



**UNITED STATES – COUNTERVAILING DUTY MEASURES  
ON CERTAIN PRODUCTS FROM CHINA**

RECOURSE TO ARTICLE 22.6 OF THE DSU BY THE UNITED STATES

DECISION BY THE ARBITRATOR

*BCI omitted, as indicated [[\*\*\*]]*

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**ABBREVIATIONS USED IN THIS DECISION**

<b>Abbreviation</b>	<b>Description</b>
BCI	business confidential information
CGE	computable general equilibrium
CVD	countervailing duty
CSPV	crystalline silicon photovoltaic
DSB	Dispute Settlement Body
DSU	Understanding on Rules and Procedures Governing the Settlement of Disputes
GATT 1994	General Agreement on Tariffs and Trade 1994
GDP	gross domestic product
HTS	Harmonized Tariff Schedule
HTSUS	Harmonized Tariff Schedule of the United States
NAICS	North American Industry Classification System
N/I	nullification or impairment
OCTG	oil country tubular goods
PE	partial equilibrium
PPI	producer price index
PV	photovoltaic
RoW	rest of the world
RPT	reasonable period of time
SCM Agreement	Agreement on Subsidies and Countervailing Measures
USBEA	United States Bureau of Economic Analysis
USCBP	United States Customs and Border Protection
USDOC	United States Department of Commerce
USITC	United States International Trade Commission
WTO	World Trade Organization

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20	Remedy-year market sales for OCTG	76
21	Remedy-year market sales for Wire Strand	78
22	Remedy-year market sales for Seamless Pipe	80
23	Remedy-year market sales for Print Graphics	82
24	Remedy-year market sales for Aluminum Extrusions	84
25	Remedy-year market sales for Steel Cylinders	85
26	Remedy-year market sales for Solar Panels	86
27	Estimated level of nullification and impairment	87

## 1 INTRODUCTION

1.1. The present arbitration proceedings arise in a dispute initiated by China against the United States. The challenged measures of the United States relate to the imposition of countervailing duties on a range of Chinese products, and the investigations leading to the imposition of such duties. These measures were found to be WTO-inconsistent in the original and compliance proceedings<sup>1</sup>, following which China has requested the DSB authorization to suspend concessions at an annual amount of USD 2.4 billion.<sup>2</sup> The United States has objected to this request<sup>3</sup>, leading to the present arbitration proceedings.<sup>4</sup>

1.2. Our task in this arbitration is to establish whether the level of suspension of concessions that China requests authorization for is equivalent to the level of nullification or impairment (N/I).<sup>5</sup> In its methodology paper, China has reduced the amount of concessions that it seeks to suspend to USD 1.02 billion.<sup>6</sup> During the proceedings, China has further reduced this amount to USD 788.75 million as a result of adjustments to its approach, in part due to agreements with certain arguments by the United States.<sup>7</sup> According to its latest calculations, the United States considers that the proper level of N/I – and hence, the suspension of concessions that China could be authorized to impose – should be no more than USD 106 million annually.<sup>8</sup>

1.3. In light of the parties' arguments and evidence in these proceedings, we have determined that the appropriate level of N/I is **USD 645.121 million per annum**. We have calculated this figure based on the parties' agreement to use a two-step Armington model similar to that applied in the arbitration decisions in *US – Washing Machines (Article 22.6 – US)* and *US – Anti-Dumping Methodologies (China) (Article 22.6 – US)*. We have also taken into account the parties' agreement on a "net-of-duties" approach whereby duty payments are excluded from the final calculation of N/I. Further, we have decided to exclude Lawn Groomers from these proceedings in light of the parties' agreement that the relevant countervailing duty (CVD) measures had been withdrawn before the end of the reasonable period of time (RPT) and are thus out of scope.

1.4. In calculating the above figure, we did not accept certain methodological suggestions proposed by the parties, which they describe as "adjustments" to the two-step Armington model applied in *US – Washing Machines (Article 22.6 – US)* and *US – Anti-Dumping Methodologies (China) (Article 22.6 – US)*. We have declined the United States' suggestion to take into account the anti-dumping duties imposed on the ten products at issue largely contemporaneously to the CVDs in question. It is not evident how any impact of those anti-dumping duties would translate into what both parties agree should be the focus of this arbitration: the impact of the CVDs at issue on China's market shares. We have also rejected the United States' suggestion to take into account the alleged impact of certain private investments and government measures in third countries other than China, the so-called "Rising Suppliers", for lack of direct evidence for such impact and absent sufficient explanation of its exogeneity to the CVDs at issue.

1.5. China proposed that we apply a "nested approach" to elasticities of substitution under which micro-elasticities (i.e. elasticities of substitution among different import varieties), would be larger than macro-elasticities (i.e. elasticities of substitution between domestic and imported varieties).

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<sup>1</sup> Panel Reports, *US – Countervailing Measures (China)*, section 8; *US – Countervailing Measures (China) (Article 21.5 – China)*, section 8; Appellate Body Reports, *US – Countervailing Measures (China)*, section 5; *US – Countervailing Measures (China) (Article 21.5 – China)*, section 6; DSB, Minutes of the meetings held on 16 January 2015, WT/DSB/M/355, section 1 (with regard to the original proceedings), and 15 August 2019, WT/DSB/M/433, section 9 (with regard to the compliance proceedings).

<sup>2</sup> WT/DS437/30.

<sup>3</sup> WT/DS437/31.

<sup>4</sup> WT/DS437/32.

<sup>5</sup> Under Article 22.4 of the DSU, "the level of the suspension of concessions or other obligations authorized by the DSB shall be equivalent to the level of the nullification or impairment." Accordingly, as a recent arbitrator emphasised, "Article 22.7 of the DSU defines the mandate for an arbitrator acting exclusively under Article 22.6; that is, the arbitrator 'shall determine whether the level of suspension is equivalent to the level of nullification or impairment.'" Decision by the Arbitrator, *US – Large Civil Aircraft (2<sup>nd</sup> complaint) (Article 22.6 – US)*, para. 3.3.

<sup>6</sup> China's methodology paper, para. 106.

<sup>7</sup> China's comments on the United States' response to Arbitrator question No. 98, para. 57, and No. 100, para. 58.

<sup>8</sup> United States' closing statement at the meeting of the Arbitrator, para. 27; response to Arbitrator question No. 114, para. 157; and Exhibit USA-160.

As regards the specific ratio under such a nested approach, China suggested a "Rule of Two", whereby micro-elasticities would be the double of macro-elasticities. Conversely, the United States suggested a "Rule of One", with equal micro- and macro-elasticities. We conclude that the United States has not demonstrated this alternative "non-nested approach". That said, the United States has successfully called into question applying a nested approach with China's proposed Rule of Two. We have therefore rejected China's proposed Rule of Two. Our calculations are based on a nested approach, with the ratio between micro- and macro-elasticities at the square root of two (i.e. approximately 1.41), as the most reasonable figure in light of the parties' limited evidence.

1.6. As regards the counterfactual compliance scenario, we have relied on the final CVD rates determined by the United States Department of Commerce (USDOC) in the relevant Section 129 proceedings as a starting point for the calculation of the duties that would have been WTO-consistent, as suggested by the United States. Although these rates took effect a few weeks after the end of the RPT, their calculation has been multilaterally determined to be WTO-inconsistent in the compliance stage of the present dispute, and China's request for suspension of concessions is based on the WTO-inconsistency of these determinations. In the interest of prompt dispute settlement, we have decided to rely on these rates instead of those in force at the end of the RPT as suggested by China.

1.7. The parties agreed that the remedy year is 2017, and our calculation is based on this calendar year. As for the calendar year prior to the imposition of the WTO-inconsistent CVDs at issue (year-prior), the parties agreed on the year-prior for four products and disagreed with regard to six products. Again, where the parties agreed, we followed them. For the six products where the parties disagreed, we decided to accept the earlier years-prior suggested by China. We agree with China about the importance of relying on data uncontaminated by the preliminary CVDs imposed in the subsequent calendar years alternatively advanced by the United States.

1.8. While the parties agreed on the key elasticity figures<sup>9</sup>, they disagreed on numerous other data points necessary for our calculation. These disagreements concern the market shares of the US domestic variety and the varieties imported from China and the rest of the world (RoW) for each product at issue in the year-prior, as well as the total market size for each product in the remedy year. We have addressed these disagreements based on what we considered to be the most solid evidence, the most reasonable calculation methodology and the best available data – developing our own calculations where necessary.

1.9. The rest of this Decision elaborates on the above points in the following structure:

- a. The next, second section addresses procedural matters. It summarises the original and compliance proceedings in this dispute, and the key steps and procedural aspects of this arbitration, including the treatment of business confidential information (BCI).
- b. The subsequent, third section deals with the main issue before us: the determination of the level of N/I. It first addresses the scope of these proceedings, followed by the counterfactual compliance scenario. It then turns to the various methodological and data issues raised by the parties or necessary for making our calculation. Once these issues are settled, the third section concludes by implementing the outcome of the earlier methodological and data analyses to calculate the level of N/I.
- c. A final, Conclusion section ends the Decision.<sup>10</sup>

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<sup>9</sup> This is without prejudice to their disagreement on the nested approach to the elasticities of substitution (see section 3.3.1 below).

<sup>10</sup> The Addendum to this Decision, WT/DS437/ARB/Add.1, contains all working procedures of the Arbitrator in Annex A, the executive summaries of the parties in Annex B, and the data inputs and calculations of the Arbitrator in Annex C.

## 2 PROCEDURAL MATTERS

### 2.1 Prior stages of this dispute

2.1. This dispute commenced on 25 May 2012, upon the filing of China's original request for consultations with the United States.<sup>11</sup> On 20 August 2012, China requested the establishment of a panel.<sup>12</sup> The panel and the Appellate Body in the original proceedings found that the United States acted inconsistently with certain provisions of the SCM Agreement.<sup>13</sup> The DSB adopted the Appellate Body report and the panel report, as modified by the Appellate Body report, on 16 January 2015.<sup>14</sup>

2.2. On 9 October 2015, an arbitrator under Article 21.3(c) of the DSU determined that the RPT for the United States to implement the DSB recommendations and rulings would expire on 1 April 2016.<sup>15</sup>

2.3. The compliance proceedings<sup>16</sup> started with China's request, on 13 May 2016, for consultations with the United States with respect to the alleged failure of the United States to implement the recommendations and rulings of the DSB in this dispute.<sup>17</sup> On 8 July 2016, China requested the establishment of a compliance panel.<sup>18</sup> As upheld by the Appellate Body<sup>19</sup>, the compliance panel concluded, in relevant part, that the United States acted inconsistently with: i) Articles 1.1(b) and 14(d) of the SCM Agreement in the Pressure Pipe, Line Pipe, OCTG, and Solar Panels Section 129 proceedings; and ii) Article 2.1(c) of the SCM Agreement in the Section 129 proceedings with respect to all ten products at issue.<sup>20</sup> The DSB adopted the Appellate Body report and the panel report in the compliance proceedings, as upheld by the Appellate Body report, on 15 August 2019.<sup>21</sup>

### 2.2 Present arbitration proceedings

2.4. On 17 October 2019, China requested authorization from the DSB to suspend concessions or other obligations at an annual amount of USD 2.4 billion, with respect to goods under the agreements described in Article 22.3(g)(i) of the DSU.<sup>22</sup>

2.5. On 25 October 2019, the United States objected to China's proposed level of suspension. At the DSB meeting of 28 October 2019, the DSB took note that the matter raised by China had been referred to arbitration pursuant to Article 22.6 of the DSU.<sup>23</sup> The Arbitrator was constituted on 15 November 2019<sup>24</sup> as follows:

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<sup>11</sup> China's consultation request in the original proceedings was made pursuant to Article 4 of the DSU, Article XXIII:1 of the GATT 1994, and Article 30 of the SCM Agreement (WT/DS437/1).

<sup>12</sup> China's panel request in the original proceedings was made pursuant to Articles 4 and 6 of the DSU, Article XXIII:2 of the GATT 1994, and Article 30 of the SCM Agreement (WT/DS437/2).

<sup>13</sup> The Panel and Appellate Body in the original proceedings found that the United States had acted inconsistently with Articles 1.1(a)(1), 1.1(b), 11.3, and 14(d) of the SCM Agreement (see Appellate Body Report, *US – Countervailing Measures (China) (Article 21.5 – China)*, para. 1.3).

<sup>14</sup> DSB, Minutes of the meeting held on 16 January 2015, WT/DSB/M/355.

<sup>15</sup> Award of the Arbitrator, *US – Countervailing Measures (China) (Article 21.3(c))*, WT/DS437/16.

<sup>16</sup> On 15 April 2016, the parties informed the DSB of their Agreed Procedures under Articles 21 and 22 of the DSU and Article 7 of the SCM Agreement (WT/DS437/19).

<sup>17</sup> China's consultation request in the compliance proceedings was made pursuant to Articles 4 and 21.5 of the DSU, Article XXII of the GATT 1994, Article 30 of the SCM Agreement, and paragraph 1 of the Sequencing Agreement (WT/DS437/20).

<sup>18</sup> China's panel request in the compliance proceedings was made pursuant to Articles 6 and 21.5 of the DSU, Article XXIII of the GATT 1994, and Article 30 of the SCM Agreement (WT/DS437/21).

<sup>19</sup> See Appellate Body Report, *US – Countervailing Measures (China) (Article 21.5 – China)*, section 6.

<sup>20</sup> For a complete list of findings in the compliance proceedings, see Appellate Body Report, *US – Countervailing Measures (China) (Article 21.5 – China)*, section 6.

<sup>21</sup> DSB, Minutes of the meeting held on 15 August 2019, WT/DSB/M/433.

<sup>22</sup> Recourse to Article 22.2 of the DSU by China, WT/DS437/30.

<sup>23</sup> DSB, Minutes of the meeting held on 28 October 2019, WT/DSB/M/436.

<sup>24</sup> Recourse to Article 22.6 of the DSU by the United States, WT/DS437/32.

Chairperson: Mr Hugo Perezcano  
Members: Mr Luis Catibayan  
Mr Thinus Jacobsz

2.6. An organizational meeting was held on 17 December 2019 to discuss procedural aspects of the arbitration proceeding. After consulting with the parties, the Arbitrator adopted its Working Procedures on 8 January 2020. At the joint request of the parties, on 8 January 2020 the Arbitrator also adopted dedicated BCI Procedures, as elaborated in section 2.3 below.<sup>25</sup> Also on 8 January 2020, the Arbitrator adopted its timetable, which it amended on 27 October 2020 in light of developments regarding the meeting of the Arbitrator with the parties.

2.7. In accordance with the timetable and Working Procedures adopted by the Arbitrator, China submitted a communication explaining its methodology for calculating the proposed level of suspension on 14 January 2020. The United States filed its written submission on 18 February 2020. China filed its written submission on 24 March 2020. The Arbitrator sent questions to the parties for written responses on 23 April 2020, to which the parties responded on 7 May 2020. The Arbitrator sent additional questions to the parties for written responses on 22 July 2020, to which the parties responded on 21 August 2020.

2.8. On 17 April 2020, the Arbitrator sent a communication to the parties, explaining that, given the COVID-19-related restrictions on worldwide travel, it seemed unlikely that it would be possible to meet physically with the Arbitrator in Geneva at the time originally scheduled in the timetable, i.e. 26-27 May 2020. In response, China requested the Arbitrator to issue additional written questions to the parties rather than reschedule the meeting.<sup>26</sup> In turn, the United States was of the opinion that a real-time exchange of views would be necessary in order to resolve this dispute, and proposed to reschedule the meeting for a later date and to further consult should conditions not permit the meeting to be held at the rescheduled date.<sup>27</sup> According to the United States, an in-person meeting would be necessary to provide both parties an adequate opportunity to explain their positions and respond in real time to each other's arguments and the Arbitrator's questions.<sup>28</sup>

2.9. Having considered these comments, on 28 April 2020, the Arbitrator announced to the parties that the meeting would not take place on the originally scheduled date, and that it would monitor the situation and revert to the parties at the end of May/beginning of June 2020 to explore the best possible way forward.<sup>29</sup> On 5 June<sup>30</sup> and 2 July 2020<sup>31</sup>, the Arbitrator sent two communications to the parties indicating that, in light of limited progress in easing restrictions on worldwide travel, it would continue to monitor the situation and, subject to sufficient further progress, would revert to the parties for their additional comments on the way forward.

2.10. On 5 October 2020, the Arbitrator contacted the parties for their views on the idea of holding a hybrid virtual/in-person meeting.<sup>32</sup> In response, China agreed with the arrangement proposed by the Arbitrator.<sup>33</sup> The United States reiterated its objection to holding the substantive meeting via videoconference and requested the Arbitrator to postpone it until an in-person meeting in Geneva would be possible. At the same time, the United States requested that, if the Arbitrator decided to hold a virtual session with the parties, it should hold time-limited virtual sessions, provide any questions to the parties in advance, and refrain from asking additional questions during the session.<sup>34</sup>

2.11. Having considered these comments, on 20 October 2020, the Arbitrator announced to the parties that it would hold a hybrid virtual/in-person meeting with the parties on 12, 16, and

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<sup>25</sup> Additional Working Procedures of the Arbitrator Concerning Business Confidential Information (BCI Procedures).

<sup>26</sup> See China's communications (20 and 22 April 2020).

<sup>27</sup> See United States' communications (20 and 22 April 2020).

<sup>28</sup> See United States' communications (20 and 22 April 2020).

<sup>29</sup> Arbitrator communication to the parties (28 April 2020).

<sup>30</sup> Arbitrator communication to the parties (5 June 2020).

<sup>31</sup> Arbitrator communication to the parties (2 July 2020).

<sup>32</sup> Arbitrator communication to the parties (5 October 2020).

<sup>33</sup> See China's communication (9 October 2020).

<sup>34</sup> See United States' communication (9 October 2020).

18 November 2020 and, after having consulted the parties, it adopted Additional Working Procedures Concerning Meetings with Remote Participation.<sup>35</sup> The Arbitrator indicated that the meeting sessions would be limited in time to the periods when both parties as well as all three arbitrators were available across their different time zones during the day. The Arbitrator added that it would send advance questions to the parties before the meeting, while reserving the possibility of asking for clarifications from the parties during the Q&A session.

2.12. Following individual and collective test sessions with the parties, the Arbitrator held a hybrid virtual/in-person meeting with the parties on 12, 16, and 18 November 2020. On 20 November 2020, the Arbitrator sent additional questions to the parties for written responses. The parties responded to these questions on 11 December 2020 and provided comments on each other's responses on 8 January 2021.

2.13. The Arbitrator submitted its Decision for translation on 29 November 2021, and notified the parties of this transmission. After reviewing with the parties that the Decision did not include any BCI, the Arbitrator circulated its Decision to WTO Members on 26 January 2022.

### 2.3 Treatment of BCI

2.14. At the organizational meeting held on 17 December 2019, both parties proposed that the Arbitrator adopt Additional Working Procedures of the Arbitrator Concerning Business Confidential Information (BCI Procedures) submitted in the course of the proceedings, based on the language used in the working procedures on BCI in *US – Anti-Dumping Methodologies (China) (Article 22.6 – US)*. As indicated, the Arbitrator adopted the proposed BCI Procedures on 8 January 2020 accordingly.<sup>36</sup>

2.15. On 5 January 2021, the United States informed the Arbitrator that it had discovered inadvertent omissions of double brackets for BCI in the United States' responses to the questions from the Arbitrator, submitted on 11 December 2020. The United States provided the Arbitrator with a revised version of the United States' responses and requested that the original version submitted on 11 December 2020 be replaced with this revised version. China had no objections to this request. On 12 January 2021, the Arbitrator agreed to grant the leave to correct omissions requested by the United States, pursuant to paragraph 22 of its Working Procedures, confirming that the original version of the responses submitted by the United States on 11 December 2020 would be considered as replaced with the revised version submitted on 5 January 2021.

2.16. In accordance with paragraph 8 of the BCI Procedures, on 29 November 2021 the Arbitrator issued to the parties a version of its Decision for BCI review. On 7 December 2021, the parties indicated that they had no comments in the context of the BCI review of the Decision.<sup>37</sup> In accordance with the aforementioned paragraph of the BCI Procedures, the text of our Decision circulated to Members is identical to the text of the confidential version issued to the parties, with the exception of passages that disclose BCI, which have been replaced by "[[\*\*\*]]".

## 3 DETERMINATION OF THE LEVEL OF NULLIFICATION AND IMPAIRMENT

3.1. Despite their disagreement on the level of N/I, the parties agree that the purpose of these Article 22.6 arbitration proceedings is to determine whether the level of suspension of concessions or other obligations (level of suspension) proposed by China is equivalent to the level of nullification or impairment (level of N/I) of the benefits that China could have expected as a result of the United States' compliance with the DSB's recommendations and rulings by the end of the RPT.<sup>38</sup>

3.2. We note that in Article 22.6 arbitration proceedings, the "overall burden" of proving that the requirements of the DSU have *not* been met rests in general on the party challenging the proposed

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<sup>35</sup> Arbitrator communication to the parties (20 October 2020); Annex A-3 of the Addendum to this Decision, WT/DS437/ARB/Add.1.

<sup>36</sup> See Annex A-2 of the Addendum to this Decision, WT/DS437/ARB/Add.1.

<sup>37</sup> In accordance with paragraph 8 of the BCI Procedures (Annex A-2 of the Addendum to this Decision, WT/DS437/ARB/Add.1).

<sup>38</sup> China's methodology paper, paras. 14 and 17; United States' written submission, paras. 19, 22-24, and 34-36.

level of suspension.<sup>39</sup> In other words, it is for the United States in this dispute to prove that China's proposed level of suspension of concessions is *not* "equivalent" to the level of nullification and impairment within the meaning of Article 22.4 of the DSU.

3.3. Despite these rules on the general allocation of the burden of proof in Article 22.6 arbitrations, the duty rests on both parties to produce evidence and to collaborate in presenting evidence to the Arbitrator.<sup>40</sup> In particular, "it is for each party to bring forward the elements to sustain the factual assertions it makes"<sup>41</sup>, insofar as "[i]t is for the party alleging the fact to prove its existence".<sup>42</sup>

3.4. We also note that, in the event we conclude that China's proposed level of suspension of concessions or other obligations is not WTO-consistent, we cannot end our examination the way panels do. Instead, we would be called upon to go further, and, in pursuit of the basic DSU objectives of prompt and positive settlement of disputes, we would need to estimate the level of suspension we consider to be equivalent to the impairment suffered.<sup>43</sup>

### 3.1 Scope of the proceedings

3.5. In its methodology paper, China indicated that the present proceedings cover a total of eleven CVD investigations, in particular the Section 129 proceedings relating to (i) Pressure Pipe; (ii) Line Pipe; (iii) Lawn Groomers; (iv) Kitchen Shelving; (v) OCTG; (vi) Wire Strand; (vii) Seamless Pipe; (viii) Print Graphics; (ix) Aluminum Extrusions; (x) Steel Cylinders; and (xi) Solar Panels.<sup>44</sup>

3.6. In its written submission, the United States agreed to the relevance of only ten of these eleven CVD investigations. The United States requested the exclusion of Lawn Groomers, claiming that the relevant CVD order was revoked prior to the expiration of the RPT. According to the United States, the Arbitrator should not conduct a counterfactual analysis for Lawn Groomers because the level of N/I attributable to the maintenance of the CVD measure on Lawn Groomers beyond the expiration of the RPT is zero.<sup>45</sup>

3.7. In its written submission, China did not contest the United States' assertion and evidence that the CVD order concerning Lawn Groomers was withdrawn more than a year before the end of the

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<sup>39</sup> See Decisions by the Arbitrators, *EC – Hormones (Canada) (Article 22.6 – EC)*, paras. 9-11; *EC – Hormones (US) (Article 22.6 – EC)*, paras. 9-11; *US – Washing Machines (Article 22.6 – US)*, para. 1.14, *US – Large Civil Aircraft (2<sup>nd</sup> complaint) (Article 22.6 – US)*, para. 4.3; *US – Anti-Dumping Methodologies (China) (Article 22.6 – US)*, para. 1.11; *US – 1916 Act (EC) (Article 22.6 – US)*, paras. 3.2-3.3; *US – Gambling (Article 22.6 – US)*, paras. 2.22-2.23; and *US – COOL (Article 22.6 – US)*, para. 4.7.

<sup>40</sup> See Decisions by the Arbitrators, *EC – Bananas III (Ecuador) (Article 22.6 – EC)*, para. 38; *EC – Bananas III (US) (Article 22.6 – EC)*, para. 4.2; *EC – Hormones (Canada) (Article 22.6 – EC)*, para. 11; *EC – Hormones (US) (Article 22.6 – EC)*, para. 11; *US – FSC (Article 22.6 – US)*, para. 2.11; *US – Offset Act (Byrd Amendment) (India) (Article 22.6 – US)*, paras. 2.26-2.27; *Brazil – Aircraft (Article 22.6 – Brazil)*, paras. 2.8-2.9; and *US – Large Civil Aircraft (2<sup>nd</sup> complaint) (Article 22.6 – US)*, para. 4.4.

<sup>41</sup> Decision by the Arbitrator, *US – Gambling (Article 22.6 – US)*, para. 2.24. See also Decisions by the Arbitrators, *EC – Hormones (Canada) (Article 22.6 – EC)*, para. 11; *EC – Hormones (US) (Article 22.6 – EC)*, paras. 9-11; *US – Washing Machines (Article 22.6 – US)*, para. 1.14; *Brazil – Aircraft (Article 22.6 – Brazil)*, para. 2.9; *US – FSC (Article 22.6 – US)*, para. 2.11; and *US – Offset Act (Byrd Amendment) (India) (Article 22.6 – US)*, paras. 2.26-2.27.

<sup>42</sup> Decisions by the Arbitrators, *EC – Hormones (Canada) (Article 22.6 – EC)*, para. 10; *EC – Hormones (US) (Article 22.6 – EC)*, para. 10. See also Decision by the Arbitrator, *US – Gambling (Article 22.6 – US)*, para. 2.24.

<sup>43</sup> See Decisions by the Arbitrators, *EC – Hormones (Canada) (Article 22.6 – EC)*, para. 12; *EC – Hormones (US) (Article 22.6 – EC)*, para. 12.

<sup>44</sup> China's methodology paper, paras. 2 and 11. According to China, "[t]he products at issue in the 11 CVD investigations are circular welded austenitic stainless pressure pipe ('Pressure Pipe'), circular welded carbon quality steel line pipe ('Line Pipe'), tow behind lawn groomers ('Lawn Groomers'), kitchen appliance shelving and racks ('Kitchen Shelving'), oil country tubular goods ('OCTG'), prestressed concrete steel wire strand ('Wire Strand'), seamless carbon and alloy steel standard, line, and pressure pipe ('Seamless Pipe'), coated paper suitable for high-quality print graphics using sheet-fed presses ('Print Graphics'), aluminum extrusions, high pressure steel cylinders ('Steel Cylinders'), and crystalline silicon photovoltaic cells ('Solar Panels')." China's methodology paper, fn 3 to para. 2. See also *ibid.*, para. 11 (referring to Panel Report, *US – Countervailing Measures (China) (Article 21.5 – China)*, section 3.1).

<sup>45</sup> United States' written submission, para. 6. See also *ibid.*, paras. 9, 32, and 54; and Exhibit USA-9.

RPT. Ultimately, China also excluded the CVD order concerning Lawn Groomers from its calculation of the level of N/I.<sup>46</sup>

3.8. As mentioned, the RPT in this dispute expired on 1 April 2016.<sup>47</sup> According to the information provided by the United States, uncontested by China, the USDOC revoked the relevant CVD order for Lawn Groomers on 23 September 2014, effective 3 August 2014.<sup>48</sup> In light of this and the parties' agreement, we have decided to exclude the CVD order concerning Lawn Groomers from the scope of our analysis. We shall address only the ten remaining CVD investigations and products for calculating the level of N/I in the present proceedings, namely: (i) Pressure Pipe; (ii) Line Pipe; (iii) Kitchen Shelving; (iv) OCTG; (v) Wire Strand; (vi) Seamless Pipe; (vii) Print Graphics; (viii) Aluminum Extrusions; (ix) Steel Cylinders; and (x) Solar Panels.<sup>49</sup>

### 3.2 Counterfactual

3.9. The parties agree that, in order to determine level of N/I, the Arbitrator should assess a "counterfactual" scenario, i.e. a "hypothetical scenario that describes what would have happened in terms of trade flows had the responding party implemented the DSB recommendations and rulings"<sup>50</sup> by the end of the RPT, and "compare[] [this counterfactual] with the actual situation, as of the end of the RPT – where the Member has yet to come into compliance – in order to quantify the trade effect caused by that Member's failure to comply".<sup>51</sup> As the RPT expired on 1 April 2016, the parties agree that the baseline year or reference period for a counterfactual analysis should be the 2017 calendar year.<sup>52</sup>

3.10. In light of the relevant DSB recommendations and rulings in the Article 21.5 compliance proceedings<sup>53</sup>, the parties are also in agreement that, had the United States brought its measures into conformity with its obligations under Articles 2.1(c) and 14(d) of the SCM Agreement, it would not have identified a countervailable subsidy with respect to the alleged provision of inputs for less than adequate remuneration, and any countervailing duties (CVDs) applied to the products at issue would be calculated so as to exclude the portion of the total CVD margin attributed to the alleged input subsidy programmes.<sup>54</sup>

3.11. Thus, the parties agree that the appropriate counterfactual analysis would entail modifying the relevant CVD rates by deducting the portion attributable to the alleged input subsidy programs.<sup>55</sup> However, the parties disagree on the original WTO-inconsistent CVD rates to be used when making this calculation for some of the products for which the revised rates entered into force after the expiry of the RPT.<sup>56</sup> Although the parties' principled disagreement in this context concerns five of

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<sup>46</sup> China's written submission, para. 25.

<sup>47</sup> See China's methodology paper, paras. 14, 17, and fn 15 to para. 17; United States' written submission, para. 12.

<sup>48</sup> Exhibit USA-9.

<sup>49</sup> This list follows the order submitted by China in its N/I estimates, which in turn corresponds to the numerical order of the docket numbers assigned by USITC to the CVD investigations at issue. This Decision follows the same order in addressing the measures and products at issue.

<sup>50</sup> China's methodology paper, para. 15 (and the arbitration decisions referenced in fn 17 thereto); United States' written submission, paras. 27-28 (and the arbitration decisions referenced in fns 21-22 thereto).

<sup>51</sup> China's methodology paper, para. 15 (quoting Decision by the Arbitrator, *US – Washing Machines (Article 22.6 – US)*, para. 3.7). See also United States' written submission, paras. 27-28.

<sup>52</sup> China's methodology paper, para. 4; United States' written submission, para. 28 and fn 23 thereto.

<sup>53</sup> WT/DSB/M/433, para. 9.33.

<sup>54</sup> China's methodology paper, paras. 20-21. See also *ibid.*, paras. 18-19; United States' written submission, para. 29; and China's written submission, para. 9.

<sup>55</sup> China's methodology paper, paras. 16, 20 and 21; United States' written submission, para. 29.

<sup>56</sup> As regards the calculation of the counterfactual WTO-consistent CVD rates, the parties had disagreements at an earlier stage of these proceedings but these were ultimately resolved. First, regarding the inputs for the LTAR subsidy rate to be deducted from the WTO-inconsistent CVD rates, the United States claimed that China had incorrectly identified the portion of the CVD rate attributable to the input subsidy programs for four of the measures (Line Pipe, Wire Strand, Seamless Pipe, and Steel Cylinders). China accepted the rates proposed by the United States for Line Pipe and Steel Cylinders in its written submission. In response to questions from the Arbitrator, the United States concurred with China with respect to Seamless Pipe, and China accepted the United States' proposal regarding Wire Strand. (United States' written submission, paras. 30 and 41-45; China's written submission, para. 24; United States' response to Arbitrator question No. 27, para. 143; and China's response to Arbitrator question No. 96, para. 56.) Second, the United States claimed that China's calculations failed to apply the methods that the USDOC used to derive the

the products at issue, its impact in terms of actual differences in the CVD rates only extends to three: Line Pipe, OCTG, and Seamless Pipe.<sup>57</sup>

3.12. In its calculation, China uses the following CVD rates that were in force at the expiry of the RPT on 1 April 2016:<sup>58</sup>

**Table 1: CVD rates in force at the expiry of the RPT for Line Pipe, OCTG, and Seamless Pipe<sup>59</sup>**

PRODUCT	RESPONDENTS IN THE RELEVANT CVD INVESTIGATIONS	CVD RATES <sup>60</sup>
Line Pipe	Huludao Seven Star Group, Huludao Steel Pipe Industrial Co. Ltd., and Huludao Bohai Oil Pipe Industrial Co. Ltd.	33.43
	All Others	36.74
OCTG	Tianjin Pipe (TPCO)	10.49
	All Others	13.41
Seamless Pipe	Hengyang Steel, Hengyang Valin Steel, Hengyang Valin MPM, Xigang Seamless Steel (Hengyang)	56.67
	Tianjin Pipe (TPCO)	13.66
	All Others	35.17

3.13. The United States, by contrast, relies on the final revised CVD rates that were determined by the USDOC in the Section 129 proceedings followed to implement the recommendations and rulings of the DSB in the original proceedings of this dispute (the Section 129 proceedings).<sup>61</sup> According to the United States, this would be consistent with the fact that the Section 129 CVD rates were the compliance measures reviewed in the Article 21.5 proceedings in this dispute.<sup>62</sup> The revised Section 129 rates for the products and respondents in question are:

**Table 2: Revised Section 129 CVD rates for Line Pipe, OCTG, and Seamless Pipe**

PRODUCT	RESPONDENTS IN THE RELEVANT CVD INVESTIGATIONS	CVD RATES <sup>63</sup>
Line Pipe	Huludao Seven Star Group, Huludao Steel Pipe Industrial Co. Ltd., and Huludao Bohai Oil Pipe Industrial Co. Ltd.	32.65
	All Others	36.35
OCTG	Tianjin Pipe (TPCO)	7.71
	All Others	12.26
Seamless Pipe	Hengyang Steel, Hengyang Valin Steel, Hengyang Valin MPM, Xigang Seamless Steel (Hengyang)	49.56
	Tianjin Pipe (TPCO)	8.24
	All Others	28.90

3.14. China asserts that, according to the decision by the arbitrator in *US – Tuna II (Mexico) (Article 22.6 – US)*, compliance measures implemented after the expiry of the RPT should not form

"All Others" rates. China considered that the changes made by the United States were consistent with the parties' shared position and reflected these changes in its own estimates. (United States' written submission, paras. 31 and 46-53; United States' response to Arbitrator question No. 68, paras. 92-95, and No. 69, paras. 96-105; and China's response to Arbitrator question No. 29, paras. 74-77, and No. 97, para. 57).

<sup>57</sup> Revised rates were also published for Pressure Pipe and Solar Panels, but they were identical to the prior ones. China does not take issue with using the rates from the Section 129 determinations for the remaining five products (i.e. Kitchen Shelving, Wire Strand, Print Graphics, Aluminum Extrusions, and Steel Cylinders). (China's written submission, para. 17).

<sup>58</sup> China's written submission, para. 14.

<sup>59</sup> This table and table 2 below only show the respondents for which the CVD rates changed after the expiry of the RPT.

<sup>60</sup> Exhibit CHN-100.

<sup>61</sup> United States' written submission, para. 38.

<sup>62</sup> United States' response to Arbitrator question No. 20, paras. 123 and 127; opening statement at the meeting of the Arbitrator, para. 8.

<sup>63</sup> Exhibit USA-138.

part of a counterfactual analysis under Article 22.6 of the DSU.<sup>64</sup> China points out that the arbitrator in that dispute considered the pertinent version of the measure to be the one in existence at the time of expiry of the RPT, noting that such version "may or may not be the most recent version of the relevant measure".<sup>65</sup> By contrast, the United States points out that there have been Article 22.6 arbitrations that relied on compliance measures adopted after the expiry of the RPT to quantify the level of N/I. The United States advances as examples the arbitrator decisions in *US – FSC (Article 22.6 – US)* and *US – COOL (Article 22.6 – US)*.<sup>66</sup>

3.15. Despite the above statement in *US – Tuna II (Mexico) (Article 22.6 – US)* referenced by China, the two other arbitration decisions cited by the United States suggest to us that, as a matter of fact, previous Article 22.6 arbitrators have not followed a uniform approach to this issue. There have been prior Article 22.6 arbitrations, including those mentioned by the United States, in which compliance measures adopted after the expiry of the RPT have been considered for the determination of a counterfactual in an N/I assessment.<sup>67</sup> We are therefore of the view that the determination of the relevant measure for an N/I assessment must be resolved on a case-by-case basis, depending on the facts and circumstances of the specific dispute. Indeed, as a prior Article 22.6 arbitrator held, even if previous arbitrators had established one single level of nullification or impairment at the level that existed at the end of the RPT, "we do not read anything in Article 22 of the DSU that would preclude us from following a different path if the circumstances of this case clearly required it".<sup>68</sup>

3.16. The specific factual circumstances of the dispute before us are as follows. Although the USDOC informed the interested parties of the initiation of the Section 129 proceedings regarding all products at issue on 27 April 2015 (i.e. before the expiry of the RPT on 1 April 2016), it published its final CVD determinations for this specific group of products on 9 June 2016, stating that they would become effective retroactively as of 26 May 2016<sup>69</sup>, that is almost two months after the expiration of the RPT on 1 April 2016.<sup>70</sup> As China explains, in the course of the compliance proceedings it challenged certain determinations made by the United States in the context of these Section 129 proceedings.<sup>71</sup> As a consequence, the Section 129 Proceedings were one of the measures reviewed and ultimately found to be WTO-inconsistent in those compliance proceedings.<sup>72</sup> The relevant panel and Appellate Body findings in this regard were multilaterally endorsed when the DSB adopted the compliance reports in August 2019. Finally, in the context of this arbitration proceeding, the

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<sup>64</sup> China's written submission, para. 13 (referring to Decision by the Arbitrator, *US – Tuna II (Mexico) (Article 22.6 – US)*, paras 3.19-3.21 and 3.25); comments on the United States' response to Arbitrator question No. 113, para. 99 (referring to Decision by the Arbitrator, *US – Tuna II (Mexico) (Article 22.6 – US)*, para. 3.24).

<sup>65</sup> Decision by the Arbitrator, *US – Tuna II (Mexico) (Article 22.6 – US)*, para. 3.24.

<sup>66</sup> United States' response to Arbitrator question No. 20, paras. 124-125 (referring to Decisions by the Arbitrators, *US – FSC (Article 22.6 – US)*, para. 2.12; *US – COOL (Article 22.6 – US)*, fn 5 to para. 1.3 and fn 59 to para. 3.2).

<sup>67</sup> In fact, the same Article 22.6 arbitrator in *US – Tuna II (Mexico) (Article 22.6 – US)* analysed other prior arbitration decisions when discussing the issue, namely *EC – Bananas III*, *US – Upland Cotton*, and *Brazil – Aircraft*. (Decision by the Arbitrator, *US – Tuna II (Mexico) (Article 22.6 – US)*, para. 3.28-3.47).

<sup>68</sup> "Most previous arbitrators have established one single level of nullification or impairment at the level that existed at the end of the reasonable period of time granted to the responding party to bring its legislation into conformity. We do not disagree that this approach is, in the large majority of cases, the most appropriate. However, we do not read anything in Article 22 of the DSU that would preclude us from following a different path if the circumstances of this case clearly required it." (Decision by the Arbitrator, *US – Offset Act (Byrd Amendment) (India) (Article 22.6 – US)*, para. 4.21). (fn omitted)

<sup>69</sup> Exhibit USA-1.

<sup>70</sup> We note in this regard that the United States initiated the Section 129 Proceedings before the RPT was determined by an arbitration carried under Article 21.3 (c) of the DSU. The relevant Award of that arbitrator was circulated on 9 October 2015, when Section 129 Proceedings were already on their way. (Award of the Arbitrator, *US – Countervailing Measures (China) (Article 21.3(c))*).

<sup>71</sup> China's methodology paper, para. 11.

<sup>72</sup> The Panel Report refers to them as the "preliminary and final determinations made by the United States Department of Commerce (USDOC) under Section 129 of the Uruguay Round Agreements Act (Section 129) to comply with recommendations and rulings of the DSB made in the original proceeding in *US – Countervailing Measures (China)*". (Panel Report, *US – Countervailing Measures (China) (Article 21.5 – China)*, para. 2.1).

Section 129 Proceedings are the measures regarding which China seeks to obtain authorization to suspend concessions or other obligations.<sup>73</sup>

3.17. The parties agree that the revised CVD rates suggested by the United States correspond to the final determinations under the Section 129 proceedings, and that the revised rates for this subset of products became effective after the expiry of the RPT. We also note that the United States does not claim that it has brought its measures into conformity with the recommendations and rulings of the DSB within the RPT. There are no disagreements between the parties on these aspects of the dispute.

3.18. As argued by China, the existence of an RPT is crucial in the assessment under Article 22.7. According to DSU Article 22.1, the suspension of concessions or other obligations is available in the event that the recommendations and rulings are not implemented within the RPT. That said, as the United States argues, Article 22 directs an arbitrator to base its decision on the "recommendations and rulings" of the DSB to bring a WTO-inconsistent measure into conformity.<sup>74</sup> Further, under Article 22.4, "the level of the suspension of concessions or other obligations authorized by the DSB shall be equivalent to the level of the nullification or impairment [caused by the measures]". As a prior Article 22.6 arbitrator noted, "it would be the WTO-inconsistency of [the measure at issue] that would be the root cause of any nullification or impairment suffered by [the complainant]".<sup>75</sup> Thus, in order to be able to determine the level of N/I, it is essential to identify the measures causing such N/I. Whether the Section 129 CVD rates were implemented before or after the expiration of the RPT, does not immediately determine the relevant measure, or version of the measure, for our counterfactual analysis.<sup>76</sup>

3.19. Turning to the arbitration decisions referenced by the parties, we note that one of the considerations for the choice of the arbitrator in *US – Tuna II (Mexico) (Article 22.6 – US)* to rely on an earlier pre-RPT measure was that this had been the subject of adverse DSB recommendations and rulings. In the words of that arbitrator, the alternative post-RPT measure proposed by the respondent was "not yet subject to any panel or Appellate Body findings, and so it is not a measure that has been found to be WTO inconsistent".<sup>77</sup> The arbitrator added that, although the respondent had made changes to the earlier measure, the adverse DSB recommendations and rulings remained in effect "until such time as there are new, overriding panel and/or Appellate Body findings that have been adopted by the DSB or a mutually agreed solution has been notified to the DSB".<sup>78</sup> We therefore consider that, while the arbitrator in *US – Tuna II (Mexico) (Article 22.6 – US)* opted for a pre-RPT measure, this was based at least in part on a consideration of multilateral review. We find this particularly noteworthy as the measures at issue in the present arbitration (i.e. the Section 129 Proceedings) have been multilaterally reviewed and found to be WTO-inconsistent in Article 21.5 compliance proceedings.

3.20. The relevance of multilateral review as a reason for reviewing post-RPT measures in the present proceedings is supported by the two arbitration decisions referenced by the United States. The arbitrator in *US – FSC (Article 22.6 – US)* noted that "it was [the measure that had come into existence after the expiration of the RPT] which was reviewed by the Compliance Panel and, on appeal, by the Appellate Body, under Article 21.5 of the DSU."<sup>79</sup> In *US – COOL (Article 22.6 – US)*, the arbitrator calculated the level of N/I caused by the original and amended measures, which had

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<sup>73</sup> See China's methodology paper, paras. 2, 3, 11, and 12. See also Recourse to Article 22.2 of the DSU by China, WT/DS437/30, p. 2. We also note China's argument that: "[i]n this dispute, the measures found to be inconsistent with the SCM Agreement are the U.S. compliance measures pertaining to the ten cases at issue. This is clear from the findings of the compliance panel and the Appellate Body. The DSB's recommendations in relation to these findings are similarly clear: the United States must bring its measures into conformity with the relevant provisions of the SCM Agreement." (China's written submission, para. 31).

<sup>74</sup> United States' written submission, paras. 34 and 35.

<sup>75</sup> Decision by the Arbitrator, *EC – Bananas III (US) (Article 22.6 – EC)*, para. 4.8. We also agree with the reasoning of such arbitrator regarding the timing of proceedings. (See *ibid.*, fn 11 to para. 4.11).

<sup>76</sup> United States' response to Arbitrator question No. 113, para. 154.

<sup>77</sup> Decision by the Arbitrator, *US – Tuna II (Mexico) (Article 22.6 – US)*, para. 3.25.

<sup>78</sup> Decision by the Arbitrator, *US – Tuna II (Mexico) (Article 22.6 – US)*, para. 3.35.

<sup>79</sup> Decision by the Arbitrator, *US – FSC (Article 22.6 – US)*, para. 2.12.

been reviewed at the original and compliance stages, although the amended measure came into force one day after the expiry of the RPT.<sup>80</sup>

3.21. China claims that in *US – FSC (Article 22.6 – US)* the parties had agreed on the compliance measure adopted after the expiry of the RPT being the relevant measure for evaluating the suspension of concessions, whereas no such agreement has been reached by China and the United States in this proceeding.<sup>81</sup> Regarding *US – COOL (Article 22.6 – US)*, China notes that in its statement to the DSB, the United States explicitly stated that it "had come into compliance within the ten-month reasonable period of time set by a WTO arbitrator, which had expired the previous day".<sup>82</sup> We do not consider that such circumstances alter the fact that, as the United States explains, measures adopted after the expiry of the RPT were indeed used for assessing the level of N/I in those Article 22.6 arbitration proceedings, and that in both cases the relevant measures under discussion had been subject to multilateral review through compliance proceedings.<sup>83</sup>

3.22. Our mandate as an Arbitrator, consistent with the obligation established in Article 22.4, is specifically set out in Article 22.7 of the DSU: "The arbitrator... shall determine whether the level of such suspension is equivalent to the level of nullification or impairment".

3.23. We recall that the Appellate Body has described suspension of concessions or other obligations as the last resort in the chain of events of a multi-stage process that constitutes a WTO dispute:

[T]he suspension of concession is the last resort available to a Member who has successfully challenged the consistency with the covered agreements of another Member's measure. The DSB's authorization to suspend concessions is necessarily preceded by a multi-stage dispute settlement process. This process may encompass: (i) consultations, (ii) panel proceedings, (iii) appellate review, (iv) the adoption of the panel and Appellate Body reports, (v) an arbitration to determine the reasonable period of time for implementation, (vi) compliance panel proceedings, (vii) compliance appellate review, and (viii) an arbitration to determine the level of suspension of concessions. The authorization to suspend concessions is thus granted following a long process of multilateral dispute settlement in which relevant adjudicative bodies, as well as the DSB, render multilateral decisions at key stages of the process.<sup>84</sup>

3.24. As already noted, in this case the Section 129 Proceedings have been multilaterally reviewed under Article 21.5 and the compliance reports adopted by the DSB. In this connection, we further note that China's request for the suspension of concessions is based on the findings of WTO-inconsistency in such compliance reports.<sup>85</sup>

3.25. Accordingly, in the circumstances of the present proceedings, we shall rely on the final CVD rates determined by the USDOC in the Section 129 Proceedings for the counterfactual and the calculation of the WTO-consistent CVD rates in this dispute. Consequently, the initial

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<sup>80</sup> Decisions by the Arbitrator, *US – COOL (Article 22.6 – US)*, fn 59 to para. 3.2. "The 'amended COOL measure' comprised the original COOL measure as amended by the [compliance measure enacted after the expiry of RPT]." (Ibid., fn 6 to para 1.4).

<sup>81</sup> China's comments on the United States' response to Arbitrator question No. 113, para. 103 (referring to Decision by the Arbitrator, *US – FSC (Article 22.6 – US)*).

<sup>82</sup> China's comments on the United States' response to Arbitrator question No. 113, para. 101 (quoting DSB, Minutes of the meeting held on 31 July 2013, WT/DSB/M/332, Item 11). (emphasis omitted)

<sup>83</sup> In a comparable manner, the Article 22.6 arbitrator in *US – Upland Cotton* considered the lack of a multilateral determination of inconsistency as "an important aspect of the legal situation before us, which we must take into account in these proceedings". (Decision by the Arbitrator, *US – Upland Cotton (Article 22.6 – US I)*, para 3.42).

<sup>84</sup> Appellate Body Report, *US – Continued Suspension*, para. 317. As a recent Article 22.6 arbitrator explained, the authorization to maintain a suspension "would only lapse following confirmation, through WTO dispute settlement proceedings or a mutually agreed solution, of the responding party's substantive compliance". The same Article 22.6 arbitrator has emphasised the importance of formal multilateral confirmation, explaining that the justification for maintaining a suspension should be found in the formal multilateral compliance status of the responding party (Decision by the Arbitrator, *EC and certain member States – Large Civil Aircraft (Article 22.6 – EU)*, para 6.51, referring to Appellate Body Report, *US – Continued Suspension*, section IV.E).

<sup>85</sup> See China's methodology paper, paras. 10-21.

WTO-inconsistent CVD rates to be used in the implementation of the two-step Armington model will be the ones suggested by the United States.<sup>86</sup>

### 3.3 Methodology

3.26. To estimate the impact of the WTO-inconsistent CVD orders on China's 2017 exports of subject products to the United States, the parties agree that the Arbitrator should apply a two-step Armington elasticities model similar to the methodology that was used in *US – Washing Machines (Article 22.6 – US)* and *US – Anti-Dumping Methodologies (China) (Article 22.6 – US)*.<sup>87</sup>

3.27. As the parties explain, the Armington elasticities model needs to be applied twice, once with WTO-inconsistent CVDs and once more with WTO-consistent CVDs, to compute, with regard to each CVD order at issue, the value of sales of imports from China in the US market for the 2017 remedy year. The former figure then needs to be subtracted from the latter for each CVD order, and, finally, the differences obtained for each CVD order need to be added up in order to calculate the overall level of N/I.<sup>88</sup> This was also the overall approach applied in the two above-mentioned Article 22.6 arbitrations.<sup>89</sup>

3.28. Although the parties agree in general on the use of a two-step Armington model to estimate the level of N/I,<sup>90</sup> the parties propose the following "advancements" in China's words<sup>91</sup>, or "adjustments" as described by the United States<sup>92</sup>, to the methodology, most of which are in turn challenged by the other party:<sup>93</sup>

- a. China's proposed nested approach to elasticities of substitution, including the application of the Rule of Two;
- b. China's proposed net-of-duty adjustment to exclude duty payments from the estimated remedy-year sales of imports from China obtained with the Armington model using both WTO-inconsistent and WTO-consistent CVD rates, and hence ultimately from the N/I calculation;
- c. the United States' suggestion to account for the effect of both subsidies and dumping on China's market shares in the United States; and
- d. the United States' suggestion to account for factors other than trade remedy measures that influenced the evolution of the market in the period between the imposition of such measures and the base year of the analysis (2017) (Rising Suppliers).

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<sup>86</sup> See Annex C-3 for the WTO-inconsistent Section 129 rates relied upon by the Arbitrator and the resulting WTO-consistent CVD rates for each of the ten products at issue.

<sup>87</sup> China's methodology paper, para. 4; United States' written submission, para. 3.

<sup>88</sup> China's methodology paper, paras. 4-7 and 28-33; United States' written submission, paras. 2-3.

<sup>89</sup> Decisions by the Arbitrators, *US – Washing Machines (Article 22.6 – US)*, paras. 3.118-3.121; *US – Anti-Dumping Methodologies (China) (Article 22.6 – US)*, paras. 7.43-7.46.

<sup>90</sup> Under the two-step Armington model, the level of N/I is calculated by first estimating the value of imports from China in the US market with WTO-inconsistent CVDs for the 2017 remedy year. This is done by applying the Armington elasticities model to the US market as it had existed prior to the imposition of the WTO-inconsistent CVDs in order to simulate, for each CVD order, the impact of imposing the WTO-inconsistent CVDs on the sales, and hence the market shares, of three varieties: imports from China, imports from the rest of the world, and shipments of US domestic producers. The simulated market shares are then multiplied by the value of total 2017 sales in the US market to obtain an estimated 2017 Chinese import value for the WTO-inconsistent scenario. This procedure is repeated using WTO-consistent CVDs so that estimated 2017 Chinese import values are obtained under both scenarios for each CVD order. The differences between the two scenarios are then aggregated to obtain the level of N/I (see China's methodology paper, paras. 4-7, 28-33, and 44-72; United States' written submission, paras. 27-28).

<sup>91</sup> China's methodology paper, paras. 8-9.

<sup>92</sup> United States' written submission, para. 7.

<sup>93</sup> United States' written submission, para. 4; China's written submission, paras. 3-5.

### 3.3.1 Nested approach to elasticities of substitution

3.29. China suggests that the Arbitrator should apply a "nested approach"<sup>94</sup> to the demand structure of the two-step Armington model. This approach is based on the assumption that the elasticity of substitution between imports from different sources, i.e. subject and non-subject imports or "micro-elasticity", would be different from the elasticity of substitution between imports and US domestic goods, the "macro-elasticity". Relying on economic literature and empirical evidence in the form of an econometric study and descriptive statistics, China advances that the micro-elasticity is twice the corresponding macro-elasticity for all products at issue (Rule of Two).<sup>95</sup>

3.30. The United States in principle does not oppose a nested approach being considered where trade diversion is expected. However, the United States notes that, for the products at issue, no trade diversion is to be expected.<sup>96</sup> The United States considers that a constant elasticity of substitution assumption (or Rule of One) between different imports and between imported and domestic goods would be more appropriate. The United States submits that a literature standard and empirical evidence support its position in this regard.<sup>97</sup>

3.31. The United States adds that it is China that needs to provide evidence that the micro- and macro-elasticities of substitution differ for the products at issue in these proceedings and that the Rule of Two is a reasonable assumption about their relative magnitudes.<sup>98</sup> According to the United States, China has not presented any persuasive evidence in support of its position.<sup>99</sup>

3.32. We note that China's proposal contains two linked but distinct issues. First, whether it is reasonable to set micro-elasticities for the products at issue that differs from their macro-elasticities (i.e. a nested approach) and, second, whether it is reasonable to assume that this difference can be approximated by a factor of two (i.e. the Rule of Two). Before assessing these issues, we address first the systemic arguments made by the parties on the burden of proof in the context of China's proposal for a nested approach.

3.33. China claims that, due to the allocation of the initial burden of proof in an Article 22.6 arbitration, if the parties' arguments in favour or against the Rule of Two are of equal merit, the Arbitrator needs to apply the Rule of Two.<sup>100</sup> The United States argues that China conflates the burden of proof with each party's responsibility to present evidence and support their arguments.<sup>101</sup>

3.34. As regards the burden of proof, we recall that in an Article 22.6 arbitration proceeding it is the party challenging the proposed level of suspension that bears the general burden of proving that the requirements of the DSU have not been met.<sup>102</sup> In other words, as a matter of principle, it is for the original respondent, the United States in this dispute, to prove that China's proposed level of suspension of concessions is not "equivalent" to the level of N/I within the meaning of Article 22.4 of the DSU.<sup>103</sup> In the context of the nested approach, this would mean that the United States would

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<sup>94</sup> China's methodology paper, paras. 8, 27, 82, and 107; China's response to Arbitrator question No. 1, para. 1. The technical implementation of such nested approach is outlined in paragraphs 51-56 of China's methodology paper.

<sup>95</sup> China's methodology paper, para. 83.

<sup>96</sup> United States' response to Arbitrator question No. 1, para. 4.

<sup>97</sup> United States' written submission, paras. 88, 108 and 110. See also United States' response to Arbitrator question No. 101, para. 100.

<sup>98</sup> United States' written submission, para. 111.

<sup>99</sup> United States' written submission, para. 108.

<sup>100</sup> China's opening statement at the meeting of the Arbitrator, para. 16.

<sup>101</sup> United States' response to Arbitrator question No. 100, paras. 85-89.

<sup>102</sup> See Decisions by the Arbitrators, *US – Anti-Dumping Methodologies (China) (Article 22.6 – US)*, para. 1.11; *US – Washing Machines (Article 22.6 – US)*, para. 1.14; *US – 1916 Act (EC) (Article 22.6 – US)*, paras. 3.2-3.3; *US – Gambling (Article 22.6 – US)*, paras. 2.22-2.23 (quoting Decision by the Arbitrator, *EC – Hormones (Canada) (Article 22.6 – EC)*, para. 9); *US – FSC (Article 22.6 – US)*, para. 2.10; *US – COOL (Article 22.6 – US)*, para. 4.7 (quoting Decision by the Arbitrator, *EC – Hormones (Canada) (Article 22.6 – EC)*, para. 9); *EC and certain member States – Large Civil Aircraft (Article 22.6 – EU)*, para. 4.2; *US – Large Civil Aircraft (2<sup>nd</sup> complaint) (Article 22.6 – US)*, para. 4.3; *EC – Hormones (Canada) (Article 22.6 – EC)*, para. 9; and *EC – Hormones (US) (Article 22.6 – EC)*, para. 9. See also Appellate Body Reports, *US – Wool Shirts and Blouses*, p. 14; *EC – Hormones*, para. 104; *US – Upland Cotton*, para. 644; and *US – Carbon Steel (India)*, para. 4.505; and Panel Report, *Russia – Pigs (EU)*, para. 7.589.

<sup>103</sup> See Decisions by the Arbitrators, *EC – Hormones (Canada) (Article 22.6 – EC)*, para. 9; *EC – Hormones (US) (Article 22.6 – EC)*, para. 9.

need to put forward sufficient arguments and evidence to disprove the methodology proposed by China.

3.35. The United States argues that it has succeeded in making a *prima facie* case that China's request for suspension of concessions is not equivalent to the level of N/I due to the fact that China revised the level of suspension initially requested to the DSB to a lower amount in its methodology paper.<sup>104</sup> We understand that we are not being asked to assess the appropriateness of such a reduction at that stage of the proceedings.

3.36. We note that there have been other Article 22.6 arbitration proceedings in which the original complainant has reduced the level of suspension initially requested to the DSB once it presented its methodology paper.<sup>105</sup> For instance, in the recent *US – Large Civil Aircraft (2<sup>nd</sup> complaint) (Article 22.6 – US)* arbitration, the original complainant, the European Union, initially requested authorization from the DSB to take countermeasures totalling USD 12 billion annually<sup>106</sup>, but later calculated a level of suspension of USD 10.02 billion in its methodology paper.<sup>107</sup> Despite this downward change in the original complainant's request, the arbitrator confirmed the long-established allocation of the burden of proof among the parties as follows:

"For present purposes, it is sufficient to state that we regard the United States, as the party challenging the proposed level of countermeasures, to bear the overall burden of demonstrating that the [original complainant's] methodology results in countermeasures that are not "commensurate" with the degree and nature of the adverse effects determined to exist. To discharge that burden, it is not sufficient for the United States merely to propose an alternative methodology that it asserts is more appropriate. Rather, the United States must engage with the methodology used by the [original complainant], in the sense that the United States must demonstrate why that methodology would result in countermeasures that are not "commensurate" within the meaning of Article 7.10 of the SCM Agreement."<sup>108</sup>

3.37. We agree with this approach. Thus, evoking the mere fact that the original complainant has revised its originally requested level of N/I downwards does not amount to making a *prima facie* case or shift the burden of proof to the original complainant. In our view, once the original complainant has presented a downward revised suspension request in its methodology paper, that is the request on which the arbitration proceedings will be based<sup>109</sup>, and the long-established allocation of the parties' burden of proof applies with respect to that reduced amount. Similarly to the arbitrator in *US – Large Civil Aircraft (2<sup>nd</sup> complaint) (Article 22.6 – US)*, we still regard the United States, as the party challenging China's proposed level of suspension, to bear the initial burden of demonstrating that such reduced level of suspension requested by China is not equivalent to the level of N/I in this dispute.

3.38. That said, the rules on the allocation of the burden of proof in Article 22.6 arbitration proceedings do not relieve the parties from their general duty to provide evidence to an arbitrator.<sup>110</sup> In the words of previous Article 22.6 arbitrators, "[a]n issue to be distinguished from the question of who bears the burden of proof is that of the duty that rests on both parties to produce evidence

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<sup>104</sup> United States' response to Arbitrator question No. 100, para. 91. See also United States' closing statement at the meeting of the Arbitrator, para. 3; response to Arbitrator question No. 98, paras. 79-83, and No. 100, paras. 85-89.

<sup>105</sup> See e.g. Decision by the Arbitrator, *US – Large Civil Aircraft (2<sup>nd</sup> complaint) (Article 22.6 – US)*, fn 44 to para. 1.29 (referring to *ibid.*, para. 6.6 and fns 123 and 597) and fn 123 to para. 6.6.

<sup>106</sup> Decision by the Arbitrator, *US – Large Civil Aircraft (2<sup>nd</sup> complaint) (Article 22.6 – US)*, para. 1.19 (referring to Recourse to Article 22.2 of the DSU, and Articles 4.10 and 7.9 of the SCM Agreement by the European Union, WT/DS353/17).

<sup>107</sup> Decision by the Arbitrator, *US – Large Civil Aircraft (2<sup>nd</sup> complaint) (Article 22.6 – US)*, para. 1.29.

<sup>108</sup> Decision by the Arbitrator, *US – Large Civil Aircraft (2<sup>nd</sup> complaint) (Article 22.6 – US)*, para. 4.3. (fns omitted)

<sup>109</sup> We consider this situation to be different from an increase of the requested level of N/I in the original complainant's methodology paper from the originally requested level of suspension addressed to the DSB. See e.g. Decision by Arbitrator, *EC – Bananas III (Ecuador) (Article 22.6 – EC)*, paras. 22-24.

<sup>110</sup> Decision by the Arbitrator, *US – Gambling (Article 22.6 – US)*, para. 2.24. See also Decisions by the Arbitrators, *EC – Hormones (Canada) (Article 22.6 – EC)*, para. 11; *EC – Hormones (US) (Article 22.6 – EC)*, para. 11.

and to collaborate in presenting evidence to the [a]rbitrators"<sup>111</sup>, and "it is for each party to bring forward the elements to sustain the factual assertions it makes".<sup>112</sup> Thus, we agree with the United States that each party has "a duty to collaborate in the establishment of the facts".<sup>113</sup>

3.39. Accordingly, while the United States is required to submit evidence showing that China's proposal is not equivalent to the level of N/I, China is also required to come forward with evidence explaining how it arrived at its proposal.<sup>114</sup> In this sense, the duty rests on both parties to produce evidence and to collaborate in presenting evidence to the Arbitrator<sup>115</sup>, regardless of which party bears the overall burden of proof.<sup>116</sup> As the Appellate Body has held, "precisely how much and precisely what kind of evidence will be required to establish ... a presumption [that what is claimed is true] will necessarily vary from measure to measure, provision to provision, and case to case."<sup>117</sup>

3.40. In light of the above, we shall examine the totality of the evidence submitted by the parties in the context of China's proposal for a nested approach and specifically for a Rule of Two. We recall in this regard that "[i]n determining the level of nullification or impairment ..., we need to rely, as much as possible, on credible, factual, and verifiable information."<sup>118</sup> We shall analyse the arguments and evidence advanced by the parties in four parts: (i) the United States International Trade Commission (USITC) report containing a survey on the characteristics of the products at issue; (ii) the existence of an alleged literature standard; (iii) hypothesis tests and point estimates contained in a recent econometric study; and (iv) descriptive evidence stemming from observed trade patterns after the measure was put in place. As regards China's claim about the parties' arguments and evidence being of equal merit or in equipoise, we will address the relevant arguments if, after having engaged with the parties' substantive arguments and evidence, we consider that indeed we are in this specific scenario.

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<sup>111</sup> Decision by the Arbitrator, *Brazil – Aircraft (Article 22.6 – Brazil)*, para. 2.9. See also Decisions by the Arbitrators, *EC – Hormones (Canada) (Article 22.6 – EC)*, para. 10; *EC – Hormones (US) (Article 22.6 – EC)*, para. 10; *US – Gambling (Article 22.6 – US)*, para. 2.24; and *US – Washing Machines (Article 22.6 – US)*, para. 1.14 (quoting Decision by the Arbitrator, *US – Gambling (Article 22.6 – US)*, para. 2.24).

<sup>112</sup> Decision by the Arbitrator, *US – Gambling (Article 22.6 – US)*, para. 2.24 (referring to Decisions by the Arbitrators, *EC – Hormones (Canada) (Article 22.6 – EC)*, para. 11; *EC – Hormones (US) (Article 22.6 – EC)*, para. 11). See also Decision by the Arbitrator, *US – Large Civil Aircraft (2<sup>nd</sup> complaint) (Article 22.6 – US)*, para. 4.4.

<sup>113</sup> United States' response to Arbitrator question No. 100, para. 89 (quoting Decision by the Arbitrator, *US – Anti-Dumping Methodologies (China) (Article 22.6 – US)*, para. 1.11). See also Decisions by the Arbitrators, *US – Gambling (Article 22.6 – US)*, para. 2.24, *US – Washing Machines (Article 22.6 – US)*, para. 1.14 (quoting Decision by the Arbitrator, *US – Gambling (Article 22.6 – US)*, para. 2.24); *EC – Hormones (Canada) (Article 22.6 – EC)*, para. 11; and *EC – Hormones (US) (Article 22.6 – EC)*, para. 11.

<sup>114</sup> Decisions by the Arbitrators, *EC – Hormones (Canada) (Article 22.6 – EC)*, para. 11; *EC – Hormones (US) (Article 22.6 – EC)*, para. 11. See also Decisions by the Arbitrators, *Brazil – Aircraft (Article 22.6 – Brazil)*, para. 2.8; *EC – Bananas III (Ecuador) (Article 22.6 – EC)*, para. 38; and *US – Large Civil Aircraft (2<sup>nd</sup> complaint) (Article 22.6 – US)*, para. 4.4.

<sup>115</sup> Decision by the Arbitrator, *Brazil – Aircraft (Article 22.6 – Brazil)*, para. 2.9. See also Decisions by the Arbitrators, *US – FSC (Article 22.6 – US)*, para. 2.11; *US – Offset Act (Byrd Amendment) (India) (Article 22.6 – US)*, para. 2.26 (quoting Decision by the Arbitrator, *EC – Hormones (Canada) (Article 22.6 – EC)*, para. 11) and para. 2.27 (referring to Decisions by the Arbitrators, *Brazil – Aircraft (Article 22.6 – Brazil)*, paras. 2.9-2-11; and *Canada – Aircraft Credits and Guarantees (Article 22.6 – Canada)*, para. 3.76).

<sup>116</sup> "An issue to be distinguished from the question of who bears the burden of proof is that of the duty that rests on both parties to produce evidence and to collaborate in presenting evidence to the Arbitrators. This is why, even though [the original respondent] bears the original burden of proof, we expected [the original complainant] to come forward with evidence explaining why its proposal constitutes appropriate countermeasures and we requested it to submit a 'methodology paper' describing how it arrived at the level of countermeasures it proposes."

(Decision by the Arbitrator, *Brazil – Aircraft (Article 22.6 – Brazil)*, para. 2.9. See also Decisions by the Arbitrators, *EC – Bananas III (US) (Article 22.6 – EC)*, para. 4.2; *US – Large Civil Aircraft (2<sup>nd</sup> complaint) (Article 22.6 – US)*, para. 4.4).

<sup>117</sup> Appellate Body Report, *US – Wool Shirts and Blouses*, p. 14.

<sup>118</sup> Decision by the Arbitrator, *US – 1916 Act (EC) (Article 22.6 – US)*, para. 5.54. See also Decisions of the Arbitrators, *US – Washing Machines (Article 22.6 – US)*, para. 1.16 (referring to *ibid.*, para. 5.54); *US – Large Civil Aircraft (2<sup>nd</sup> complaint) (Article 22.6 – US)*, para. 3.6 (quoting Decision by the Arbitrator, *EC and certain member States – Large Civil Aircraft (Article 22.6 – EU)*, para. 6.173 (in turn quoting Decision by the Arbitrator, *US – Tuna II (Mexico) (Article 22.6 – US)*, para. 5.16 (fns omitted) (in turn quoting Decisions by the Arbitrator, *US – COOL (Article 22.6 – US)*, para. 4.5; *US – Gambling (Article 22.6 – US)*, para. 3.3; and *US – 1916 Act (EC) (Article 22.6 – US)*, para. 5.54))).

### 3.3.1.1 USITC survey evidence and elasticity estimates

3.41. The United States considers that the Arbitrator has compelling evidence before it supporting identical micro- and macro-elasticities for each of the specific products at issue. The United States notes that, in the current proceedings, both parties have relied on USITC reports for elasticities of substitution, which are developed within the framework of a non-nested, constant elasticity of substitution model and, hence, support the Rule of One.<sup>119</sup> The United States also argues that the USITC investigations pertinent to this dispute found through business surveys that, for all products at issue with the exception of Wire Strand, "domestic, Chinese, and non-subject imported varieties are similarly comparable in terms of intrinsic characteristics, quality, and terms of sale".<sup>120</sup> The United States adds that most of the products at issue are standardized materials produced to common specifications such that they are fully interchangeable across all sources.<sup>121</sup>

3.42. China argues that it is not evident from USITC reports whether USITC has evaluated the Rule of Two for use within its product analysis, and the United States has not indicated where such an evaluation could be found.<sup>122</sup> China further refers to the evidence on interchangeability as insufficient because the questionnaire is not informative regarding how buyers react to price changes.<sup>123</sup>

3.43. We note that, despite the United States' claim that the USITC reports use the Rule of One, i.e. a non-nested approach, the USITC reports in question do not seem to specify whether their estimates rely on a nested or a non-nested approach. Accordingly, we disagree with the United States' claim that China's reliance on the USITC estimates for macro-elasticities implies adopting the Rule of One.

3.44. Regarding interchangeability and comparability, we note that while it appears reasonable that these factors contribute to determining elasticities, there is nothing on the record suggesting that these would be the only factors. These factors might imply that the ratio of micro- to macro-elasticity is indeed lower for the products at issue than for less comparable products. However, we fail to see this as clear evidence that the ratio should be one as suggested by the United States.

### 3.3.1.2 Standard approach in the economic modelling literature

3.45. According to China, using the Rule of Two would be in accordance with an established standard for economic analysis of international trade. China argues that the Rule of Two has been widely applied in the context of modelling the effect of counterfactual policy changes, including by the USITC, the WTO Secretariat, and the Global Trade Analysis Project (a network of researchers and policy-makers that provides a standard model and data for modelling global trade flows).<sup>124</sup> China submits that this standard in the literature is based on a series of papers finding micro-elasticities to be larger than macro-elasticities. In comparison, according to China, the United States' assumption of a constant elasticity between all suppliers is an outlier in the economic literature.<sup>125</sup>

3.46. The United States argues that although the Rule of Two has been used in certain trade policy modelling literature, the fact that a rule of thumb may be widely used is no substitute for evidentiary support, and considers that the studies cited by China in support of the Rule of Two suffer from biased estimation techniques.<sup>126</sup> The United States notes that, contrary to China's assertion, although the USITC employed the Rule of Two in multisector computable general equilibrium (CGE) modelling, the lack of empirical support led the USITC to abandon the Rule of Two in its recent CGE analysis of the impact of the US-Mexico-Canada Agreement.<sup>127</sup> The United States further argues

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<sup>119</sup> The United States notes that, as examples of both parties' reliance on USITC reports, the parties have set the macro-elasticity equal to the elasticity of substitution reported in USITC reports, and have used the supply and demand elasticity estimates reported in USITC reports (United States' response to Arbitrator question No. 1, para. 2).

<sup>120</sup> United States' response to Arbitrator question No. 1, para. 3.

<sup>121</sup> United States' response to Arbitrator question No. 1, para. 4.

<sup>122</sup> China's written submission, para. 60.

<sup>123</sup> China's opening statement at the meeting of the Arbitrator, para. 13.

<sup>124</sup> China's methodology paper, paras. 8 and 83-86. See also China's written submission, para. 54.

<sup>125</sup> China's methodology paper, paras. 8 and 87-89 (referring to Exhibits CHN-63, 69, and 70); written submission, para. 3; and response to Arbitrator question No. 1, para. 5.

<sup>126</sup> United States' response to Arbitrator question No. 1, para. 20; Exhibit USA-33.

<sup>127</sup> United States' written submission, para. 109 (referring to Exhibits USA-30 and USA-33).

that CGE assumptions are not necessarily applicable to the type of product-by-product, partial equilibrium (PE) modelling required in these proceedings.<sup>128</sup> The United States adds that the increased discarding of the Rule of Two, even in multisector CGE modelling, confirms that this rule is not an appropriate simplifying assumption for a single-product PE model. Regarding PE modelling, the United States argues that the Rule of One is standard practice and has been used in previous arbitrations, including in DS471.<sup>129</sup>

3.47. We consider that the degree to which a standard in the economic literature may serve as guidance in a specific arbitration proceeding would depend not only on its alleged wide use but also on the evidence it is based on and its applicability to the specific situation at issue.

3.48. We agree with the United States that the use of the Rule of Two in CGE modelling appears to be based on a limited set of older studies that do not provide conclusive evidence that micro-elasticities are consistently twice as large as macro-elasticities. At most, these studies could be taken to support the conclusion that micro-elasticities tend to be larger than macro-elasticities. In any event, a standard applied in CGE modelling might not necessarily be informative for a PE model as used in the form of the Armington model in this arbitration. CGE models analyse more aggregated sectors rather than individual products, which might have an impact on the degree of substitutability.

3.49. While the United States points out that the USITC has discarded the Rule of Two, the United States has not substantiated its claim that the Rule of One is standard in the PE modelling literature, nor has the United States submitted any evidence which such a standard may be based on. The United States references a USITC working paper, which provides a technical description of the Rule of One and claims that "the standard trade policy model is the constant elasticity of substitution (CES) tariff model"<sup>130</sup>, without however substantiating the reasons for using such Rule. Further, while the USITC working paper describes the use of the Rule of One, it also contains declarations acknowledging the nested approach and the Rule of Two.<sup>131</sup> In any case, we do not consider that a single study could establish the existence of a widely applied literature standard.

3.50. In light of the above, we consider that the parties' arguments regarding literature standards do not provide conclusive support for either a nested approach (with any ratio, including the Rule of Two) or a non-nested approach for the purposes of this arbitration.

### 3.3.1.3 Econometric evidence

3.51. China claims that the Rule of Two is additionally supported by econometric evidence reported in a recent study (Feenstra et al.<sup>132</sup>). At the outset, the United States claims that none of the products at issue in these proceedings were in the sample used in the study and hence the results cannot be generalized.<sup>133</sup> However, China notes that Feenstra et al. does estimate a micro-elasticity for OCTG and that the broad categories covered by the study include "Metal Products" which includes products at issue in this dispute.<sup>134</sup> We consider that while the direct product overlap between Feenstra et al. and the products at issue is limited to OCTG, the presence of the product categories

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<sup>128</sup> United States' written submission, para. 4.

<sup>129</sup> United States' written submission, para. 110.

<sup>130</sup> Exhibit CHN-60, p. 2. See also United States' response to Arbitrator question No. 70, fn 7 to para. 6; No. 100, fn 94 to para. 98; and No. 101, fn 96 to para. 100.

<sup>131</sup> For instance, the paper acknowledges that "modellers commonly nest all imported varieties in an industry and keep the domestic variety outside the nest", that "many modellers use the rule-of-two", and that "for many products, there is greater substitutability between imported varieties than there is between domestic and imported varieties". (Exhibit CHN-60, pp. 2, 8, and 16).

<sup>132</sup> Robert C. Feenstra, Philip Luck, Maurice Obstfeld, and Katheryn N. Russ, "In Search of the Armington Elasticity," *The Review of Economics and Statistics*, 2018 100:1, 135-150 (Exhibit CHN-63) (Feenstra et al.).

<sup>133</sup> United States' response to Arbitrator question No. 1, paras. 17-18.

<sup>134</sup> China's response to Arbitrator question No. 70, paras. 2 and 4.

"Primary Metals" and "Metal Products"<sup>135</sup> in the study confers relevance to Feenstra et al. given that seven out of the ten products at issue fall under these categories.<sup>136</sup>

3.52. China relies on essentially two sets of the study's results concerning hypothesis tests and point estimates. Regarding hypothesis tests, China argues firstly that, for 34.7% of the cases, Feenstra et al. is able to reject in a statistically significant way the hypothesis that the micro-elasticity is less than or equal to the macro-elasticity. China adds that the failure to reject the hypothesis for the other two thirds of the products in no way indicates that the Rule of One is a superior choice.<sup>137</sup> Secondly, China states that, when testing the hypothesis of the Rule of Two, the study is only able to reject the Rule of Two for between 10% and 20% of the cases. According to China, Feenstra et al. suggests that, at a minimum, the micro-elasticity should be above the macro-elasticity and the vast majority of contemporary trade policy modellers fail to find anything in the study that dissuades them from adopting the Rule of Two.<sup>138</sup>

3.53. The United States responds that the fact that Feenstra et al. finds estimated macro-elasticities that are statistically and significantly lower than estimated micro-elasticities for only "between one-quarter and one-third of the [sample] goods" supports its own position.<sup>139</sup> The United States suggests that China misinterprets the evidence that the micro-elasticity may be larger than the macro-elasticity as definitive evidence that for all products the micro-elasticity is exactly two times larger than the corresponding macro-elasticity.<sup>140</sup> The United States adds that Feenstra et al. does not provide information on the power of the statistical tests applied. The United States refers to Bayes' Theorem<sup>141</sup>, according to which the power of a statistical estimator must be known if one wishes to determine the probability that a null hypothesis (in this case, the Rule of Two) is true when the statistical test fails to reject this null hypothesis.<sup>142</sup>

3.54. Regarding point estimates, China notes firstly that Feenstra et al. obtains higher point estimates for elasticities among imports in 74.5% of the cases analysed. If the elasticities were to be the same, China contends, one would see higher point estimates in only 50% of the cases, and the probability of finding higher point estimates in 74.5% of cases would essentially be zero in the scenario argued by the United States.<sup>143</sup> China adds that in the product category most comparable to the products at issue (Metal Products), all goods sampled by Feenstra et al. have higher micro- than macro-elasticity point estimates. China also notes that for the one product which is subject to both Feenstra et al. and this dispute, OCTG, the estimated micro-elasticity is between two and 3.5 times higher than the macro-elasticity estimated by USITC.<sup>144</sup>

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<sup>135</sup> These two product categories appear to be based on the North American Industry Classification System (NAICS) and are defined by the NAICS manual as a "subsector [that] smelt[s] and/or refine[s] ferrous and nonferrous metals from ore, pig or scrap, using electrometallurgical and other process metallurgical techniques" (Primary Metals) and as a "subsector [that] transform[s] metal into intermediate or end products, other than machinery, computers and electronics, and metal furniture, or treat[s] metals and metal formed products fabricated elsewhere" (Metal Products). Executive Office of The President - Office of Management and Budget, North American Industry Classification System, 2017. See [https://www.census.gov/naics/reference\\_files\\_tools/2017\\_NAICS\\_Manual.pdf](https://www.census.gov/naics/reference_files_tools/2017_NAICS_Manual.pdf).

<sup>136</sup> The exceptions being Kitchen Shelving, Print Graphics, and Solar Panels.

<sup>137</sup> China's written submission, para. 57.

<sup>138</sup> China's written submission, para. 59.

<sup>139</sup> United States' written submission, para. 108.

<sup>140</sup> The United States explains that the Feenstra et al. paper conducts two statistical tests for a set of products that are not randomly selected and are not representative of the products at issue in these proceedings, and links China's assumptions to each test. According to the United States, the first test is for the null hypothesis that the micro-elasticity is less than or equal to the macro-elasticity versus the alternative hypothesis that the micro-elasticity is greater than the macro-elasticity (in which the authors reject the null hypothesis for two-thirds to three-quarters of the sample products, and do not reject the null hypothesis, but cannot conclude the alternative hypothesis is valid, for the remaining products), and the second test is for the null hypothesis that the Rule of Two is valid (in which the authors find statistical evidence to reject the null hypothesis in one-tenth to one-fifth of the products in the sample). (United States' response to Arbitrator question No. 1, paras. 9-10).

<sup>141</sup> Bayes' Theorem provides the probability of a null hypothesis given the outcome of a statistical test. (United States' response to Arbitrator question No. 1, fn 34 to para. 12).

<sup>142</sup> United States' response to Arbitrator question No. 1, para. 12. The United States also contests an example submitted by China in Exhibit CHN-96, claiming that China relies on incorrect data from Feenstra et al. (Ibid., paras. 14-16; Exhibits CHN-96; and USA-102 (BCI))

<sup>143</sup> China's written submission, para. 56.

<sup>144</sup> China's response to Arbitrator question No. 70, paras. 1-6.

3.55. The United States contests China's interpretation of the point estimates of Feenstra et al. for extrapolating beyond what is supported by the data presented in that paper in light of the large standard errors surrounding them.<sup>145</sup>

3.56. We note the seemingly contradictory hypothesis tests in which Feenstra et al. first fails to reject the Rule of Two for up to 90% of the products studied but also reports that the micro-elasticity is statistically significantly larger than the macro-elasticity for only about one third of the products reviewed. This may be explained by relatively imprecise estimates potentially caused by the small number of observations in the study. In light of this, we fail to see these hypothesis tests as conclusive evidence for either a nested or a non-nested approach.

3.57. Concerning point estimates, we agree with China that Feenstra et al. reporting estimated micro-elasticities that are larger than estimated macro-elasticities for 74.5% of the products studied supports the use of a nested approach. Even if the point estimates are not precisely estimated and the United States is correct in arguing that China's calculations extrapolate beyond what the study's data supports, they appear to be the best available econometric evidence on the record for the relative size of micro- and macro-elasticities.

3.58. That said, we do not concur with China that Feenstra et al. provides clear evidence in favour of implementing the nested approach using the Rule of Two in these arbitration proceedings. The estimated micro-elasticities in Feenstra et al. are not consistently twice as large as the estimated macro-elasticities. Therefore, we take the econometric evidence as supportive of a nested approach but not of the implementation using the Rule of Two.

#### **3.3.1.4 Descriptive statistics**

3.59. China argues that product-specific descriptive evidence complements the econometric evidence. China claims that the United States' suggestion to adjust the Armington model to reflect the increased market share of countries that are Rising Suppliers<sup>146</sup>, in fact, lends support to the Rule of Two. China argues that, at its core, the United States seems to be showing that non-Chinese import suppliers gained larger market share than expected after the imposition of the duties.<sup>147</sup> For China, this pattern of third-country responses can be explained by the fact that micro-elasticities are greater than macro-elasticities.<sup>148</sup> China argues that, at least regarding cases where the United States feels such an adjustment should be made to the Armington model, the United States has provided direct evidence that the import-import response is larger than the import-domestic response.<sup>149</sup> To support its argument, China presents a table showing that, for each of the products at issue, the drop in China's shares in the US market from the year-prior to the remedy year (17.77% on average) is smaller than the drop in China's share of US imports in the same period (39.86% on average). According to China, this is evidence that the CVDs imposed on Chinese products result in trade diversion to non-subject imports at a rate higher than the diversion to US domestic products.<sup>150</sup>

3.60. The United States criticizes China for mischaracterizing the United States' argument about Rising Suppliers. The United States acknowledges that its proposed "supply shock" adjustment implies that imports from certain third countries have gained market share at the expense of products of the US domestic, Chinese, and other RoW varieties, and that a nested approach generates such a market response.<sup>151</sup> However, the United States argues that the adjustments proposed by China and the United States are based on different underlying assumptions, which have substantial implications for estimating the level of N/I. According to the United States, China's application of the Rule of Two implies that imports from China are twice as substitutable for imports from non-subject countries than they are for the domestic variety.<sup>152</sup> On the contrary, the United States argues that the underlying assumption of its proposed supply-shock adjustment is that producers in certain third countries have increased their ability to supply during the period

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<sup>145</sup> United States' response to Arbitrator question No. 1, para. 19.

<sup>146</sup> See section 3.3.4 below.

<sup>147</sup> China's written submission, para. 53.

<sup>148</sup> China's response to Arbitrator question No. 1, para. 2.

<sup>149</sup> China's written submission, para. 61. See also China's response to Arbitrator question No. 1, para. 2.

<sup>150</sup> China's response to Arbitrator question No. 1, paras. 3 and 4.

<sup>151</sup> United States' response to Arbitrator question No. 1, para. 6.

<sup>152</sup> United States' response to Arbitrator question No. 1, para. 7.

between the imposition of the CVDs and the expiration of the RPT, independently of any duties on Chinese imports.<sup>153</sup>

3.61. We agree with China that the trade pattern observed after the imposition of the CVDs in which third country suppliers gained a larger market share relative to domestic suppliers could be consistent with a nested approach. The United States argues that such a trade pattern is also consistent with its proposed adjustment related to Rising Suppliers. However, as analysed later<sup>154</sup>, we do not consider that the United States has substantiated this adjustment. We also note that the intensity of the observed trade diversion towards other importers varies significantly by product rather than being consistently around twice as large as the trade diversion towards domestic varieties. Our conclusion is, thus, that this descriptive evidence can be supportive of a nested approach with micro-elasticities larger than macro-elasticities but it does not support China's implementation of that approach with the Rule of Two.

### 3.3.1.5 Conclusion

3.62. As mentioned<sup>155</sup>, China's proposed adjustment raises two issues: (i) whether to apply a nested approach; and, if so, (ii) whether to use the Rule of Two for the specific ratio between macro- and micro-elasticities for all of the products at issue. In light of the aforementioned considerations, and having reviewed the totality of the arguments and evidence put forward by the parties, we have arrived at the following conclusions.

3.63. As regards the nested approach, we consider that the United States has failed to prove that micro-and macro-elasticities are equal for the products at issue (Rule of One). Logically, therefore, the United States has not proven that China's suggestion for using a nested approach *per se* is inadequate. Indeed, we consider that the evidence provided by China has successfully demonstrated the appropriateness of the nested approach.

3.64. As regards the specific ratio for such a nested approach, although the United States has not made a *prima facie* case in favour of its alternative proposal of a Rule of One, we consider that it has called into question the Rule of Two advanced by China, and that the evidence submitted by China is not sufficient to justify the Rule of Two. We recall in this regard that, despite the allocation of the general burden of proof, "it is for each party to bring forward the elements to sustain the factual assertions it makes".<sup>156</sup> While the United States "is required to submit evidence showing that [China's] proposal is not equivalent" within the meaning of Article 22.4 of the DSU, China is also "required to come forward with evidence explaining how it arrived at its proposal and showing why its proposal is equivalent to the trade impairment it has suffered".<sup>157</sup>

3.65. We recall China's argument that, if the parties' arguments are "of equal merit such that the evidence was in 'equipoise'"<sup>158</sup>, its position should necessarily prevail. This concept was explained by a previous arbitrator as follows:

Following well-established WTO jurisprudence, ... it is for the [original respondent] to submit arguments and evidence sufficient to establish a *prima facie* case or presumption that the level of suspension proposed by the [original complainant] is not equivalent to the level of nullification and impairment ... . Once the [original respondent] has done so, however, it is for the [original complainant] to submit arguments and evidence sufficient to rebut that presumption. Should all arguments and evidence

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<sup>153</sup> United States' response to Arbitrator question No. 1, para. 8.

<sup>154</sup> See section 3.3.4 below.

<sup>155</sup> See paragraph 3.32 above.

<sup>156</sup> Decision by the Arbitrator, *US – Gambling (Article 22.6 – US)*, para. 2.24 (referring to Decisions by the Arbitrators, *EC – Hormones (Canada) (Article 22.6 – EC)*, para. 11; *EC – Hormones (US) (Article 22.6 – EC)*, para. 11).

<sup>157</sup> Decisions by the Arbitrators, *EC – Hormones (Canada) (Article 22.6 – EC)*, para. 11; *EC – Hormones (US) (Article 22.6 – EC)*, para. 11. (emphasis omitted) See also Decisions by the Arbitrators, *Brazil – Aircraft (Article 22.6 – Brazil)*, para. 2.8; *EC – Bananas III (Ecuador) (Article 22.6 – EC)*, para. 38; and *US – Large Civil Aircraft (2<sup>nd</sup> complaint) (Article 22.6 – US)*, para. 4.4.

<sup>158</sup> China's opening statement at the meeting of the Arbitrator, para. 16. (emphasis omitted)

remain in equipoise, the [original respondent], as the party bearing the original burden of proof, would lose.<sup>159</sup>

3.66. We do not consider that the parties' evidence and arguments are "of equal merit" or "in equipoise" in this context. While the United States has failed to disprove the nested approach *per se*, its claim against a nested approach with the specific ratio of two has been successful. It has thus established "a *prima facie* case or a presumption" that China's suggestion for a Rule of Two would result in a level of suspension not equivalent to the level of N/I. As noted, while showing that macro-elasticities are higher than micro-elasticities, China's evidence is insufficient to justify the Rule of Two, and hence China has not rebutted the presumption established by the United States.

3.67. In short, the parties' arguments and evidence do not mutually undermine each other's positions. Rather, they provide sufficient basis for accepting a nested approach, but not with a ratio of two as suggested by China.

3.68. Given its limitations, however, the evidence before us is insufficient for determining a specific figure for a nested approach in the range argued by the parties, i.e. between 1 and 2. Nonetheless, in light of our mandate as an Article 22.6 arbitrator, we cannot end our analysis here. We are called upon to go further and estimate the level of suspension we consider to be equivalent to the level of N/I suffered by China. As noted by a previous arbitrator:

There is ... a difference between our task here and the task given to a panel. In the event we decide that the [original complainant's] proposal is not WTO consistent (i.e. the suggested amount is too high), we should not end our examination the way panels do, namely by requesting the DSB to recommend that the measure be brought into conformity with WTO obligations. ... [W]e would be called upon to go further. In pursuit of the basic DSU objectives of prompt and positive settlement of disputes, we would have to estimate the level of suspension we consider to be equivalent to the impairment suffered. This is the essential task and responsibility conferred on the arbitrators in order to settle the dispute.<sup>160</sup>

3.69. As the parties' evidence points to an overall ratio of micro- to macro-elasticities of above one, but not necessarily as high as two, we need to choose an appropriate ratio between these values. Given our task and the limitations of the evidence before us, we felt compelled to review other available approaches in the economic literature beyond those put forward by the parties, and note that another major CGE model, Mirage, by the Centre d'Etudes Prospectives et d'Informations<sup>161</sup>, uses the square root of two, or approximately 1.41.<sup>162</sup> As this ratio is in line with our reading of the parties' evidence that the overall ratio of micro- to macro-elasticities for the products at issue would be above one but below two, we adopt this number and implement the nested approach accordingly, using a ratio of the square root of two (i.e. approximately 1.41).

### 3.3.2 Net-of-duty adjustment

3.70. As explained<sup>163</sup>, once both steps of the two-step Armington model have been completed, a subtraction needs to be performed. For each CVD order at issue, the figure for the estimated remedy-year sales of imports from China obtained under step 1 of the Armington model with WTO-inconsistent CVD rates needs to be subtracted from the figure for the estimated counterfactual remedy-year sales of imports from China obtained under step 2.

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<sup>159</sup> Decisions by the Arbitrators, *EC – Hormones (Canada) (Article 22.6 – EC)*, para. 9; *EC – Hormones (US) (Article 22.6 – EC)*, para. 9. (emphasis omitted) See also Decision by the Arbitrator, *Brazil – Aircraft (Article 22.6 – Brazil)*, para. 2.8.

<sup>160</sup> Decisions by the Arbitrators, *EC – Hormones (Canada) (Article 22.6 – EC)*, para. 12; *EC – Hormones (US) (Article 22.6 – EC)*, para. 12. (emphasis omitted; fns omitted)

<sup>161</sup> The Mirage consortium tasked with maintaining the model consists of the European Commission, the International Food Policy Research Institute (IFPRI), the Institut National de la Recherche Agronomique, the International Trade Centre, Trinity College, the United Nations Economic Commission for Africa, Università del Molise, and the World Trade Organization. See [http://www.mirage-model.eu/miragewiki/index.php?title=MIRAGE\\_Consortium](http://www.mirage-model.eu/miragewiki/index.php?title=MIRAGE_Consortium).

<sup>162</sup> See Decreux, Y. and H. Valin (2007), MIRAGE, Updated Version of the Model for Trade Policy Analysis with a Focus on Agriculture and Dynamics, CEPII Working Paper no. 2007-15, October 2007, CEPII.

<sup>163</sup> See para. 3.27 above.

3.71. China's proposed net-of-duty adjustment would entail excluding duty payments from both sides of this subtraction, and hence ultimately from the N/I calculation.<sup>164</sup> In essence, China argues that the export values used for the N/I calculation should not include any duty revenue being collected as such duties do not accrue to Chinese exporters.<sup>165</sup>

3.72. Initially, the United States disagreed with this adjustment suggested by China, arguing that it is a "baseless" departure from the arbitrator's approach in *US – Anti-Dumping Methodologies (China) (Article 22.6 – US)*, which would "distort the results of the estimation of the level of [N/I]".<sup>166</sup> However, in response to a question from the Arbitrator, the United States ultimately describes China's suggested adjustment for a net-of-duty calculation as "reasonable ... from the perspective of trade opportunities for China", and agrees to revise its own computer code to incorporate China's net-of-duty adjustment.<sup>167</sup>

3.73. In light of the parties' agreement, we shall apply China's net-of-duty adjustment when calculating the level of N/I for the purpose of these proceedings. In doing so, we need not address the approach of prior Article 22.6 arbitrations.<sup>168</sup>

### 3.3.3 The effects of dumping on China's market shares

3.74. According to the United States, China's market share in the year prior to the imposition of the CVDs was distorted by dumping practices.<sup>169</sup> As a consequence, the first methodological adjustment proposed by the United States to the two-step Armington model would be to take into account the effect of such dumping on China's market shares by simulating the effect of the AD duties adopted by the United States in response, in step one of the two-step Armington model.<sup>170</sup> In practice, the United States suggests applying a duty rate on imports from China that is equal to the WTO-inconsistent CVD rate plus an AD duty rate in step one of the two-step Armington model, before moving in step two to a rate equal to the WTO-consistent CVD rate plus the same unchanged AD duty rate, rather than simply modelling the effect of a move from a WTO-inconsistent to a WTO-consistent CVD rate.

3.75. The United States argues that this adjustment would ensure that the level of N/I is calculated using a model that more accurately represents the US market at the expiration of the RPT, based on a counterfactual that better captures the changes in duty rates applied to imports from China in that period.<sup>171</sup> If dumping is not accounted for, explains the United States, the model would generate 2017 counterfactual market shares that would overstate China's underlying competitiveness and inflate the level of N/I.<sup>172</sup> According to the United States, not including other factors in the model

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<sup>164</sup> China's methodology paper, paras. 9 and 76-77.

<sup>165</sup> China's methodology paper, paras. 7 and 33.

<sup>166</sup> United States' written submission, para. 106.

<sup>167</sup> United States' response to Arbitrator question No. 9, para. 74. See also Exhibits USA-101; USA-105; and USA-139.

<sup>168</sup> The two prior arbitrations relying on the two-step Armington model applied different approaches to calculate the level of N/I. A net-of-duty calculation was used in *US – Washing Machines (Article 22.6 – US)*, whereas the arbitrator in *US – Anti-Dumping Methodologies (China) (Article 22.6 – US)* applied a gross-of-duty calculation (see Decisions by the Arbitrators, *US – Washing Machines (Article 22.6 – US)*, para. 5.3; *US – Anti-Dumping Methodologies (China) (Article 22.6 – US)*, section 7.2). China argues that the arbitrator in *US – Washing Machines (Article 22.6 – US)* was right to apply the net-of-duty adjustment, and that the computer code used by the arbitrator in *US – Anti-Dumping Methodologies (China) (Article 22.6 – US)* contained a "critical programming error" by not excluding the relevant duties (see China's response to Arbitrator question No. 9, para. 16, referring to China's written submission, paras. 65-75; China's methodology paper, paras. 73-81).

<sup>169</sup> United States' written submission, paras. 7 and 72.

<sup>170</sup> United States' written submission, paras. 7 and 72. The United States includes up to three distinct Chinese varieties in its proposed implementation of the two-step Armington model, which depend on the product at issue and the different AD duties applied to Chinese imports (see Exhibits USA-81 and USA-82). According to China, the approach of adopting three distinct Chinese varieties reflects the model used in *US – Anti-Dumping Methodologies (China) (Article 22.6 – US)* that was formulated to accommodate the AD duties at issue in that dispute, which differed depending on the classification of the Chinese firms. In the present proceedings, China argues, the CVD duties apply consistently across all the firms, and the parallel AD duties cannot be properly incorporated into the model because the added complexity of three distinct varieties is unnecessary (China's response to Arbitrator question No. 3, para. 11).

<sup>171</sup> United States' response to Arbitrator question No. 3, paras. 25 and 26.

<sup>172</sup> United States' written submission, paras. 7, 68, 72, 123, and 136; opening statement at the meeting of the Arbitrator, para. 23. See also Exhibits USA-74 (BCI) and USA-77.

that could affect China's 2017 market share would implicitly assume that such factors did not affect the United States' market.<sup>173</sup> The United States claims that if the AD duties are not explicitly included in step one, the Armington model would be essentially asking how the market would be different if CVD rates were WTO-consistent at the expiration of the RPT and if AD duties had never been imposed.<sup>174</sup>

3.76. The United States argues that imports from China in 2017 were affected by both CVD and AD duties, imposed at or around the same time for each of the ten products at issue.<sup>175</sup> The United States explains that its rationale for this proposed adjustment extends to any changes that occurred between the imposition of the CVD measure and the remedy year, as long as the change had an impact on market shares over the relevant time period, and there is evidence supporting that relationship.<sup>176</sup> According to the United States, if, hypothetically, the AD measures had been applied several years prior to the imposition of the CVD measures, it would not be appropriate to incorporate them into step one of the two-step Armington model.<sup>177</sup> In such a case, explains the United States, the AD measures would already be reflected in China's year-prior market share, and, accordingly, the impact of these measures on China's relative competitiveness would already be represented in the 2017 counterfactual market shares.<sup>178</sup> In contrast, the United States argues, AD measures imposed in the same year as the CVD measures or any year between that year and 2017 should be incorporated into the model to generate an adequate representation of the counterfactual 2017 market.<sup>179</sup>

3.77. China contests the validity of this proposed adjustment and requests the Arbitrator to reject it. According to China, this proposal is an attempt to undermine the integrity of the two-step Armington model by reverting it, in practice, to a one-step approach.<sup>180</sup> China claims that this adjustment would artificially reduce China's market share in step two of the methodology, ignoring year-prior market shares and understating the level of N/I<sup>181</sup> as a result of attributing the effect of the CVD duties to the AD duties.<sup>182</sup> The purpose of the two-step Armington model, argues China, is to identify the N/I caused by the measures that are the subject of the N/I inquiry, which means taking those measures and only those measures into account in the model.<sup>183</sup> China notes that this methodology was developed specifically to address the problem of the depressing effect of the United States' WTO-inconsistent duties over time.<sup>184</sup> China is of the view that the timing or duration of the AD duties is irrelevant. According to China, whether AD duties were imposed in the year-prior, the remedy year, or the period in between, the effect of the WTO-inconsistent CVD duties would be distorted if an adjustment for the AD duties were to be included in the model.<sup>185</sup>

3.78. In response, the United States challenges the idea that the two-step Armington model could isolate the effect of a particular policy, such as CVDs, by excluding all other relevant policies, such as AD duties. If that were true, argues the United States, the level of N/I estimates obtained in a model that simulates changes in both CVD and AD duties together should be equal to the sum of

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<sup>173</sup> United States' closing statement at the meeting of the Arbitrator, para. 10.

<sup>174</sup> United States' opening statement at the meeting of the Arbitrator, paras. 13 and 21.

(emphasis original)

<sup>175</sup> United States' response to Arbitrator question No. 2, para. 22.

<sup>176</sup> United States' closing statement at the meeting of the Arbitrator, para. 10; response to Arbitrator question No. 102, para. 106.

<sup>177</sup> United States' written submission, paras. 68 and 72; response to Arbitrator question No. 72, para. 14.

<sup>178</sup> United States' response to Arbitrator question No. 72, para. 16.

<sup>179</sup> United States' response to Arbitrator question No. 72, para. 17.

<sup>180</sup> China's written submission, paras. 3, 4, 29, 34, 36, and 38; response to Arbitrator question No. 2, para. 9, and No. 30, para. 3; closing statement at the meeting of the Arbitrator, para. 9.

<sup>181</sup> China's response to Arbitrator question No. 30, para. 3; opening statement at the meeting of the Arbitrator, para. 17.

<sup>182</sup> To illustrate this point, China suggests imagining a case where the United States has imposed both AD duties at a rate of 100% and WTO-inconsistent CVD duties at a rate of 50% on a particular product. Supposing that both duties are market preclusive, China argues, if an arbitrator were to incorporate the AD duties into an N/I assessment of the CVD duties, the resulting N/I would be zero, because the parallel AD duties would be market-preclusive on their own (China's opening statement at the meeting of the Arbitrator, paras. 20 and 26-27).

<sup>183</sup> China's response to Arbitrator question No. 104, para. 72.

<sup>184</sup> China's closing statement at the meeting of the Arbitrator, para. 9.

<sup>185</sup> China's response to Arbitrator question No. 72, para. 16.

the level of N/I estimates obtained in models that simulate changes in each policy individually.<sup>186</sup> However, the United States points out, the sum of the N/I estimates from individually modifying CVD and AD duties for every single product exceeds the estimate obtained in a model that simulates concurrent changes in both CVD and AD duties.<sup>187</sup>

3.79. China considers that the United States is mistaken in this hypothetical calculation. According to China, if the sum of the AD and CVD N/I calculated separately equals the level of N/I when the effects of the two duties are modelled together, it "would show that the full measure of [N/I] was *not* being captured by the model but rather that some portion was being misattributed to the parallel AD duties".<sup>188</sup> China argues that trade distortions have an inherently non-linear impact on the value of trade. On account of this non-linearity, modelling the effect of a market-preclusive AD duty before modelling the effect of a WTO-inconsistent CVD duty would lead to a finding of zero N/I resulting from the latter duty. According to China, the United States fails to take into account the non-linear effects of duties (or other measures) that affect trade. Ignoring the non-linear nature of the interaction between trade distortions, in China's view, would be incorrect from an economics perspective.<sup>189</sup>

3.80. China further contends that there is no principled basis for this adjustment.<sup>190</sup> According to China, incorporating the AD duties, as suggested by the United States, would open a "Pandora's Box of complications" and encourage the United States to seek endless "adjustments" for measures that happen to overlap temporally with the measures subject of the N/I inquiry in order to collapse the two-step Armington model into a one-step approach.<sup>191</sup> China extends this point to future arbitrations, arguing that adopting this adjustment "would open the door to a 'tit-for-tat' series of proposed adjustments by complainants and respondents that would so complicate the application of the two-step model as to render impossible the Arbitrator's task of accurately determining the level of nullification and impairment".<sup>192</sup> In China's view, there would essentially be no limit to the number and types of "adjustments" that could be made to the original complainant's market shares in order to reduce those shares to the respondent's desired levels.<sup>193</sup> China considers that the evidentiary standard relied upon by the United States imposes no meaningful restraint on the types of non-tariff actions that could be incorporated into the model because it effectively reserves unlimited discretion to the United States to adjust market shares as it sees fit.<sup>194</sup>

3.81. China adds that, if the United States was permitted to "adjust" market shares downward due to factors that allegedly inflated China's market share in the year-prior (and, thus, reducing the level of N/I), China would need to be permitted to "adjust" its market share upward in the remedy year to account for factors that would have increased its market share in that year, thus also increasing the level of N/I.<sup>195</sup> China claims that it has not done so because it understands that this would fatally compromise the integrity of the two-step Armington model.<sup>196</sup> Asked for measures that could overlap temporally with the CVDs at issue, China indicates that it "is not aware of any trade remedy measures that applied to the products at issue in [the year prior to the imposition of the CVD measures]".<sup>197</sup>

3.82. The United States notes that China has not brought forward evidence and arguments for any other factors that may have increased China's relative competitiveness between the year-prior and 2017.<sup>198</sup> The United States claims that it considered those factors itself but did not find evidence

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<sup>186</sup> United States' response to Arbitrator question No. 4, para. 39. See also *ibid.*, para. 40, and Table 5.

<sup>187</sup> United States' response to Arbitrator question No. 4, para. 39. See also *ibid.*, para. 40, and Table 5.

<sup>188</sup> China's opening statement at the meeting of the Arbitrator, para. 28. (emphasis original)

<sup>189</sup> China's response to Arbitrator question No. 104, para. 64.

<sup>190</sup> China's response to Arbitrator question No. 72, para. 20.

<sup>191</sup> China's written submission, para. 36; response to Arbitrator question No. 30, para. 2, and No. 105, para. 74.

<sup>192</sup> China's opening statement at the meeting of the Arbitrator, para. 5. See also China's closing statement at the meeting of the Arbitrator, para. 8.

<sup>193</sup> China's written submission, para. 29.

<sup>194</sup> China's comments on the United States' response to Arbitrator question No. 71, para. 7.

<sup>195</sup> China's response to Arbitrator question No. 105, para. 74.

<sup>196</sup> China's comments on the United States' response to Arbitrator question No. 102, para. 67.

<sup>197</sup> China's response to Arbitrator question No. 2, para. 8.

<sup>198</sup> United States' comments on China's response to Arbitrator question No. 105, para 44.

demonstrating that any other contemporaneous duties or any non-tariff actions in the United States meaningfully affected China's relative competitiveness.<sup>199</sup>

3.83. China also argues that this proposed adjustment is based on a misunderstanding of the purpose of Article 22.6 of the DSU.<sup>200</sup> According to China, Article 22.6 of the DSU is concerned with "the measure found to be inconsistent with a covered agreement". China notes the United States' acknowledgement that "Article 22.2 of the DSU, which is explicitly referenced in the first sentence of Article 22.6, limits the role of an arbitrator to assessing the effects of the WTO-inconsistent U.S. CVD measures in accordance with the DSB's recommendations."<sup>201</sup> In China's view, accepting the United States' proposed adjustment would threaten the viability of the Article 22.6 proceeding as a mechanism for inducing compliance with the recommendations and rulings of the DSB.<sup>202</sup> In addition, China argues that incorporating the parallel AD duties would require the Arbitrator to evaluate the trade effects and the WTO-consistency or inconsistency of measures that were not subject to the recommendations and rulings of the DSB in this dispute, noting that seven of the ten products at issue underlying these proceedings were also at issue in *US – Anti-Dumping Methodologies (China) (Article 22.6 – US)* and involved the USDOC's application of WTO-inconsistent anti-dumping methodologies.<sup>203</sup> Thus, China argues, incorporating the WTO-inconsistent AD duties analysed in *US – Anti-Dumping Methodologies (China) (Article 22.6 – US)* would imply rewarding the United States for its WTO-inconsistent actions.<sup>204</sup> China argues that even if the AD duties were not WTO-inconsistent, it would be incorrect to incorporate them into the model.<sup>205</sup> Trade actions other than those at issue, according to China, should not be considered, regardless of their contemporaneity or WTO-consistency or inconsistency.<sup>206</sup>

3.84. The United States challenges China's view that including the AD duties in the Armington model requires the Arbitrator to assess their WTO-consistency or inconsistency, as they are incorporated into the model only to correctly represent the actual extent of duties on imports from China in the relevant period.<sup>207</sup> In other words, the United States argues that, whether WTO-consistent or WTO-inconsistent, the AD duties did exist, and they can and should be taken into account in the analysis.<sup>208</sup>

3.85. China notes that parallel duties were present in *US – Washing Machines (Article 22.6 – US)* and *US – Anti-Dumping Methodologies (China) (Article 22.6 – US)*, but those arbitrators computed the level of N/I by isolating the impact of the specific measures that were at issue. According to China, a major reason for the implementation of the two-step Armington model in those arbitrations was to separately identify and evaluate the effect of the specific measures under scrutiny.<sup>209</sup> The United States explains, however, that none of the parties in those proceedings had proposed a two-step Armington model to begin with, and thus no party proposed any adjustments to control for other relevant factors in a two-step Armington model.<sup>210</sup>

3.86. We note that there seems to be no doubt that the AD duties were made effective either contemporaneously or with a very limited delay relative to the introduction or amendment of the final CVDs at issue. China does not dispute the existence of these parallel duties or their timing. According to the evidence provided by the parties, the relevant dates of imposition of the CVDs and the AD duties were the following:

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<sup>199</sup> United States' response to Arbitrator question No. 71, para. 13; comments on China's response to Arbitrator question No. 105, para 46.

<sup>200</sup> China's response to Arbitrator question No. 104, para. 63.

<sup>201</sup> China's written submission, para. 30 (quoting United States' written submission, para. 35) (original emphasis by the United States omitted).

<sup>202</sup> China's response to Arbitrator question No. 72, para. 20.

<sup>203</sup> China's written submission, paras. 28 and 31.

<sup>204</sup> China's written submission, para. 33.

<sup>205</sup> China's response to Arbitrator question No. 30, paras. 1 and 4.

<sup>206</sup> China's opening statement at the meeting of the Arbitrator, paras. 18-19.

<sup>207</sup> United States' response to Arbitrator question No. 4, para. 38, and No. 103, para. 120.

<sup>208</sup> United States' response to Arbitrator question No. 4, para. 39. See also *ibid.*, para. 40, and Table 5.

<sup>209</sup> China's written submission, paras. 4 and 37 (referring to Decisions by the Arbitrators, *US – Washing Machines (Article 22.6 – US)*, paras. 3.120 and 3.121; *US – Anti-Dumping Methodologies (China) (Article 22.6 – US)*, paras. 7.1-7.6).

<sup>210</sup> United States' comments on China's response to Arbitrator question No. 72, para. 22.

**Table 3: Dates of determination of the CVD and AD orders**

Product	Final CVD determination date (amendment date) <sup>211</sup>	AD order effective date <sup>212</sup>
Pressure Pipe	28 Jan 2009	17 Mar 2009
Line Pipe	24 Nov 2008 (23 Jan 2009)	13 May 2009
Kitchen Shelving	27 Jul 2009	14 Sep 2009
OCTG	7 Dec 2009 (20 Jan 2010)	21 May 2010
Wire Strand	21 May 2010 (7 Jul 2010)	29 Jun 2010
Seamless Pipe	21 Sep 2010 (10 Nov 2010)	10 Nov 2010
Print Graphics	27 Sep 2010 (17 Nov 2010)	17 Nov 2010
Aluminum Extrusions	4 Apr 2011	26 May 2011
Steel Cylinders	7 May 2012	21 Jun 2012
Solar Panels	17 Oct 2012	07 Dec 2012

3.87. However, the fact that these AD duties existed in parallel with the CVDs does not in itself justify their incorporation. As explained<sup>213</sup>, it is for the original respondent in these proceedings, the United States, to prove that China's proposed level of suspension of concessions is not "equivalent" to the level of N/I within the meaning of Article 22.4 of the DSU. To discharge that burden, as prior arbitrators have noted, merely putting forward a different methodology is not sufficient in the absence of a demonstration that China's methodology is incorrect. Accordingly, the fact that the United States has successfully demonstrated the existence of these AD duties, which is uncontested by China, does not discharge the United States' burden of proof. As a previous arbitrator held:

It may be possible to present an alternative methodology as a way of engaging with, and contributing to disproving, a proposed methodology. However, merely putting forward ... a different methodology as 'appropriate' or as one that 'more accurately estimates' the level of nullification or impairment is not sufficient. In the absence of a demonstration that the proposing party's methodology is incorrect, the mere submission of an alternative methodology would not meet the objecting party's burden of proof. *This is because the alternative methodology does not, in itself, assist the Arbitrator in determining whether the result from the first methodology is (or is not) equivalent to the level of nullification or impairment. In such a situation, it would follow from the rules on burden of proof that the objecting party has not proved that the act at issue is WTO-inconsistent.*<sup>214</sup>

3.88. It is *a priori* compelling that a duty increase, such as the imposition of the AD duties advanced by the United States in the context of this proposed adjustment, would have an impact on Chinese imports and their share in the US market. At the same time, as the United States explains, past arbitrators have consistently held that "[t]he mandate of the arbitrators is to determine whether the level of suspension of concessions or other obligations sought by the complaining party is equivalent to the level of nullification or impairment sustained by the complaining party *as a result of the failure of the responding party to bring its WTO-inconsistent measures into compliance.*"<sup>215</sup> In the words of

<sup>211</sup> Exhibit CHN-99.

<sup>212</sup> United States' response to Arbitrator question No. 2, paras. 23 and Table 2 thereto, and 24 and Table 3 thereto.

<sup>213</sup> See para. 3.2 above.

<sup>214</sup> Decisions by the Arbitrator, *US – COOL (Article 22.6 – US)*, para. 4.12. (emphasis added; fns omitted) See also Decision by the Arbitrator, *US – Large Civil Aircraft (2<sup>nd</sup> complaint) (Article 22.6 – US)*, para. 4.3.

<sup>215</sup> United States' written submission para. 36 (quoting Decision by the Arbitrator, *US – 1916 Act (EC) (Article 22.6 – US)*, para. 4.5). (emphasis added)

the United States, "Article 22.2 of the DSU, which is explicitly referenced in the first sentence of Article 22.6, limits the role of an arbitrator to assessing *the effects of the WTO-inconsistent U.S. CVD measures in accordance with the DSB's recommendations.*"<sup>216</sup>

3.89. In our view, as we need to focus on the N/I resulting from the CVDs at issue, the United States needs to show more than the mere existence of the AD duties or that these may have an impact on Chinese imports. The United States must demonstrate whether and, if so, in what manner or degree any trade impact of these AD duties would alter the level of N/I resulting from the CVDs. Indeed, the parties advance different propositions regarding how such measures may interact with each other for calculating the level of N/I.

3.90. The United States implements its proposed adjustment based on the assumption that CVDs and AD duties are one and the same measure and can be merged into a single duty rate. The United States calculates the level of N/I by using rates beyond the WTO-consistent and -inconsistent CVD rates, by adding the same unchanged AD duty rates to both sides of the subtraction.<sup>217</sup> China contests the assumptions underlying this calculation method, arguing that the implementation applied by the United States may lead to an overlapping effect of CVDs and AD duties and ignore the possibility of a non-linear response to these two types of separately imposed duties, which risks distorting the impact of the CVDs at issue on the level of N/I.<sup>218</sup>

3.91. To sustain its proposed adjustment, the United States merely provides hypothetical N/I calculations that illustrate that the level of N/I would be different when calculations are performed for each type of duty in isolation or when both types of duties are included in a single N/I calculation.<sup>219</sup> However, we note that the result of the calibration of an economic model is a mere quantification of the underlying economic theory and assumptions chosen. The calibration serves to implement such theory and assumptions but does not amount to justifying these.

3.92. By submitting only such modelling outcomes, without any further evidence, the United States does not substantiate its assumption, and fails to explain whether and, if so, in what manner or degree any trade impact of these AD duties would alter the level of N/I resulting from the CVDs at issue. Accordingly, the United States has not demonstrated that China's estimated level of N/I is inconsistent with Article 22.4 of the DSU, and we shall not adopt this methodological adjustment proposed by the United States.

3.93. We are reaching this conclusion exclusively on the basis of the above evidentiary grounds and based on the evidence before us in these proceedings. We need not and hence do not make any principled statement as to the appropriateness of an Article 22.6 arbitration taking into account trade measures, such as AD duties, different from those at issue in a specific dispute. We also do not address whether, as a matter of principle, it may or may not be appropriate to consider, in the specific context of applying the two-step Armington model, measures other than those at issue in a specific dispute, and whether the relative timing of such other measures or their alleged WTO-consistency or inconsistency should be of any relevance in that regard.

### **3.3.4 Factors other than trade remedies (Rising Suppliers)**

3.94. The second adjustment to the two-step Armington model requested by the United States consists of accounting for factors other than trade remedy measures. According to the United States, these other factors entail that new market participants and increased capacity of other third countries have influenced the evolution of the market between the imposition of the CVD measures and the remedy year (2017). The new market participants and third countries whose market shares

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<sup>216</sup> United States' written submission, para. 35. (emphasis added) See also China's written submission, para. 30 (referring to the United States' written submission, para. 35).

<sup>217</sup> United States' written submission, paras. 95, 98, 99, and 102; response to Arbitrator question No. 4, paras. 31-40; comments on China's response to Arbitrator question No. 104, paras. 16 and 19-22; and Exhibits USA-50 (BCI), USA-51 (BCI), and USA-157 (BCI).

<sup>218</sup> China's response to Arbitrator question No. 104, paras. 63-73; comments on the United States' response to Arbitrator question No. 71, paras. 5-9.

<sup>219</sup> United States' response to Arbitrator question No. 4, paras. 39-40, and Table 5.

have allegedly grown disproportionately fast as a result of "industry investments" or certain "government policies"<sup>220</sup> are referred to by the United States as Rising Suppliers.

3.95. The United States suggests implementing the Rising Suppliers adjustment by imposing a negative duty rate on imports from the affected countries. The United States would follow this approach since the structure of the Armington model does not allow for modelling industry investments or government policies explicitly. The size of the negative duty under this adjustment would be intended to generate a market share for the Rising Suppliers as it was observed in 2017.<sup>221</sup> As a result, the adjustment would yield a larger market share for these Rising Suppliers and a smaller market share for all other suppliers, crucially China.

3.96. The United States requests these supply-shock adjustments with respect to five products.<sup>222</sup> For the remaining products at issue, the United States explains that it has either not found sufficient documentation of investments or policy changes to identify a set of Rising Suppliers, or it has not been able to separate data on the relevant imports from the RoW aggregate.<sup>223</sup>

3.97. According to the United States, this adjustment to the two-step Armington model would be necessary to capture China's true relative competitiveness in the 2017 remedy year.<sup>224</sup> Without this adjustment, argues the United States, the two-step Armington model as implemented by China and applied in *US – Anti-Dumping Methodologies (China) (Article 22.6 – US)* would implicitly assume that the CVDs imposed on imports from China were the only factor contributing to the changes in China's market share between the year-prior and 2017.<sup>225</sup> According to the United States, the simple fact that action was taken against countervailable subsidies may have spurred changes in China and elsewhere that altered the relative competitiveness of different import varieties. This could have contributed to the decline in Chinese imports beyond what is attributable to the price difference resulting from the CVDs at issue.<sup>226</sup>

3.98. China agrees that import varieties' market share in the remedy year is the outcome of a myriad of factors<sup>227</sup>, but rejects the United States' proposed adjustment. China considers this to be an arbitrary attempt by the United States to revert to a one-step Armington model with the sole intention of reducing China's remedy-year benchmark market share.<sup>228</sup> China argues that the two-step Armington model was precisely designed to address the issue of the distortion of trade levels in the remedy year.<sup>229</sup> In China's view, adjusting for other factors would open a "pandora's box" and encourage original respondents to seek endless "adjustments" to reduce the original complainant's market share, and thus the level of N/I, and ultimately collapse the two-step approach into a one-step approach.<sup>230</sup> China adds that no supporting evidence has been provided for the United States' assertions. China also notes that, crucially, no evidence is given that the fast growth in the market share of non-Chinese import varieties was not a result of the trade-diverting effect of the WTO-inconsistent CVDs imposed on China.<sup>231</sup> According to China, the implication that there were

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<sup>220</sup> United States' written submission, paras. 73 and 76. For example, according to the United States, investments by producers in Korea, Malaysia, the Netherlands, Thailand, and Viet Nam dramatically increased their overall competitiveness in the solar panels market between 2012 and 2016. (United States' written submission, para. 77 and fn 68 thereto).

<sup>221</sup> Exhibits USA-82; USA-83.

<sup>222</sup> The United States originally presented the adjustment for three products only (OCTG, Aluminum Extrusions, and Solar Panels), but it extended it to two additional products (Pressure Pipe and Line Pipe) in response to a question from the Arbitrator. (United States' written submission, paras. 77, 83-85, and 138; United States' response to Arbitrator question No. 5, paras. 47-53).

<sup>223</sup> The United States provides explanations regarding Kitchen Shelving, Wire Strand, Seamless Pipe, and Print Graphics. (United States' response to Arbitrator question No. 5, paras. 54-58).

<sup>224</sup> United States' written submission, paras. 7, 69, 117, and 123.

<sup>225</sup> United States' written submission, para. 73; United States' response to Arbitrator question No. 5, para. 43.

<sup>226</sup> United States' written submission, para. 74.

<sup>227</sup> China's comments on the United States' response to Arbitrator question No. 103, para. 72.

<sup>228</sup> China's written submission, paras. 3, 34, 40, 43, 62, 79, and 88.

<sup>229</sup> China's written submission, paras. 5 and 35; opening statement at the meeting of the Arbitrator, para. 35.

<sup>230</sup> China's written submission, paras. 29 and 36; opening statement at the meeting of the Arbitrator, para. 34.

<sup>231</sup> China's written submission, para. 47.

no investments or relevant government policies in any countries other than those referenced as Rising Suppliers would confirm that this approach is completely arbitrary.<sup>232</sup>

3.99. We note that, in introducing its evidence, the United States explains that it is not possible to directly observe supply shocks for every product for which the relative competitiveness of third country suppliers has evolved between the imposition of the relevant CVDs and the remedy year. In other words, the United States does not submit direct evidence of the alleged industry investments or government policies that would form the basis of its Rising Suppliers adjustment. Rather, the United States indicates that, "as the best alternative", it has relied on two types of evidence: USITC investigations and trade data trends.<sup>233</sup>

3.100. As the first type of evidence, the United States refers to USITC reports issued in the context of different CVD, AD, and safeguards investigations on the relevant products.<sup>234</sup> Depending on the product at issue, the United States argues, *inter alia*, that these USITC reports detail "investments in manufacturing capacity"<sup>235</sup> or show an emerging industry in which "the United States is a growing market for its exports"<sup>236</sup>, or that the duties imposed due to such investigations imply that the imports from those third countries were subsidized or sold at less than fair value in the US market.<sup>237</sup>

3.101. We would need more than the descriptive passages from these USITC reports to assess if the industry investments or government policies claimed by the United States in the context of Rising Suppliers have actually taken place. Without further and direct evidence for these developments in third countries, the information provided in these USITC reports leads to mere assertions. What is more, some of the phenomena referenced in these USITC reports are distinct from the investments and policies claimed by the United States in the context of Rising Suppliers. For instance, the United States being a growing market for exports from a certain third country does not in itself prove the existence of industry investments or government policies, let alone what such investments and policies would specifically entail. Also, the CVDs and AD duties referenced by the United States may be expected to have negatively affected the competitiveness of Rising Suppliers. Indeed, for one product, the United States indicates that it has found evidence of the deterioration of the relative competitiveness of certain third countries due to the imposition of trade remedies against their imports.<sup>238</sup>

3.102. As the second type of evidence, the United States refers to the expansion of the market share of Rising Suppliers *vis-à-vis* other third countries, including China. As mentioned, without further evidence, these changes in market share do not demonstrate the industry investments and government policies claimed by the United States. Absent specific evidence to the contrary, it could be equally plausible to expect that it is precisely because of the effects of the measures at issue on China's market share in the United States that other Members would step in to supply the US market.

3.103. In addition to the lack of direct evidence, the United States' proposed adjustment suffers from another shortcoming insofar as it relies on the assumption that the Rising Suppliers phenomenon is completely exogenous to, or independent from, the measures at issue. The United States acknowledges that this adjustment should be applied when "certain third countries have become more competitive in the U.S. market due to reasons that are independent from the CVD measures at issue".<sup>239</sup> However, as China remarks, it is not clear from the evidence on the record that the increase of the capacities of Rising Suppliers is actually independent from the existence of the WTO-inconsistent CVDs. Some of the USITC reports referenced by the United States, in fact, even indicate that imports from other countries substantially increased their presence in the US market "after the imposition of the antidumping and countervailing duty orders

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<sup>232</sup> China's written submission, paras. 49 and 51.

<sup>233</sup> United States' opening statement at the meeting of the Arbitrator, para. 27.

<sup>234</sup> United States' response to Arbitrator question No. 5, paras. 49-53, and No. 6, paras. 59-63.

<sup>235</sup> United States' response to Arbitrator question No. 6, para. 62.

<sup>236</sup> United States' response to Arbitrator question No. 6, para. 63.

<sup>237</sup> United States' response to Arbitrator question No. 5, paras. 49-58, and No. 6, paras. 60-61.

<sup>238</sup> As a consequence, the United States implements a supply shock adjustment to that specific market to reduce the shares of those third countries whose relative competitiveness has deteriorated (United States' response to Arbitrator question No. 5, paras. 41-58; comments on China's response to Arbitrator question No. 105, para. 46).

<sup>239</sup> United States' closing statement at the meeting of the Arbitrator, para. 14.

on imports from China".<sup>240</sup> In other words, the United States has not demonstrated that the rise of these alleged Rising Suppliers is not a natural consequence of the introduction of the CVDs at issue.

3.104. Accordingly, we shall not adopt the Rising Suppliers methodological adjustment proposed by the United States. We are taking this decision purely on the basis of the above evidentiary issues. As already indicated in the context of the United States' first proposed adjustment<sup>241</sup>, we therefore make no principled statement as regards the appropriateness or not of taking into account factors different from the measures at issue, such as Rising Suppliers, in the context of a two-step Armington model.

### 3.4 Data inputs

3.105. In terms of data inputs, the two-step Armington model necessitates utilizing data on the market share of the three product varieties<sup>242</sup> for the year prior to the imposition of the CVDs at issue, as well as overall market size data for the remedy year for each of the ten products at issue.<sup>243</sup> In addition, the Armington model also requires data on total supply elasticities, demand elasticities, and elasticities of substitution for each of the ten products.

3.106. The following sections address these data issues, based on what we considered to be the most solid evidence<sup>244</sup>, the most reasonable calculation methodology<sup>245</sup>, and the best available data<sup>246</sup>, developing our own calculations where necessary.

#### 3.4.1 Year-prior

3.107. Regarding the year-prior, the parties disagree on specific year-prior data points, and for six products they advance different calendar years as the year-prior.

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<sup>240</sup> USITC Publication 4739 (regarding Solar Panels) (Exhibit USA-22), p. 40. See also *ibid.*, pp. 10 and 93.

<sup>241</sup> See section 3.3.3 above.

<sup>242</sup> In light of our rejection of the United States' proposed adjustment to take into account the effects of dumping, we base our calculations on the following three product varieties suggested by China: (i) US domestic production; (ii) Chinese imports; and (iii) imports from the rest of the world.

<sup>243</sup> We note that for the purposes of this Decision and the implementation of the two-step Armington model, the relevant market values have been rounded to USD 1,000.

<sup>244</sup> See e.g. Award of the Arbitrator, *US – Section 110(5) Copyright Act (Article 25)*, para. 4.28: "in the absence of figures grounded on facts, [Article 22.6] Arbitrators tried to use estimates which ... seemed reasonable on the basis of the information available." See also *ibid.*, para. 1.18; Decision by the Arbitrator, *EC and certain member States – Large Civil Aircraft (Article 22.6 – EU)*, para. 6.175 and fn 307 thereto (referring to Award of the Arbitrator, *US – Section 110(5) Copyright Act (Article 25)*, para. 4.28; Decisions by the Arbitrator, *US – COOL (Article 22.6 – US)*, para. 5.101.

<sup>245</sup> See e.g. Decision by the Arbitrator, *US – Washing Machines (Article 22.6 – US)*, para. 1.16 (referring to Decision by the Arbitrator, *US – 1916 Act (EC) (Article 22.6 – US)*, para. 5.54): "[i]n determining the level of nullification or impairment, previous arbitrators developed their own appropriate methodologies, based either on elements of methodologies proposed by the parties, or on an altogether different approach. Any determination of nullification or impairment, because it is based on assumptions, is necessarily a 'reasoned estimate' relying on 'credible, factual, and verifiable information'." (fns omitted)

<sup>246</sup> See e.g. Decision by the Arbitrator, *EC and certain member States – Large Civil Aircraft (Article 22.6 – EU)*, para. 6.175: "we must seek to ensure that not just our methodological approach, but also our concrete quantitative estimation, is supported, wherever possible, by credible and verifiable information. To that end, we have undertaken all reasonably feasible efforts to request additional information from the parties to complete the record. Where we nevertheless ultimately did not have access to certain desired information (e.g. because it is not readily available), we drew appropriate inferences from the best available information on the record, provided that the best information that we had was itself credible and verifiable". (fn omitted)

**3.4.1.1 Determination of the year-prior**

3.108. According to the United States, China identified incorrect calendar years for the year prior to the imposition of six<sup>247</sup> CVD measures.<sup>248</sup> The United States claims that it has followed the same approach that was used in *US – Anti-Dumping Methodologies (China) (Article 22.6 – US)*: it has identified the year-prior based on the timing of the final CVD determination for each product. The United States argues that this is the correct year-prior to use for the adjusted two-step Armington model.<sup>249</sup>

3.109. China counters that it has adopted a consistent approach to defining the year-prior. China claims that the relevant year-prior for the purposes of determining the level of N/I in this dispute is the calendar year prior to the year in which the WTO-inconsistent duties were imposed, and the WTO-inconsistent duties were imposed as of the effective date of the *preliminary* determination in each case.<sup>250</sup>

3.110. The parties thus agree on the year-prior for four products and disagree for the remaining six products. The years-prior advanced by the parties are:

**Table 4: Years-prior advanced by the parties for each of the ten products at issue**

Products	Years-prior advanced by the parties	
	China <sup>251</sup>	United States <sup>252</sup>
Pressure Pipe	2007	2008
Line Pipe	2007	2008
Kitchen Shelving	2008	
OCTG	2008	2009
Wire Strand	2008	2009
Seamless Pipe	2009	
Print Graphics	2009	
Aluminum Extrusions	2009	2010
Steel Cylinders	2010	2011
Solar Panels	2011	

3.111. In our calculations, we rely on the parties' agreed year-prior for:

- a. Kitchen Shelving (2008);
- b. Seamless Pipe (2009);
- c. Print Graphics (2009); and
- d. Solar Panels (2011).

3.112. The six remaining products affected by the parties' disagreement are:

- a. Pressure Pipe;

<sup>247</sup> The original United States' objection concerning the correct year-prior relates to three products: Pressure Pipe, Line Pipe, and OCTG (see United States' written submission, para. 125). In engaging with this objection in its written submission, China extends it to an additional three products: Wire Strand; Aluminum Extrusions; and Steel Cylinders. (China's written submission, para. 22). This extension increases the scope of the parties' disagreement in this context to a total of six products: Pressure Pipe; Line Pipe; OCTG; Wire Strand; Aluminum Extrusions; and Steel Cylinders.

<sup>248</sup> United States' written submission, paras. 5 and 8.

<sup>249</sup> United States' written submission, para. 125.

<sup>250</sup> China's written submission, para. 76.

<sup>251</sup> See Exhibit CHN-120.

<sup>252</sup> See Exhibit USA-155 (BCI).

- b. Line Pipe;
- c. OCTG;
- d. Wire Strand;
- e. Aluminum Extrusions; and
- f. Steel Cylinders.

3.113. For each of these products, China suggests the calendar year preceding the United States' suggested year-prior. China contends that the years-prior suggested by the United States involve preliminary CVDs which affected China's market share, thus distorting the calculation of the level of N/I.

3.114. According to China<sup>253</sup>, the preliminary and final CVD determinations for the six products concerned by the parties' disagreement were introduced (and, where applicable, amended) on the following dates:

**Table 5: The preliminary and final CVD determinations for the six products concerned by the parties' disagreement**

Products	Preliminary CVD determination date (and date of amendment, where applicable)	Final CVD determination date (and date of amendment, where applicable)
<b>Pressure Pipe</b>	10 July 2008 (amended on 7 August 2008)	28 January 2009
<b>Line Pipe</b>	9 September 2008	24 November 2008 (amended on 23 January 2009)
<b>OCTG</b>	15 September 2009	7 December 2009 (amended on 20 January 2010)
<b>Wire Strand</b>	2 November 2009	21 May 2010 (amended on 7 July 2010)
<b>Aluminum Extrusions</b>	7 September 2010	4 April 2011
<b>Steel Cylinders</b>	18 October 2011	7 May 2012

3.115. The United States contests neither the accuracy of these dates nor the fact that preliminary duties were in place during the year-prior it advances for each of these six products<sup>254</sup>, although the United States adds that no provisional CVDs were collected for several months between the expiration of the provisional CVD measures and the publication of the final determinations.<sup>255</sup>

3.116. Importantly, while the parties agree that the preliminary determinations were not at issue at the original or compliance stages of this dispute, they explicitly concur that this is not determinative for identifying the correct year-prior.<sup>256</sup> Accordingly, we do not address this issue. We

<sup>253</sup> See Exhibit CHN-99.

<sup>254</sup> See China's response to Arbitrator question No. 13, para. 49. See also Exhibit CHN-99 and China's response to Arbitrator question No. 107, para. 84.

<sup>255</sup> See United States' opening statement at the meeting of the Arbitrator, para. 29. See also United States' closing statement at the meeting of the Arbitrator, para. 17.

<sup>256</sup> China recognizes that the preliminary determinations in these particular investigations were not at issue in earlier stages of this dispute with respect to China's claims concerning alleged inputs for LTAR subsidies. However, China argues that this does not mean that the year-prior may be one that includes the preliminary duties imposed pursuant to those determinations, noting that the preliminary duties in each of these cases were imposed as part of the same investigation that resulted in the imposition of the final duties. China also argues that both sets of duties suffer from the same legal flaws that the DSB identified with respect to the final determinations, i.e. the USDOC's findings with respect to the alleged "inputs for LTAR" subsidies. (See China's response to Arbitrator question No. 33, para. 9). The United States concurs that the preliminary determinations for the six products were not "at issue" in earlier stages of this dispute. (United States' response to Arbitrator question No. 33, para. 10). Although in its original panel request China identified "the preliminary and final countervailing duty measures identified in Appendix 1 [to such request]" as the "specific measures at issue" (Request for the Establishment of a Panel by China, WT/DS437/2), the United States

focus rather on the relationship of these preliminary CVD determinations to the final CVD determinations, and the characteristics and impact of the preliminary CVD determinations, as well as the two economic papers submitted by China.

#### **3.4.1.1.1 Relationship of the preliminary and final CVD determinations**

3.117. As China points out, the preliminary CVDs in each of the six cases in question were imposed as part of the same investigation that resulted in the imposition of final CVDs.<sup>257</sup> The United States does not contest this. In the parties' description of the differences between the preliminary and final CVDs, their figures for the relevant CVD rates quantitatively correspond and show that, with the exception of one supplier<sup>258</sup>, preliminary CVDs ranging from 6.18 to 137.65% were imposed on each of the six products at issue. Further, the differences between the corresponding preliminary and final CVD rates varied between +236.50 and -130.28% per product and respondent.<sup>259</sup>

3.118. In introducing key aspects of its CVD regime, the United States argues that China fails to take into account that provisional measures are, as the term indicates, preliminary and temporary. Provisional CVD measures expire after 120 days, and exposure to duty liability is not confirmed until a final CVD determination takes place and a duty order is imposed. Even then, under the US retrospective system of CVD duty assessment, final duty liability is typically not known until a later date, when the USDOC determines final CVD duty margins in an administrative review.<sup>260</sup>

3.119. China acknowledges that, under the United States' CVD regime, preliminary duties are provisional in nature and the final duty rate is not confirmed until a final CVD determination is reached. China further acknowledges that, under the United States' "retrospective" system, actual duty liability is not finally determined in most cases until the completion of an administrative review. China considers that the United States appears to misunderstand China's position with respect to the imposition of preliminary CVD duties on the products. China's point is that regardless of when the actual duty liability is finally determined, distortive effects occur as soon as preliminary duties are imposed.<sup>261</sup>

3.120. In light of these aspects of the United States' CVD regime, which the parties agree upon, we consider that preliminary and final CVDs are closely linked by virtue of the design of the US CVD regime, despite the sometimes considerable rate differences between the two, as mentioned earlier.

#### **3.4.1.1.2 Characteristics and impact of the preliminary CVD determinations**

3.121. As a further aspect of its CVD regime, the United States indicates that, while the United States Customs and Border Protection (USCBP) suspends liquidation and starts collecting cash deposits from the date of the imposition of provisional CVD measures as a result of an affirmative preliminary CVD determination, these cash deposits are provisional and potentially refundable.<sup>262</sup> In response, China indicates that, in practice, preliminary duties are rarely if ever refunded to Chinese exporters. China contends that any refunding of preliminary CVDs is irrelevant;

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considers that the reference to preliminary determinations amongst all of the other decisions and documents appears to have been an effort by China to be comprehensive in its identification of any and all documents of potential relevance to its "as applied" claims. The United States points out that throughout the original dispute, the provisional CVD rates determined in the preliminary determinations and the timing of those determinations were never raised as an issue. Rather, references were made to the preliminary determinations to the extent that they, when read together with the final determinations, explained decisions that the USDOC made in connection with the imposition of the CVD measures (United States' response to Arbitrator question No. 33, para. 12 (referring to United States' written submission, para. 37)). Accordingly, the United States claims, the preliminary determinations have no relevance for determining the correct year-prior, and the dates of those preliminary determinations are not determinative of the correct year-prior in this proceeding (United States' response to Arbitrator question No. 33, para. 13).

<sup>257</sup> China's response to Arbitrator question No. 33, para. 9.

<sup>258</sup> See Exhibit USA-107.

<sup>259</sup> China's response to Arbitrator question No. 33, para. 8 (referring to Exhibit CHN-106); United States' response to Arbitrator question No. 33, para. 9 (referring to Exhibit USA-107).

<sup>260</sup> United States' response to Arbitrator question No. 14, fn 110 to para. 93. See also United States' response to Arbitrator question No. 32, para. 4.

<sup>261</sup> China's response to Arbitrator question No. 31, para. 5.

<sup>262</sup> United States' response to Arbitrator question No. 32, para. 3. See also *ibid.*, para. 4; United States' opening statement at the meeting of the Arbitrator, para. 29.

rather, what is relevant is whether the preliminary duties distort trade.<sup>263</sup> China adds that it does not dispute that months or sometimes years later, some amount of the deposits collected may be refunded following the final determinations of the USDOC and the USITC when final liability is calculated. However, according to China, this possibility does not nullify the distortive effects that occur as a result of the preliminary liability imposed on importers. Furthermore, China maintains that in many cases there are no entries to liquidate at any duty rate because the preliminary duty rate is so high that it effectively blocks all imports of subject product.<sup>264</sup>

3.122. The United States emphasizes that for all of the products in question, no provisional CVDs were collected for several months between the expiration of the provisional CVD period and the publication of the final CVD determination.<sup>265</sup> According to the United States, China has not explained how, or why, any changes in trade flows during such gap periods should be attributed to CVD duties when there were no CVD duties in place.<sup>266</sup> China responds that it is irrelevant that the WTO-inconsistent preliminary CVD duties were not in place for the entirety of the United States' proposed year-prior or that preliminary CVD duties are potentially refundable. According to China, the United States' argument does not address, let alone refute, China's position that it is the imposition of the WTO-inconsistent preliminary CVD duties that distorts trade flows.<sup>267</sup>

3.123. We agree with China that, as a matter of principle, it is indeed the possibility of the preliminary CVDs having an impact on trade that is relevant for determining an appropriate year-prior for each product at issue. We also consider that the provisional nature of such preliminary duties, including their possible subsequent refunding or their non-collection for a considerably later period, is immaterial in terms of the immediate trade impact that such preliminary duties may have on affected exporters. Also, according to the evidence before us<sup>268</sup>, the gap periods raised by the United States never amounted to more than a few months and, thus never left a whole calendar year completely free of preliminary CVD duties.

3.124. As regards the more immediate impact of preliminary CVDs, we note China's example concerning OCTG. According to China, the preliminary CVDs were imposed on OCTG on 15 September 2009. Using the harmonized tariff schedule (HTS) codes listed for the case along with the public USITC DataWeb trade data, in 2009 the average monthly customs value of US imports from China prior to the imposition of the preliminary CVD duties was USD 132 million. By contrast, the average monthly US imports from China in 2009 following the imposition of the preliminary CVD duties was just USD 157,590, a drop of over 99%. According to China, these figures clearly show that the trade-depressing effects of the WTO-inconsistent CVD duties were already affecting China's exports to the US market in 2009.<sup>269</sup> We note that, according to the information provided by the United States<sup>270</sup>, preliminary duties on OCTG were imposed on 15 September 2009 and were collected until 14 January 2010, and the final determination was effective on 21 May 2010. As the OCTG example shows, the four-month gap period between January and May 2010 advanced by the United States does not alter the immediate effect the preliminary duties may have had as of their imposition in September 2009.

3.125. The United States does not contest the factual aspects of China's OCTG example, and indeed it recognizes that the existence of a temporary preliminary CVD measure could have some impact on trade, including on China's market share.<sup>271</sup> However, the United States contends, preliminary CVDs have a variable trade impact depending on the circumstances, and even if such an impact were to be negative, it should not be indiscriminately attributed to preliminary CVDs.<sup>272</sup> According to the United States, China unjustifiably assumes that the 99% drop in OCTG imports from China in 2009 was due to the imposition of the preliminary CVD duties, but China does not provide any

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<sup>263</sup> China's opening statement at the meeting of the Arbitrator, para. 45.

<sup>264</sup> China's response to Arbitrator question No. 31, para. 6.

<sup>265</sup> United States' opening statement at the meeting of the Arbitrator, para. 29. See also United States' closing statement at the meeting of the Arbitrator, para. 17.

<sup>266</sup> See United States' response to Arbitrator question No. 109, para. 139.

<sup>267</sup> China's response to Arbitrator question No. 107, para. 78. See also China's comments on the United States' response to Arbitrator question No. 109, para. 83.

<sup>268</sup> United States' response to Arbitrator question No. 2, para. 23.

<sup>269</sup> China's written submission, para. 20. See also China's opening statement at the meeting of the Arbitrator, para. 46.

<sup>270</sup> United States' response to Arbitrator question No. 2, para. 23, and Table 2.

<sup>271</sup> United States' response to Arbitrator question No. 109, para. 138.

<sup>272</sup> United States' response to Arbitrator question No. 109, para. 138.

evidence that the preliminary CVD duties are the cause for this decline. For instance, according to the United States, China neglects that 2009 was at the height of the great recession, or that there may have been industry events or other factors that contributed to the decline in demand.<sup>273</sup> According to United States, the mere fact that certain imports from China significantly declined around the same time as the imposition of the preliminary duties does not prove that any Chinese exporters actually exited the US market due to the preliminary duties.<sup>274</sup> The United States contends that China has not provided any evidence for the exit of Chinese exporters as a result of the preliminary CVDs.<sup>275</sup>

3.126. In response, China submits that the United States' argument that a 99% drop in OCTG imports from China was not entirely due to the imposition of the preliminary duties is hardly evidence that the preliminary duties had no effect on imports of OCTG from China. China notes that, according to the USITC, the size of the total US market for OCTG (i.e. domestic shipments plus imports from all sources) fell by 46.8% between 2008 and 2009. In China's words, that imports from China fell by 99% during this period "cannot simply be attributed to the Great Recession".<sup>276</sup>

3.127. China adds that, contrary to the United States' claims, it has demonstrated that imports dropped significantly following the imposition of the preliminary duties. China reiterates that, in the case of OCTG, for example, the average monthly US imports from China in 2009 following the imposition of the preliminary CVD duties dropped by over 99%. According to China, it is reasonable to infer from this steep decline that at least some exporters exited the market entirely following the imposition of the preliminary duties<sup>277</sup> as such a dramatic reduction in trade necessarily indicates that some (or more likely, most) suppliers from China ceased supplying the US market.<sup>278</sup>

3.128. We find China's OCTG example compelling as an illustration of the immediate negative trade impact of preliminary CVDs. We agree with China that it is unrealistic to assume that a 99% decrease in OCTG imports from China immediately following the introduction of preliminary CVDs would be unrelated to the preliminary duties imposed in 2009. Unlike China, however, we do not see this steep decline as direct and conclusive proof of Chinese firms' *exit* from the US OCTG market because of the preliminary CVDs. We agree with the United States that China's OCTG example could mean that each exporting firm reduced the level of its exports, or a subset of exporting firms left the market, or a mix of both. However, regardless of the specific form in which the negative trade impact of the preliminary CVDs could manifest, the risk of such impact seems sufficiently serious to warrant excluding any calendar year when preliminary duties were in place from being defined as the year-prior.

#### **3.4.1.1.3 Economic papers submitted by China**

3.129. China also submits two economic papers<sup>279</sup>, which, it claims, show that the rate of preliminary CVDs is proportional to the exit of exporters and that such impact of preliminary CVDs is higher than final CVDs.<sup>280</sup> The first paper concludes that:

"[A]n affirmative preliminary LTFV [less than fair value] finding places the importer at considerable risk for future duty payments on any imports purchased after that date. Again, this situation suggests that an affirmative preliminary LTFV finding, coupled with an expectation that the final determination will also be affirmative, would lead to a sharp drop in the rate of imports and to a rise in prices, with these effects lasting for the remainder of the investigation."<sup>281</sup>

3.130. The second economic paper submitted by China finds that "the most significant effects occur early in the investigation", that the "investigation effects are larger than those when the final AD

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<sup>273</sup> United States' closing statement at the meeting of the Arbitrator, para. 18.

<sup>274</sup> United States' closing statement at the meeting of the Arbitrator, para. 19. See also United States' response to Arbitrator question No. 108, para. 135.

<sup>275</sup> United States' response to Arbitrator question No. 108, paras. 136-137.

<sup>276</sup> China's response to Arbitrator question No. 107, paras. 79-80.

<sup>277</sup> China's opening statement at the meeting of the Arbitrator, para. 46.

<sup>278</sup> China's comments on the United States' response to Arbitrator question No. 108, para. 82.

<sup>279</sup> China's opening statement at the meeting of the Arbitrator, para. 47 (referring to Exhibits CHN-113 and CHN-114).

<sup>280</sup> China's response to Arbitrator question No. 107, paras. 81-83.

<sup>281</sup> Exhibit CHN-114; China's response to Arbitrator question No. 107, para. 81.

duty is levied, implying that by the time the final duty is levied most of the effect on the extensive margin has already happened", and that "[e]xporters often cease serving the market during the investigation."<sup>282</sup>

3.131. The United States responds that these two economic papers submitted by China do not discuss the impact of preliminary CVD measures on the products at issue in this proceeding, and thus do not provide any evidence that Chinese exporters have actually exited the market in response to the relevant preliminary CVD measures. Rather, the United States argues, one economic paper (Exhibit CHN-113) covers anti-dumping cases from 2006 or earlier, whereas the other (Exhibit CHN-114) covers anti-dumping cases from 1980 to 1985 – both time-periods during which none of the CVD measures at issue in this proceeding were yet in place.<sup>283</sup> According to the United States, both papers simply find that exports to the United States from subject countries declined following the imposition of certain AD duties, which could mean that each exporting firm reduced the level of its exports, or a subset of exporting firms left the market, or a mix of both. The United States adds that neither paper makes use of firm-level data, which would be required to determine whether exporting firms exited from the market. Thus, according to the United States, neither paper submitted by China is directly relevant to the question of whether exporters exit the market because of the imposition of preliminary duties.<sup>284</sup>

3.132. China responds that the findings of the two economic papers are highly relevant to this proceeding. Both papers specifically document trade effects caused by preliminary duties on imports from subject suppliers, and therefore provide crucial academic support for the general proposition that preliminary duties have large and immediate effects on trade.<sup>285</sup> China adds that, even if these papers do not specifically address CVDs, they provide proof that it is generally understood by economic experts that the trade effects of preliminary duties are large.<sup>286</sup> According to China, Exhibit CHN-114 documents that the preliminary duty has the same type of negative effect on trade as basic trade theory predicts and, importantly, documents that the impact of the duty is felt immediately. China considers Exhibit CHN-113 equally relevant, as it examines how subject suppliers often cease supplying the market once the preliminary duties have been imposed and finds that the likelihood that subject suppliers will stop selling to the United States is higher in the period immediately following the imposition of the preliminary duties than in the period after the imposition of the final duties.<sup>287</sup>

3.133. We agree with the United States that the two economic papers submitted by China do not directly relate to CVDs, but we disagree on these papers not being "directly relevant to the question of whether exporters exit the market because of the imposition of preliminary duties".<sup>288</sup> Insofar as both CVDs and AD duties entail an additional tariff on relevant imports, we see a high degree of similarity in the practical operation and impact of CVDs and AD duties. Accordingly, we do read the two economic papers submitted as evidence by China lending support to its argument that preliminary CVDs have an immediate negative impact on relevant imports. These papers also underscore the intuitively compelling general point that a tariff increase, for instance in the form of preliminary CVDs, has a corresponding negative impact on relevant imports, irrespective of the products at issue.<sup>289</sup>

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<sup>282</sup> Exhibit CHN-113; China's response to Arbitrator question No. 107, para. 82.

<sup>283</sup> United States' response to Arbitrator question No. 108, para. 133. See also United States' comments on China's response to Arbitrator question No. 107, paras. 50-53.

<sup>284</sup> United States' response to Arbitrator question No. 108, para. 134. See also United States' comments on China's response to Arbitrator question No. 107, paras. 50-53.

<sup>285</sup> China's comments on the United States' response to Arbitrator question No. 108, para. 80.

<sup>286</sup> China's comments on the United States' response to Arbitrator question No. 108, para. 81.

<sup>287</sup> China's comments on the United States' response to Arbitrator question No. 108, para. 82.

<sup>288</sup> United States' response to Arbitrator question No. 108, para. 134.

<sup>289</sup> We note in this regard the explanation by the United States of the contrary trade impact of a reduction in CVDs. The United States indicates that a "[d]uty reduction acts like a price cut", and that its "effects amount to an overall increase in U.S. demand for [imports] from China." (United States' written submission, para. 58).

#### 3.4.1.1.4 Conclusion

3.134. We agree with the parties that it is important to choose the "correct" year-prior in the interest of a correct calculation of the level of N/I.<sup>290</sup> We also agree with China that the year-prior must be an objective benchmark, otherwise the entire analysis of the level of N/I would be compromised.<sup>291</sup>

3.135. We agree with China that, in order to accurately estimate the level of N/I, the effects of the WTO-inconsistent duties in the reference year must be compared to a year in which trade flows were not distorted by those duties, and that using a year-prior when the preliminary duties were in place could prevent us from satisfying that basic requirement.<sup>292</sup> As China notes, what is relevant is whether the preliminary duties distort trade.<sup>293</sup> We therefore also agree with China that using the calendar years suggested by the United States would risk including periods in which the duties, even if in a preliminary form, have affected China's share in the US market. We note that the United States has not specified any advantages, from the perspective of our mandate, of running such a risk.

3.136. In light of the parties' arguments and evidence, we conclude that the United States has not demonstrated that the year-prior used by China for each product at issue would distort the calculation of the level of suspension so that it would not be equivalent to the level of N/I.<sup>294</sup> On the contrary, the collective body of evidence adduced by China suggests to us that preliminary CVD duties would have a significant negative impact on Chinese trade flows.

3.137. Basing our choice of the year-prior on the calendar year preceding the imposition of the preliminary CVDs would therefore secure a correct calculation, rather than, as the United States suggests, distort the purpose of this arbitration.<sup>295</sup> Accordingly, we select the year-prior suggested by China for each of the six products in question.

3.138. In doing so, we consider it immaterial and unnecessary to explore whether our approach reflects a deviation, as the United States suggests, from *US – Washing Machines (Article 22.6 – US)* and *US – Anti-Dumping Methodologies (China) (Article 22.6 – US)*.<sup>296</sup> Neither of these two previous arbitration proceedings that relied on the two-step Armington model had to choose between preliminary and final CVD determinations to establish the correct year-prior, and in fact both used the two-step Armington model to avoid a distorted calculation of the level of N/I.<sup>297</sup> In the circumstances of the present case and for the reasons elaborated upon earlier, we consider that choosing the calendar years preceding the preliminary CVDs is the appropriate approach to avoid any such distortion with regard to the six products for which the parties disagree on the year-prior.

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<sup>290</sup> See, e.g. China's response to Arbitrator question No. 107, paras. 83-84; United States' opening statement at the meeting of the Arbitrator, para. 30.

<sup>291</sup> China's opening statement at the meeting of the Arbitrator, para. 45.

<sup>292</sup> China's response to Arbitrator question No. 31, para. 6. See also China's comments on the United States' response to Arbitrator question No. 108, para. 80.

<sup>293</sup> China's opening statement at the meeting of the Arbitrator, para. 45.

<sup>294</sup> As explained, the party challenging the proposed level of suspension in an Article 22.6 arbitration proceeding bears the general burden of proving that the requirements of the DSU have not been met. In the context of determining the year-prior, the United States has the original burden of proving that China's proposal of a year-prior for the products at issue would result in the level of suspension not being equivalent to the level of N/I in the sense of Article 22.4 of the DSU. (See para. 3.2 above).

<sup>295</sup> United States' response to Arbitrator question No. 14, fn 110 to para. 93.

<sup>296</sup> United States' response to Arbitrator question No. 108, para. 137; and No. 109, para. 140; comments on China's response to Arbitrator question No. 107, para. 54; written submission, paras. 124-125; response to Arbitrator question No. 14, fn 110 to para. 93; opening statement at the meeting of the Arbitrator, para. 29; and closing statement at the meeting of the Arbitrator, paras. 16 and 20.

<sup>297</sup> China rightly points out in this regard that "[a]s the arbitrators in DS464 and DS471 acknowledged, in order to accurately estimate N/I, it is necessary to adopt a methodology that isolates the specific policy at issue and excludes the distorting effects of the WTO-inconsistent duties over time. For this reason, the arbitrators adopted the two-step approach to the Armington model." (China's written submission, para. 19. (fns omitted) See also Decisions by the Arbitrators, *US – Washing Machines (Article 22.6 – US)*, paras. 3.115-3.118; *US – Anti-Dumping Methodologies (China) (Article 22.6 – US)*, paras. 6.63-6.67).

3.139. Taking into account the parties' agreement for the other four products, we adopt the following years-prior for the ten products at issue in these proceedings:

**Table 6: Years-prior relied upon by the Arbitrator**

Products	Years-prior relied upon by the Arbitrator
Pressure Pipe	2007
Line Pipe	2007
Kitchen Shelving	2008
OCTG	2008
Wire Strand	2008
Seamless Pipe	2009
Print Graphics	2009
Aluminum Extrusions	2009
Steel Cylinders	2010
Solar Panels	2011

### 3.4.1.2 Year-prior market shares per product

3.140. In addition to disagreeing on the correct year-prior for six of the ten products at issue<sup>298</sup>, the parties also disagree on the year-prior market data to be used for the three different sales varieties (US domestic variety, imports from China, and imports from the RoW) for these ten products.<sup>299</sup> In particular, China relies on information of the three varieties obtained from USITC reports for eight of the products at issue (Pressure Pipe, Line Pipe, OCTG, Wire Strand, Seamless Pipe, Print Graphics, Aluminum Extrusions, and Solar Panels).<sup>300</sup> For the remaining two products<sup>301</sup>, China estimates domestic sales by using methodologies tailored to each product and obtains import data from USITC DataWeb.<sup>302</sup> The United States, in turn, relies on sales information of the three varieties obtained from USITC reports for four of the products at issue (Wire Strand, Seamless Pipe, Print Graphics, and Aluminum Extrusions). For the remaining products, the United States relies on domestic sales from USITC reports (with the exception of Kitchen Shelving and Steel Cylinders), and sources import varieties data from the US Census Bureau and USCBP.<sup>303</sup>

3.141. The year-prior data issues relate to data sources (for Pressure Pipe, Line Pipe, OCTG, Aluminum Extrusions, and Steel Cylinders), calculation methodologies (for Kitchen Shelving and Steel Cylinders), and product scope (for Kitchen Shelving, Pressure Pipe, Print Graphics, and Solar Panels). To the extent necessary in light of our earlier determination of the year-prior<sup>304</sup>, we address these data issues with regard to each of the ten products and for each of the three sales varieties.

<sup>298</sup> As mentioned, the parties disagree on the year-prior to be used for six of the products (i.e. Pressure Pipe, Line Pipe, OCTG, Wire Strand, Aluminum Extrusions, and Steel Cylinders). We addressed the parties' disagreement in section 3.4.1.1 above.

<sup>299</sup> See Exhibits CHN-120 and USA-155 (BCI).

<sup>300</sup> China's methodology paper, para. 92 and fn 67 thereto.

<sup>301</sup> According to China, some of the necessary market information for Kitchen Shelving and Steel Cylinders was not provided in the relevant final USITC reports. (China's methodology paper, para. 93).

<sup>302</sup> China explains that it was able to use the HTS10 tariff codes listed in the relevant USITC reports (Exhibits CHN-19 and CHN-41) to download the value of trade for Chinese exports and exports from the RoW, using USITC DataWeb as source of the HTS10 import data. (China's methodology paper, para. 94 and fn 68 thereto).

<sup>303</sup> The United States explains that it generally relies on the same shipment data used by the *US – Anti-Dumping Methodologies (China) (Article 22.6 – US)* arbitrator for the seven products (namely Line Pipe, OCTG, Seamless Pipe, Print Graphics, Aluminum Extrusions, Steel Cylinders, and Solar Panels) that were at issue in that arbitration. For the other three products (namely Pressure Pipe, Kitchen Shelving, and Wire Strand), the United States claims to follow estimation methods similar to those applied by that arbitrator. (United States' written submission, paras. 124-127 (referring to Exhibit USA-44 (BCI)); opening statement at the meeting of the Arbitrator, paras. 32-34; response to Arbitrator question No. 110, para. 141; and comments on China's response to Arbitrator question No. 73, para. 23).

<sup>304</sup> See section 3.4.1.1 above.

### 3.4.1.2.1 Pressure Pipe

3.142. As noted, the parties disagree on the year-prior for Pressure Pipe. In addition, they also disagree on the data source for the two import varieties. As a consequence, they present different values for the sales data to be used for the three varieties. China presents sales data based on USITC Publication 4064, Table IV-4<sup>305</sup>, for all three varieties. The United States relies on the same table in the same USITC report for sales of the US domestic variety, while it sources data for the two import varieties from the US Census Bureau.<sup>306</sup>

3.143. Regarding sales of the **US domestic variety**, while both parties rely on the same USITC report (Exhibit CHN-4, Table IV-4), their figures differ slightly because they correspond to different calendar years as the year-prior. Since this USITC report shows only the first three quarters of each year (January to September), both parties annualize this data.<sup>307</sup>

3.144. Absent direct data for the full calendar year, we consider the annualization of the available quarterly data to be reasonable.<sup>308</sup> Since we have determined 2007 to be the year-prior for Pressure Pipe<sup>309</sup>, we rely on the annualized figures for domestic sales provided by China for that calendar year based on the data contained in USITC Publication 4064.<sup>310</sup>

3.145. As regards the two **import varieties**, the parties' figures differ because they concern different calendar years as the year-prior and they rely also on different data sources. China submits data for the full calendar year 2007 from Table IV-4 of the above-mentioned USITC report<sup>311</sup>, whereas the United States relies on HTS aggregates<sup>312</sup> from the US Census Bureau.<sup>313</sup>

3.146. The United States claims that for the products that were not at issue in *US – Anti-Dumping Methodologies (China) (Article 22.6 – US)*, like Pressure Pipe, it has derived import data using a methodology that is consistent with the methodology used by that arbitrator.<sup>314</sup> The United States explains that it relies on import data from the US Census Bureau in what it considers the proper year-prior (2008) because full calendar year import data is not available in the aforementioned USITC report for 2008.<sup>315</sup>

3.147. As the parties do not criticize the alternative import data sources relied upon by the other party<sup>316</sup> and USITC Publication 4064 contains import sales data for 2007, which we have determined

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<sup>305</sup> See Exhibit CHN-4.

<sup>306</sup> See Exhibit USA-65.

<sup>307</sup> See United States' response to Arbitrator question No. 13, para. 88.

<sup>308</sup> We note that a similar approach was followed by the arbitrator in *US – Anti-Dumping Methodologies (China) (Article 22.6 – US)*: "[f]or [certain anti-dumping orders], the USITC investigation reports do not provide data for the full calendar year but only for the first six or nine months of the year. In such cases, we annualize the relevant data to estimate the annual value of US shipments by dividing the data by the corresponding number of months and multiplying the result by 12 (i.e. the number of months in a year)." (Decision by the Arbitrator, *US – Anti-Dumping Methodologies (China) (Article 22.6 – US)*, fn 272 to para. 7.16).

<sup>309</sup> See section 3.4.1.1 above.

<sup>310</sup> Exhibit CHN-4.

<sup>311</sup> Exhibit CHN-4.

<sup>312</sup> The United States uses the following HTS10 codes: 7306405005, 7306405040, 7306405062, 7306405064, and 7306405085.

<sup>313</sup> United States' response to Arbitrator question No. 13, para. 88.

<sup>314</sup> United States' response to Arbitrator question No. 13, para. 88.

<sup>315</sup> Exhibit USA-65; United States' response to Arbitrator question No. 13, para. 88.

<sup>316</sup> We note that there may be a potential difference in the scope of the products covered by the parties' import data. The USITC report relied upon by China states that the data in Table IV-4 are based on "U.S. imports from official statistics as adjusted to include WSS pressure pipe imported under HTS basket categories and to exclude pressure pipe greater than 14 inches and imports of non-subject mechanical tubing from Canada." (Exhibit CHN-4, p. IV-6 (emphasis original)). Conversely, the United States uses five HTS10-level categories, which may not have been adjusted in the same way as indicated in the USITC report referred to above. The United States acknowledges that it is not able to determine exactly how certain import values were adjusted and explains that, as a result, the import values it provides are "exact aggregates of the HTSUS data reported by the U.S. Census without any adjustments". (United States' response to Arbitrator question No. 46, para. 52).

to be the year-prior for Pressure Pipe<sup>317</sup>, we consider it reasonable to rely on the import data extracted by China from that report.

3.148. Therefore, for the three sales varieties of Pressure Pipe, we shall rely on the following year-prior figures derived from USITC Publication 4064<sup>318</sup>:

**Table 7: Year-prior (2007) market sales for Pressure Pipe**

Varieties	Total sales
<b>US domestic variety</b>	USD 201,460,000
<b>Imports from China</b>	USD 154,833,000
<b>Imports from the rest of the world</b>	USD 158,535,000

#### 3.4.1.2.2 Line Pipe

3.149. As noted, the parties disagree on the year-prior for Line Pipe. In addition, they also disagree on the data source for the imports. As a consequence, they present different values for the sales data to be used for the three sales varieties of this product. China presents sales data based on USITC Publication 4055 for all three varieties.<sup>319</sup> The United States relies on the same USITC report for sales of the US domestic variety, while it sources data for the two import varieties from US Customs<sup>320</sup> and the US Census Bureau.<sup>321</sup>

3.150. Regarding sales of the **US domestic variety**, while both parties rely on the same USITC Publication 4055 (Exhibit CHN-11, Table IV-12), their figures differ because they correspond to different calendar years as the year-prior. In addition, China uses data available for the full calendar year of 2007, while the United States annualizes data from the first three quarters of 2008 (January to September) as data only for those first nine months of 2008 is available in Table IV-12 of the USITC report.<sup>322</sup> Since we have determined 2007 to be the year-prior for Line Pipe<sup>323</sup>, we rely on the figures for domestic sales provided by China for that year and contained in USITC Publication 4055.<sup>324</sup>

3.151. As regards the two **import varieties**, the parties' figures differ because they concern different calendar years as the year-prior and they rely also on different data sources. China submits data for the full calendar year 2007 from Table IV-12 from the above-mentioned USITC report<sup>325</sup>, whereas the United States relies on company-specific USCBP data for imports from China<sup>326</sup>, and HTS aggregates from the US Census Bureau for imports from the rest of the world<sup>327</sup>. The parties disagree on the appropriateness of relying on USCBP data.<sup>328</sup>

<sup>317</sup> See section 3.4.1.1 above.

<sup>318</sup> Exhibit CHN-4.

<sup>319</sup> Exhibit CHN-11, Table IV-12.

<sup>320</sup> Exhibit USA-58 (BCI).

<sup>321</sup> Exhibit USA-59.

<sup>322</sup> As mentioned in section 3.4.1.2.1 above, regarding Pressure Pipe, absent direct data for the full calendar year, we consider annualization of the available quarters data to be reasonable.

<sup>323</sup> See section 3.4.1.1 above.

<sup>324</sup> Exhibit CHN-11.

<sup>325</sup> Exhibit CHN-11.

<sup>326</sup> Exhibit USA-58 (BCI). The United States indicates that it uses the USCBP data for imports from China because full calendar year data is not available for 2008 in the USITC report used by China (Exhibit CHN-11). According to the United States, for the products for which the arbitrator in *US – Anti-Dumping Methodologies (China) (Article 22.6 – US)* relied on BCI data from the USCBP for year-prior imports from China (i.e. Line Pipe, OCTG, Steel Cylinders, and Solar Panels), it has used the same USCBP data, based on the reference HTSUS codes from the relevant investigation product scope. (United States' opening statement at the meeting of the Arbitrator, para. 34).

<sup>327</sup> Exhibit USA-59.

<sup>328</sup> See section 3.4.2.1.2 on the use of USCBP data for remedy year estimates. Further, and specific to the year-prior, China argues that the best that the USCBP can do to estimate the value of subject imports from China is use the Harmonized Tariff Schedule ("HTS") codes from the CVD order and attempt to guess the

3.152. As the United States does not criticize the alternative import data sources relied upon by China, and USITC Publication 4055 contains import sales data for 2007 (which we have determined to be the year-prior for Line Pipe<sup>329</sup>), we consider it reasonable to rely on the import data extracted by China from that report.

3.153. Therefore, as regards the three sales varieties of Line Pipe, we shall rely on the following year-prior figures derived from USITC Publication 4055:

**Table 8: Year-prior (2007) market sales for Line Pipe**

Varieties	Total sales
<b>US domestic variety</b>	USD 757,701,000
<b>Imports from China</b>	USD 153,881,000
<b>Imports from the rest of the world</b>	USD 315,411,000

### 3.4.1.2.3 Kitchen Shelving

3.154. In the case of Kitchen Shelving, the parties agree that the correct year-prior is 2008 but they disagree on the data sources and estimation methodologies. The parties also raise issues of product scope for all three product varieties. As data from the USITC reports corresponding to the relevant CVD order is not available, both parties attempt to estimate sales of all three varieties based on various data sources and assumptions.<sup>330</sup>

3.155. Regarding sales of the **US domestic variety**, China presents data based on US Census shipment estimates for the primary 6-digit North American Industry Classification System (NAICS) code applying to kitchen appliances.<sup>331</sup> China acknowledges that this estimate covers a broader range of products than the relevant CVD order, which is limited to Kitchen Shelving.<sup>332</sup> Therefore, China adjusts the NAICS-level estimate using a factor derived from more granular *import* data. Assuming that the share of Kitchen Shelving in *domestic* shipments of kitchen appliances equals the share of Kitchen Shelving in imports of the same NAICS categories, China calculates the share of imports under the HTS10 codes that it assigns to Kitchen Shelving in total imports under all HTS10 codes associated with the relevant NAICS codes for kitchen appliances. Arguing that there appears to be no single HTS10 category exactly corresponding to Kitchen Shelving, China applies the ratio of (approximated) subject imports measured at the HTS10 level<sup>333</sup> to imports of all HTS10 codes associated with all the relevant NAICS codes.<sup>334</sup>

3.156. The United States' estimation method for the US domestic variety<sup>335</sup> first takes the total value ("U.S. product shipment values") of all kitchen appliances sold in the United States obtained at the NAICS level<sup>336</sup> from industry reports, producer price indexes, and a USITC report.<sup>337</sup> As this figure also includes imports, the United States then reduces it by the total value of imports. Finally, the United States scales the resulting figure by a factor obtained from the aforementioned USITC

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amount of subject merchandise based on the amount of exporter sales of HTS code merchandise using a series of *ad hoc* adjustments. China argues that the USCBP records subject imports only by following the imposition of the relevant measure, which implies that "USCBP data will only have a partial tally of the full year of imports". China adds that even if USCBP obtained import data prior to the imposition of the relevant CVD order, since no merchandise was "subject merchandise" during that period, USCBP could not have differentiated between what would have later been considered as subject and non-subject merchandise under a given HTS code. (China's response to Arbitrator question No. 13, paras. 47-58).

<sup>329</sup> See section 3.4.1.1 above.

<sup>330</sup> See Exhibits CHN-53 and USA-61, respectively.

<sup>331</sup> NAICS code 335221 (Household Cooking Appliance Manufacturing). See also Exhibit CHN-53.

<sup>332</sup> China's methodology paper, para. 95.

<sup>333</sup> China approximates subject imports as imports under the HTS10 codes associated with the primary NAICS code 335221 obtained from USITC DataWeb. However, some of the relevant HTS codes include Kitchen Shelving only as a portion, whereas other HTS10 codes may refer to specific subcategories of Kitchen Shelving.

<sup>334</sup> See Exhibit CHN-53 and data in Exhibits CHN-74 and CHN-76.

<sup>335</sup> Exhibit USA-61.

<sup>336</sup> NAICS codes 3352211, 3352213, and 335222.

<sup>337</sup> USITC Publication 4098 (Exhibit CHN-19).

report representing the cost share of Kitchen Shelving within the relevant NAICS categories<sup>338</sup>, based on the consideration that the latter cover more than the subject products.

3.157. Each party challenges the approach advanced by the other party. The United States claims that the underlying HTS codes used by China include more than just subject products.<sup>339</sup> China argues that the estimates of the United States are based on unverified assumptions that are impossible to evaluate.<sup>340</sup>

3.158. As both estimation methodologies rely on the import figures submitted, we turn to the import varieties before addressing the data on US domestic sales.

3.159. As regards the two **import varieties**, China uses eight HTS10 tariff codes based on USITC Publication 4098<sup>341</sup> to download relevant 2008 import data from USITC DataWeb (Exhibit CHN-74) for both import varieties.<sup>342</sup> The United States estimates the 2008 imports from China by scaling the 2010 imports of only two HTS10 categories of "oven racks" (as these two statistical numbers were not in effect or available prior to 2009)<sup>343</sup> with the change in market trends of imports from other related products (described by the United States as "basket categories" since they cover a number of products not covered by the relevant order<sup>344</sup>), and multiplying this by two in order to also account for refrigerator shelving that is covered by the six remaining basket HTS categories used by China.<sup>345</sup> As regards RoW imports, the United States estimates that these imports account for 5% of total US shipments, arguing that imports from China make up the large majority of US shipments.<sup>346</sup>

3.160. Again, each party calls into question the approach advanced by the other party. The United States claims that China uses import values based on Harmonized Tariff Schedule of the United States (HTSUS) categories that the USITC has reported to be "basket categories" containing a number of products outside of the scope of the relevant CVD measure.<sup>347</sup> To illustrate this, the United States lists products covered by the HTS codes used by China that, according to the United States, would not fit the description of subject merchandise.<sup>348</sup> The United States considers only two of the HTS codes used by China to be appropriate.<sup>349</sup>

3.161. In turn, China claims that the United States' approach is based on a series of arbitrary assumptions.<sup>350</sup> In particular, as regards Chinese imports, China argues that the United States does

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<sup>338</sup> 1.8% for household refrigerators and home freezers and 2.75% for oven ranges. (USITC Publication 4098 (Exhibit CHN-19)).

<sup>339</sup> United States' response to Arbitrator question No. 37, para. 27.

<sup>340</sup> China's response to Arbitrator question No. 37, para. 23.

<sup>341</sup> Exhibit CHN-19.

<sup>342</sup> China lists the eight HTS10-level codes in Exhibit CHN-53, p. 10, fn I, and in its data extract Exhibit CHN-74 (the HTS10 codes are: 7321.90.5000, 7321.90.6040, 7321.90.6060, 7321.90.6090, 8418.99.8050, 8418.99.8060, 8516.90.8010, and 8516.90.8050). USITC Publication 4098 (Exhibit CHN-19) mentions four HTS subheadings which contain these codes (7321.90.50, 7321.90.60, 8418.99.80, and 8516.90.80) and the following HTS10-level codes (six of which were used by China): 7321.90.5000, 7321.90.6090, 8418.99.8050, 8418.99.8060, and 8516.90.8000 (where 8516.90.8000 is split into 8516.90.8010 and 8516.90.8050, effective 1 July 2009).

<sup>343</sup> The United States uses just two HTS10-level codes: 7321.90.6040 ("Shelving and racks for cooking ovens, of iron or steel") and 8516.90.8010 ("Shelving and racks for electric cooking stoves, range and ovens of subheading 8516.60.40") and refers to trade under these two statistical reporting numbers as "oven racks" for simplicity. As the United States recognizes, import data for these two codes is not available for 2008 because they were not in effect prior to 2009. (Exhibit USA-61; United States' response to Arbitrator question No. 11, para. 82).

<sup>344</sup> Exhibit USA-61.

<sup>345</sup> The United States assumes that "oven racks" constitute around 50% of all Kitchen Shelving imports from China, with the remaining 50% reported under the other "basket" categories, e.g. refrigeration shelving. (Exhibit USA-61).

<sup>346</sup> According to the United States, China was the largest source of imports of oven racks from 2008-2010, with Mexico and Taiwan making up the large majority of the rest of imports under the corresponding statistical reporting numbers. The United States explains that, with imports from China making up the large majority of U.S. total shipments, analysts approximate the rest of total shipments at 5% of U.S. total shipments (see Exhibit USA-61).

<sup>347</sup> United States' written submission, para. 127; opening statement at the meeting of the Arbitrator, para. 33.

<sup>348</sup> United States' response to Arbitrator question No. 11, para. 84.

<sup>349</sup> United States' response to Arbitrator question No. 11, paras. 81-85.

<sup>350</sup> China's response to Arbitrator question No. 11, para. 26.

not have data for the two HTS10 codes it suggests using for 2008, as the United States uses 2010 data under these two codes and then scales this down by 20% based on the overall trend in imports from 2008 to 2009 of the aggregate data (i.e. including also non-subject products). China also argues that the United States assumes no change in imports from 2009 to 2010. China adds that it is entirely arbitrary to assume that imports of oven racks account for 50% of total Kitchen Shelving imports in the absence of supportive data. As for RoW imports, China argues that the United States' approach is questionable because it merely assumes, without adequate explanation, that imports from the rest of the world represent 5% of total imports. According to China, these assumptions are not economically justified.<sup>351</sup>

3.162. China has made a "compromise proposal"<sup>352</sup>, later in the proceedings and in light of alleged inadequacies of the United States' HTS system-based identification of subject imports, to use the mid-point between its own and the United States' estimate for both import varieties.<sup>353</sup> China has also suggested that this mid-point should be based on a corrected US estimate whereby the value of the two HTS codes relied upon by the United States should be multiplied by four rather than two to obtain the final value of US imports. China argues that such an adjustment is sensible as there are eight relevant HTS codes, which is four times the number of the two HTS codes that the United States has taken into consideration.<sup>354</sup> China adds that if this mid-point suggestion is not accepted, its proposal is to use the import estimates it has originally put forward.<sup>355</sup>

3.163. The United States disagrees with the above compromise proposal from China concerning mid-points, arguing that it is not based on data or evidence. The United States adds that its estimate needs no correction. According to the United States, China's proposed mid-point approach would incorrectly assume that approximately 60% of imports from China under the reference HTSUS codes consist of subject products.<sup>356</sup> The United States considers the proposal unreasonable also because it would be based on an unsupported premise that each of the HTSUS codes would represent an equal value of imports, and because only the two HTSUS codes covering oven racks would be specific to Kitchen Shelving products, while the other six HTSUS codes would broadly include non-subject products.<sup>357</sup>

3.164. In China's view, both parties have offered alternative approaches to derive the figures needed, producing different estimates for imports.<sup>358</sup> China highlights that the United States has not "demonstrated" what imports account for, noting that assumptions and estimations have been necessary.<sup>359</sup> Thus, China argues that its mid-point proposal is a compromise proposal intended to address this specific circumstance, which "acknowledges that the two sides have intractable differences".<sup>360</sup>

3.165. We note that the parties agree that no data is available that corresponds to the scope of Kitchen Shelving as set out in the relevant CVD order. Hence, both parties' estimates for import varieties are necessarily based on assumptions and simplifications. That said, we agree with several of the criticisms that each party has raised concerning the other party's estimate. As argued by the United States, China's estimate based on eight HTSUS codes does appear to be overinclusive since six of these HTSUS codes apply to kitchen appliances more broadly rather than to Kitchen Shelving specifically. However, China appears to be correct in arguing that many of the United States' assumptions are arbitrary, and several of these assumptions could lead to an underinclusive estimate. For example, the United States merely asserts that imports under two HTSUS codes account for exactly 50% of all Kitchen Shelving imports. The United States also does not explain how the analysts it cites reached the 5% figure for imports from the RoW that it claims to use. Further, while asserting to use this 5% of total shipments figure, we note that the United States'

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<sup>351</sup> China's response to Arbitrator question No. 11, paras. 23-39.

<sup>352</sup> China's comments on the United States' response to Arbitrator question No. 76, para. 21.

<sup>353</sup> China's response to Arbitrator question No. 35, paras. 20 and 21.

<sup>354</sup> China's response to Arbitrator question No. 12, para. 43, and No. 35, paras. 20 and 21.

<sup>355</sup> China's comments on the United States' response to Arbitrator question No. 76, para. 21.

<sup>356</sup> United States' response to Arbitrator question No. 76, paras. 23-24.

<sup>357</sup> United States' response to Arbitrator question No. 76, para. 30.

<sup>358</sup> China's comments on the United States' response to Arbitrator question No. 76, para. 17.

<sup>359</sup> China's comments on the United States' response to Arbitrator question No. 76, para. 19 (quoting United States' response to Arbitrator question No. 76, para. 23).

<sup>360</sup> China's comments on the United States' response to Arbitrator question No. 76, para. 21.

actual RoW imports estimate of USD 5 million accounts for only 3.9% of its estimated total shipments.<sup>361</sup>

3.166. Therefore, an estimate for the two import varieties in between the two parties' estimates may lead to a better approximation. China's proposal of a mid-point estimate appears in this context reasonable as it acknowledges the large uncertainty surrounding both parties' figures. We note the United States' concern that such a mid-point estimate could lead to a share of Kitchen Shelving in total kitchen appliance imports that differs substantially from the cost share estimates it has provided. However, it is unclear to what extent the United States' cost share estimates, which are based on total production, are directly applicable to the two import varieties. We therefore adopt the mid-point estimates proposed by China for the two import varieties. We calculate this mid-point without first correcting for the United States' estimate as proposed by China. We agree with the United States that such a correction presumes that each of the HTSUS codes would represent an equal value of imports, and China has not supported this presumption with evidence.

3.167. In light of this conclusion for the import varieties, we reject the United States' estimate for the domestic variety, which is quantitatively comparable to the one provided by China, since it is a function of the United States' import variety estimates. In contrast, in the absence of more precise data, we consider that China's estimate is the best available estimate for the domestic variety as it attempts to correct for the overinclusion caused by relying on aggregate NAICS codes. Hence, we adopt China's estimate for the domestic variety.

3.168. As a result, as regards the three sales varieties of Kitchen Shelving, we shall rely on the following year-prior figures:

**Table 9: Year-prior (2008) market sales for Kitchen Shelving**

Varieties	Total sales
US domestic variety	USD 84,256,000
Imports from China	USD 150,477,000
Imports from the rest of the world	USD 276,171,000

#### 3.4.1.2.4 OCTG

3.169. As noted, the parties disagree on the year-prior for OCTG. In addition, they also disagree on the data source for the imports. As a consequence, they present different values for the sales data to be used for the three varieties. China presents sales data based on USITC Publication 4124 for all three varieties of OCTG.<sup>362</sup> The United States relies on the same USITC report for sales of the US domestic variety, while it sources data for the two import varieties from US Customs<sup>363</sup> and the US Census Bureau.<sup>364</sup>

3.170. Regarding sales of the **US domestic variety**, while both parties rely on the same USITC Publication 4124 (Exhibit CHN-23, Table IV-6), their figures differ because they correspond to different calendar years as the year-prior. In addition, China uses data available for the full calendar year 2008, while the United States annualizes data from the first three quarters of 2009 (January to September) as data is available only for those first nine months of 2009 in Table IV-6 of the USITC

<sup>361</sup> We note that the United States' estimate roughly corresponds to 5% of shipments of the domestic variety. However, the United States explanation that "[w]ith imports from China making up the large majority of U.S. total shipments, analysts approximate the rest of total shipments at 5 percent of U.S. total shipments" suggests to us that the analysts referred to by the United States consider shipments of all three varieties since imports from China appear to be included in the definition of "U.S. total shipments" (Exhibit USA-61, p. 6).

<sup>362</sup> Exhibit CHN-23, Table IV-6

<sup>363</sup> Exhibit USA-58 (BCI).

<sup>364</sup> Exhibit USA-59.

report.<sup>365</sup> Since we have determined 2008 to be the year-prior for OCTG<sup>366</sup>, we rely on the figures for domestic sales provided by China for that year and contained in USITC Publication 4124.<sup>367</sup>

3.171. As regards the two **import varieties**, the parties' figures differ because they concern different calendar years as the year-prior and rely on different data sources. China submits data for the full calendar year 2008 from Table IV-6 of the above-mentioned USITC report<sup>368</sup>, whereas the United States relies on company-specific USCBP data for imports from China<sup>369</sup>, and HTS aggregates from the US Census Bureau for imports from the RoW<sup>370</sup>. As mentioned, the parties disagree on the appropriateness of relying on USCBP data.<sup>371</sup>

3.172. As the United States does not criticize the alternative import data sources relied upon by China and USITC Publication 4124 contains import sales data for 2008 (which we have determined to be the year-prior for OCTG<sup>372</sup>), we consider it reasonable to rely on the import data extracted by China from that report.

3.173. Therefore, for the three sales varieties of OCTG, we shall rely on the following year-prior figures derived from in USITC Publication 4124<sup>373</sup>:

**Table 10: Year-prior (2008) market sales for OCTG**

Varieties	Total sales
<b>US domestic variety</b>	USD 6,184,818,000
<b>Imports from China</b>	USD 2,805,206,000
<b>Imports from the rest of the world</b>	USD 2,572,888,000

#### 3.4.1.2.5 Wire Strand

3.174. As noted, the parties disagree on the year-prior for Wire Strand. As a consequence, they present different values for the sales data to be used for the three varieties. Both parties, however, obtain their figures for all three varieties from the same Table IV-6 of USITC Publication 4162.<sup>374</sup>

3.175. As we have determined 2008 to be the year-prior for Wire Strand<sup>375</sup> and USITC Publication 4162 contains domestic sales and imports data for 2008, we consider it reasonable to rely on the data extracted by China from that report.

3.176. Therefore, as regards the three sales varieties of Wire Strand, we shall rely on the following year-prior figures derived from USITC Publication 4162<sup>376</sup>:

<sup>365</sup> As mentioned in section 3.4.1.2.1 above regarding Pressure Pipe, absent direct data for the full calendar year, we consider annualization of the available quarters data to be reasonable.

<sup>366</sup> See section 3.4.1.1 above.

<sup>367</sup> Exhibit CHN-23.

<sup>368</sup> Exhibit CHN-23.

<sup>369</sup> Exhibit USA-58 (BCI). See fn 326 to para. 3.151 above.

<sup>370</sup> Exhibit USA-59.

<sup>371</sup> See fn 328 to para. 3.151 above. In addition, as regards specifically OCTG, China also argues that the exporter-specific USCBP data used by the United States for OCTG is problematic because the United States proposes measuring imports by customs value; however, in that case, the USITC decided that imports should be measured by the landed duty value paid. (China's response to Arbitrator question No. 73, para. 22).

<sup>372</sup> See section 3.4.1.1 above.

<sup>373</sup> Exhibit CHN-23.

<sup>374</sup> Exhibit CHN-28, Table IV-6.

<sup>375</sup> See section 3.4.1.1 above.

<sup>376</sup> Exhibit CHN-28, Table IV-6.

**Table 11: Year-prior (2008) market sales for Wire Strand**

Varieties	Total sales
<b>US domestic variety</b>	USD 333,721,000
<b>Imports from China</b>	USD 194,276,000
<b>Imports from the rest of the world</b>	USD 21,771,000

#### 3.4.1.2.6 Seamless Pipe

3.177. In the case of Seamless Pipe, the parties agree that the correct year-prior is 2009, and they submit identical sales data for each of the three varieties in that year.<sup>377</sup> In light of the parties' agreement, we shall rely on the following year-prior figures for the three sales varieties of Seamless Pipe:

**Table 12: Year-prior (2009) market sales for Seamless Pipe**

Varieties	Total sales
<b>US domestic variety</b>	USD 199,357,000
<b>Imports from China</b>	USD 135,240,000
<b>Imports from the rest of the world</b>	USD 348,609,000

#### 3.4.1.2.7 Print Graphics

3.178. In the case of Print Graphics, the parties agree that the correct year-prior is 2009, and they also agree<sup>378</sup> that the relevant data source for sales data of all three varieties should be USITC Publication 4192, dated November 2010.<sup>379</sup>

3.179. Regarding sales of the **US domestic variety**, while both parties rely on the same USITC report (Exhibit CHN-50), their figures differ because they use different tables contained therein. China uses the figures contained in Table IV-6 of the report, which correspond to "Certain coated paper (All U.S. integrated producers)", whereas the United States relies on the figures contained in Table IV-4 which correspond to "Certain coated paper other than coated packaging paperboard".<sup>380</sup>

3.180. The United States claims that it reported the same data that was used by the arbitrator in *US – Anti-Dumping Methodologies (China) (Article 22.6 – US)*, which does not include coated packaging paperboard and that, instead, China appears to use a different definition of subject merchandise.<sup>381</sup> China has agreed to exclude coated packaging paperboard from the scope of Print Graphics in the course of these proceedings, and suggests relying on the domestic variety figures for the year-prior that are contained in the table used by the United States.<sup>382</sup> We note,

<sup>377</sup> We note that the parties obtain the corresponding sales data from different sources. While China presents sales data based on Table C-4 in USITC Publication 4190, dated November 2010 (Exhibit CHN-32), the United States presents sales data obtained from *US – Anti-Dumping Methodologies (China) (Article 22.6 – US)* (Exhibit USA-155) (BCI), which is based on USITC Publication 4595, dated February 2016 (Exhibit USA-16). The United States notes that its data source is a more recent USITC report, while China's data source is an earlier USITC report, but highlights that the relevant data in those reports are the same. (United States' response to Arbitrator question No. 10, para. 75). Considering that both parties present the same sales figures, we do not consider it necessary to explore their differences concerning these data sources.

<sup>378</sup> Exhibits CHN-120 and USA-155 (BCI).

<sup>379</sup> Exhibit CHN-50.

<sup>380</sup> Exhibit CHN-50, Tables IV-4 and IV-6.

<sup>381</sup> United States' written submission, para. 126, and fn 103 thereto. The United States speculates that "[i]t is possible that the arbitrator in DS471 decided to exclude coated packaging paperboard from the relevant data based on the USDOC's determination to exclude from the product scope coated packaging paperboard products with a thickness of 310 cm or more and a density of less than 0.70 g/cm<sup>3</sup>". (United States' response to Arbitrator question No. 10, para. 76).

<sup>382</sup> China's response to Arbitrator question No. 38, paras. 25 and 26; and No. 77, para. 36.

however, that even though China confirmed that these figures should be used, it still relies on the initially submitted figures with year-prior market data in its calculations.<sup>383</sup>

3.181. Despite China's use of its original year-prior US domestic sales figures in its last relevant exhibit, we consider it reasonable, in light of the parties' agreement on the scope of the CVD order excluding coated packaging paperboard, to rely on the US domestic sales figure provided by the United States and contained in Table IV-4 of Exhibit CHN-50.

3.182. As regards the two **import varieties**, the parties submit identical figures based on the same USITC report.

3.183. Therefore, for the three sales varieties of Print Graphics, we shall rely on the following year-prior figures derived from USITC Publication 4192:

**Table 13: Year-prior (2009) market sales for Print Graphics**

Varieties	Total sales
<b>US domestic variety</b>	USD 1,023,688,000
<b>Imports from China</b>	USD 297,527,000
<b>Imports from the rest of the world</b>	USD 420,989,000

#### 3.4.1.2.8 Aluminum Extrusions

3.184. As noted, the parties disagree on the year-prior for Aluminum Extrusions. As a consequence, they present different values for the sales data to be used for the three varieties. China presents sales data based on USITC Publication 4229 for all three varieties<sup>384</sup>, while the United States presents sales data obtained from the more recent USITC Publication 4677.<sup>385</sup> We note that for each of the two alternative calendar years advanced by the parties, both USITC Publications 4229 and 4677 contain the same figures for all three varieties.

3.185. As we have determined 2009 to be the year-prior for Aluminum Extrusions<sup>386</sup>, and since the parties' data sources contain the same figures for that calendar year for all three sales varieties of Aluminum Extrusions, we shall rely on the following year-prior figures provided by China and derived from both USITC reports:<sup>387</sup>

**Table 14: Year-prior (2009) market sales for Aluminum Extrusions**

Varieties	Total sales
<b>US domestic variety</b>	USD 2,888,945,000
<b>Imports from China</b>	USD 547,968,000
<b>Imports from the rest of the world</b>	USD 359,382,000

#### 3.4.1.2.9 Steel Cylinders

3.186. As noted, the parties disagree on the year-prior for Steel Cylinders. In addition, they also disagree on the data sources and calculation methodologies to be used. As a consequence, they present different values for the sales data to be used for the three varieties. China presents sales data based on reports from a specific supplier (i.e. the TriMas Corporation) for domestic sales<sup>388</sup> and

<sup>383</sup> Exhibit CHN-120.

<sup>384</sup> Exhibit CHN-36, Table IV-2.

<sup>385</sup> Exhibit CHN-37, Table C-1.

<sup>386</sup> See section 3.4.1.1 above.

<sup>387</sup> Considering that both USITC reports present the same sales figures for year 2009, we do not consider it necessary to explore the parties' differences concerning these data sources.

<sup>388</sup> Exhibit CHN-55.

USITC DataWeb for the two import varieties.<sup>389</sup> The United States also relies on information from that supplier for sales of the US domestic variety, while it sources data for the two import varieties from US Customs<sup>390</sup> and the US Census Bureau.<sup>391</sup>

3.187. Regarding sales of the **US domestic variety**, China obtains sales data from the 2012 SEC Annual Report (Form 10-K) of the TriMas Corporation.<sup>392</sup> According to China, Norris Cylinder, a sub-unit in the Engineered Components Division of the TriMas Corporation, is the only company producing high pressure steel cylinders in the United States.<sup>393</sup> China estimates US domestic shipments by attempting to extract the domestic sales of Norris Cylinder from the sales of TriMas Corporation's Engineered Components Division reported in the 2012 SEC Annual Report.<sup>394</sup> According to China, the engineered components division consisted of producers of: (i) specialty engines and engine replacement parts for use in oil and natural gas production and other industrial and commercial markets; and (ii) steel cylinders produced by Norris Cylinder.<sup>395</sup> Since the 10K form does not separate revenue due to domestic shipments from export sales nor across the different lines of TriMas Corporation's Engineered Components Division, China assumes that, first, 50% of the reported 2010 revenue of TriMas Corporation's Engineered Components Division stems from Norris Cylinder, and, second, that two thirds of reported revenue comes from domestic sales.<sup>396</sup>

3.188. The United States initially proposed a similar methodology to that of China<sup>397</sup>, albeit for a different year-prior, and based on the assumption that Norris Cylinder's entire estimated revenue for 2011 stemmed from US domestic sales.<sup>398</sup> In response to a follow-up question by the Arbitrator, the United States submitted a letter containing the exact value of domestic sales figures of steel cylinders by Norris Cylinder for the 2010 and 2011 calendar years (i.e. for both alternative years-prior).<sup>399</sup> According to the United States, relying on these direct figures would obviate the need to make any assumptions concerning the value of Norris Cylinder's domestic sales.<sup>400</sup>

3.189. The domestic sales data from Norris Cylinder provided by the United States seems to us to be the best available data on the record, since it contains an exact figure, without requiring assumptions or estimation methodologies, and has been issued directly by Norris Cylinder. Accordingly, we consider it reasonable to rely on this data for domestic sales but using the figure relating to calendar year 2010, which we have determined to be the year-prior for Steel Cylinders.<sup>401</sup>

3.190. As regards the two **import varieties**, the parties' figures differ because they concern different calendar years as the year-prior and also rely on different data sources. China submits data for the full calendar year 2010 from the USITC online DataWeb system<sup>402</sup>, whereas the United States relies on company-specific USCBP data for imports from China<sup>403</sup>, and HTS aggregates from the

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<sup>389</sup> Exhibit CHN-120.

<sup>390</sup> Exhibit USA-58 (BCI).

<sup>391</sup> Exhibit USA-59.

<sup>392</sup> China's methodology paper, para. 95; written submission, para. 23. See also Exhibit CHN-55.

<sup>393</sup> China's methodology paper, para. 95; Exhibit CHN-94.

<sup>394</sup> Exhibit CHN-94; Exhibit CHN-55.

<sup>395</sup> Exhibit CHN-94.

<sup>396</sup> Exhibit CHN-94.

<sup>397</sup> Exhibit USA-60.

<sup>398</sup> United States' response to Arbitrator question No. 14, paras. 93-96.

<sup>399</sup> Exhibit USA-116 (BCI); United States' response to Arbitrator question No. 48, para. 56.

<sup>400</sup> United States' response to Arbitrator question No. 48, para. 56.

<sup>401</sup> See section 3.4.1.1 above.

<sup>402</sup> China indicates that it uses the primary HTS10 tariff code HTS 7311.00.0030 in USITC Publication 4328 to download import data from USITC DataWeb for both import varieties. This USITC publication notes, however, that "[s]ubject merchandise may also be imported under HTSUS statistical reporting numbers 7311.00.0060 or 7311.00.0090" (Exhibit CHN-41). In response to a follow-up question by the Arbitrator, China confirms, and the United States agrees, that HTS 7311.00.0030 is the appropriate and sole HTS code to be used in this context and that the other HTS codes are only secondary ones. (China's methodology paper, para. 94; China's response to Arbitrator question No. 49, para. 44; United States' response to Arbitrator question No. 49, paras. 57-58; and Exhibits CHN-41 and CHN-74).

<sup>403</sup> Exhibit USA-58 (BCI). See fn 326 to para. 3.151 above.

US Census Bureau for imports from the RoW.<sup>404</sup> As mentioned, the parties disagree on the appropriateness of relying on USCBP data.<sup>405</sup>

3.191. As we have determined 2010 to be the year-prior for Steel Cylinders<sup>406</sup> and since the data sources provided by the United States do not contain import data for that year, we consider it reasonable to rely then on the import data provided by China for 2010.

3.192. Therefore, with regard to the three sales varieties of Steel Cylinders, we shall rely on the following year-prior figures:

**Table 15: Year-prior (2010) market sales for Steel Cylinders**

Varieties	Total sales
<b>US domestic variety</b>	[[***]]
<b>Imports from China</b>	USD 23,009,000
<b>Imports from the rest of the world</b>	USD 2,821,000

#### 3.4.1.2.10 Solar Panels

3.193. In the case of Solar Panels, the parties agree that the correct year-prior is 2011. However, they disagree on the data sources, and they also raise issues of product scope. As a consequence, the parties present different values for the sales data for the three product varieties. China submits sales data based on USITC Publication 4360 (Table IV-4) for all three varieties.<sup>407</sup> The United States submits sales data used in *US – Anti-Dumping Methodologies (China) (Article 22.6 – US)*<sup>408</sup>, and, as a consequence, indirectly relies on a USITC report for sales of the US domestic variety, and on US Customs and US Census Bureau for imports.

3.194. Regarding sales of the **US domestic variety**, both parties rely, directly or indirectly, on different USITC reports.<sup>409</sup> As mentioned, China relies on USITC Publication 4360, dated November 2012<sup>410</sup>, whereas the United States relies on USITC Publication 4519, dated February 2015.<sup>411</sup> According to the United States, the figures in these USITC reports differ because more data became available between 2012 and 2015.<sup>412</sup>

3.195. Each party challenges the approach advanced by the other party. In general, China considers it inappropriate to rely in the present proceedings on the sales data previously used in

<sup>404</sup> Exhibit USA-59. While the exact HTSUS codes used are not mentioned in the source used by the United States, in response to a question from the Arbitrator, the United States explains that it uses the same HTS10 code as China. (United States' response to Arbitrator question No. 14).

<sup>405</sup> See fn 328 to para. 3.151 above.

<sup>406</sup> See section 3.4.1.1 above.

<sup>407</sup> Exhibit CHN-45.

<sup>408</sup> Exhibit USA-44 (BCI).

<sup>409</sup> The United States originally argued that its figure for US domestic shipments came from the same USITC report that China had submitted (USITC Publication 4360), referenced by the arbitrator in *US – Anti-Dumping Methodologies (China) (Article 22.6 – US)*. However, the United States recognized that the arbitrator in those proceedings was not able to confirm this number. During the course of the proceedings, the United States explains that the report containing its figures is the more recent USITC Publication 4519 (United States' response to Arbitrator question No. 42, para. 38. See also Exhibit CHN-45).

<sup>410</sup> Exhibit CHN-45.

<sup>411</sup> Exhibit USA-21.

<sup>412</sup> United States' response to Arbitrator question No. 42, para. 38.

*US – Anti-Dumping Methodologies (China) (Article 22.6 – US)* for several reasons<sup>413</sup>, especially because, according to China, there is publicly available data that would be more appropriate for "evaluating the specific violations at issue in this dispute".<sup>414</sup> The United States claims that China's data excludes photovoltaic (PV) cells, which was included in the scope of the relevant CVD measure as indicated in the CVD order in the *Federal Register*.<sup>415</sup> Specifically, for US domestic shipments, the United States notes that China's figure includes only PV modules, while the United States presumes that the figure it cites is larger because the arbitrator in *US – Anti-Dumping Methodologies (China) (Article 22.6 – US)* had most likely estimated the value of US domestic shipments of PV cells and derived its own estimate for domestic shipments of cells and modules.<sup>416</sup>

3.196. Later in the proceedings, the United States notes that it does not disagree with China's approach of using data for modules alone (without separately accounting for shipments of cells) as a proxy for the size of the US domestic Solar Panel market.<sup>417</sup> Similarly, China agrees that the values are similar in both USITC reports and states that it does not oppose the use of the more recent USITC report as the basis for domestic sales in the year-prior.<sup>418</sup> Therefore, considering China's position, we adopt the figure for the US domestic variety proposed by the United States based on USITC Publication 4519.<sup>419</sup>

3.197. As regards the two **import varieties**, the parties' figures differ because they rely on different data sources. China submits data for the full calendar year 2007 from Table IV-4 of USITC Publication 4360 for both import varieties.<sup>420</sup> The United States relies on company-specific USCBP data for imports from China<sup>421</sup>, and on HTS aggregates from the US Census Bureau for imports from the RoW.<sup>422</sup> As mentioned, the parties disagree on the appropriateness of relying on USCBP data with regard to both import varieties.<sup>423</sup>

3.198. Regarding **imports from China**, China believes that public data on PV modules alone are an accurate proxy for the overall Solar Panel market as imports of solar cells from China were small during both the year-prior and the remedy year.<sup>424</sup> The United States notes that the USCBP data it submits covers imports of both PV *cells* and *modules*.<sup>425</sup> The United States adds that the USCBP data

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<sup>413</sup> First, in China's view, arbitrators in Article 22.6 proceedings should rely on public, verifiable data whenever possible. Second, China considers that the claim that the public data reported in the USITC reports contains non-subject imports is difficult to reconcile with the USITC's described efforts to report apparent domestic consumption as precisely as possible for the product subject to the investigation. Third, China argues that since none of the parties in *US – Anti-Dumping Methodologies (China) (Article 22.6 – US)* argued for the use of the two-step Armington model to calculate the level of N/I, the appropriateness of some of the key data required for the two-step Armington model was not fully explored in those proceedings. Fourth, China claims that the violation at the core of *US – Anti-Dumping Methodologies (China) (Article 22.6 – US)* required additional, nuanced, firm-specific data, which is not needed to compute the level of N/I in this dispute. Finally, China notes that the data in *US – Anti-Dumping Methodologies (China) (Article 22.6 – US)* contains information on additional varieties for China which is unnecessary for this proceeding and serves only to complicate the analysis (China's response to Arbitrator question No. 10, paras. 17-21).

<sup>414</sup> China's response to Arbitrator question No. 10, para. 21.

<sup>415</sup> Exhibit CHN-43.

<sup>416</sup> United States' response to Arbitrator question No. 10, paras. 75-80.

<sup>417</sup> The United States explains that most domestically produced cells are internally used in the production of modules by a same firm and, as consequence, separately estimating US domestic shipments of cells and those of modules would result in double-counting. (United States' response to Arbitrator question No. 42, para. 39).

<sup>418</sup> China's response to Arbitrator question No. 74, para. 25.

<sup>419</sup> Exhibit USA-21.

<sup>420</sup> Exhibit CHN-45.

<sup>421</sup> Exhibit USA-58 (BCI). See fn 326 to para. 3.151 above. According to the United States, the arbitrator in *US – Anti-Dumping Methodologies (China) (Article 22.6 – US)* did not use USITC imports data for Solar Panels' year-prior data, "so the United States likewise did not use USITC data". (United States' closing statement at the meeting of the Arbitrator, para. 25).

<sup>422</sup> Exhibit USA-59.

<sup>423</sup> See fn 328 to para. 3.151.

<sup>424</sup> China's response to Arbitrator question No. 41, para. 31.

<sup>425</sup> United States' response to Arbitrator question No. 10, paras. 77 and 78. However, Exhibit USA-58 (BCI) mentions only "CSPV cells". In response to a follow-up question by the Arbitrator, the United States clarified that the label "CSPV cells" was intended to be a shortened version of "CSPV Cells and Modules" (United States' response to Arbitrator question No. 43, para. 41 (referring to Exhibits USA-58 (BCI) and USA-59)).

used by the *US – Anti-Dumping Methodologies (China) (Article 22.6 – US)* arbitrator has appropriate scope and temporal coverage to be applicable in the present proceedings concerning CVD orders.<sup>426</sup>

3.199. China disagrees with the United States that the USCBP data has appropriate scope. China claims that, by referring to the title of the HTS codes underlying the United States' USCBP data, the United States has included a large number of out-of-scope products in its submission, specifically generators and lead acid batteries.<sup>427</sup> China adds that the United States' USCBP data may undercount year-prior imports from China because USCBP begins to request information from exporters of subject merchandise once a preliminary duty is imposed, which calls into question the suitability of relying on USCBP data for the year-prior sales figures of the Chinese import variety.<sup>428</sup> According to China, the preliminary determination date for a CVD order on Solar Panels was 26 March 2012. It is therefore not evident to China how USCBP may have recorded company-specific importation of subject merchandise already in the year-prior (2011).<sup>429</sup> China adds that even if USCBP were able to access pre-CVD import records of subject firms *ex post*, it may fail to include in its set of subject firms Chinese firms that had exported in the past but stopped exporting once the CVD order was put in place. China argues that this would result in an undercount of imports from China.<sup>430</sup>

3.200. According to the United States, this concern by China is based on "a misunderstanding about the nature of the year-prior USCBP data" because USCBP data are not based on subject merchandise under specific CVD orders, but are based instead on the reference HTS codes that are used by USCBP to identify shipments that may be subject to relevant duties.<sup>431</sup> Accordingly, the United States considers that the USCBP data it submits covers the entirety of Chinese imports under the relevant HTS codes for the year-prior.

3.201. As regards sales of **imports from the rest of the world**, China sources its figure from the above-mentioned USITC report<sup>432</sup> and covers only PV modules, whereas the sales figure submitted by the United States is based on data from the US Census Bureau.<sup>433</sup>

3.202. The United States argues that the difference between the USITC-reported data advanced by China and the HTSUS-based data used by the United States appears to be due to a difference in product coverage.<sup>434</sup> According to the United States, the USITC-reported data is "compiled from data submitted in response to [USITC] questionnaires" and only includes imports of modules among subject Solar Panels products. In addition, the United States explains that the HTSUS-based USCBP and US Census figures submitted by the United States aggregate values of all imports under the reference HTSUS codes and include imports of both cells and modules, as well as any other products that fall under the reference HTSUS codes.<sup>435</sup> China argues that the USITC data it submits for year-prior RoW imports purges these products as well as out-of-scope thin film solar panels.<sup>436</sup> China reiterates that the HTSUS codes used by the United States include substantial amounts of out-of-scope products.<sup>437</sup>

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<sup>426</sup> United States' response to Arbitrator question No. 44, para. 42.

<sup>427</sup> China's response to Arbitrator question No. 75, paras. 26-35.

<sup>428</sup> China's response to Arbitrator question No. 13, paras. 45-58.

<sup>429</sup> See Exhibit CHN-99.

<sup>430</sup> China's response to Arbitrator question No. 13.

<sup>431</sup> United States' response to Arbitrator question No. 32, para. 6.

<sup>432</sup> Exhibit CHN-45.

<sup>433</sup> Exhibit USA-59.

<sup>434</sup> United States' response to Arbitrator question No. 75, paras. 20 and 21.

<sup>435</sup> United States' response to Arbitrator question No. 75, paras. 20 and 21 and fns 13, 14, and 15 thereto (quoting Exhibit CHN-45 and referring to the United States' response to Arbitrator question Nos. 10 and 59).

<sup>436</sup> China's comments on the United States' response to Arbitrator question No. 75, para. 13.

<sup>437</sup> China explains that three of the HTS codes listed in the Solar Panels CVD order cover out-of-scope merchandise: 8501610000 (AC generators (alternators) of an output not exceeding 75 kva); 8501318000 (DC generators, not exceeding 750 w); and 85072080 (Lead-acid storage batteries other than of a kind used for starting piston engines or as the primary source of power for electric vehicles). China claims to have confirmed, using data reported by USITC DataWeb, that the United States used the HTS codes for generators and lead-acid batteries in its submitted import data. China also claims that, in addition to excluding out-of-scope generators and batteries, the USITC data submitted by China is preferable to the U.S. Census and USCBP data because it excludes out-of-scope thin-film products under HTS code 8541406020. (China's response to Arbitrator question No. 75, paras. 26-35. See also Exhibits CHN-45 and CHN-123).

3.203. We consider that the import estimates of both parties have shortcomings. We acknowledge China's concern that the United States' estimate appears to be overinclusive due to the presence of out-of-scope generators and lead acid batteries. We also agree with the United States' criticism that the import of solar cells, not captured by China's estimate, should be accounted for given the scope of the relevant CVD order. Accordingly, we cannot rely on either party's import estimates.

3.204. We note that the USITC report advanced by China includes a table that reports the value of imports for both solar modules and solar cells (Table IV-2). This table is based on landed duty-paid rather than apparent consumption, which is the basis of Table IV-4 relied upon by China. These tables appear to differ due to technical adjustments made by USITC; however, these adjustments are small in value when based on a comparison of import values of modules only.<sup>438</sup> In order to account also for solar cells, we consider it reasonable to rely on Table IV-2 of USITC Publication 4360 to obtain an estimate for both import varieties, even if this table reports landed duty-paid and not apparent consumption as the tables predominantly used by the parties.

3.205. Therefore, with regard to the three sales varieties of Solar Panels, we shall rely on the following year-prior figures:

**Table 16: Year-prior (2011) market sales for Solar Panels**

Varieties	Total sales
US domestic variety	USD 804,853,000
Imports from China	USD 1,905,220,000
Imports from the rest of the world	USD 824,588,000

### 3.4.2 Remedy year

3.206. As noted<sup>439</sup>, the parties agree that, since the RPT expired on 1 April 2016, the baseline year or reference period for a counterfactual analysis should be the 2017 calendar year.<sup>440</sup> The parties disagree on the data points to be used for each of the ten products.

3.207. Unlike the sales data necessary for the year-prior, only an estimate of the total market size is needed for the remedy year, rather than estimates for each of the three varieties (US domestic sales, imports from China, and RoW imports). China, in fact, submits only an aggregate remedy-year sales estimate for four of the products at issue (Line Pipe, Kitchen Shelving, Wire Strand, and Seamless Pipe)<sup>441</sup>, whereas for the remaining six products (Pressure Pipe, OCTG, Print Graphics, Aluminum Extrusions, Steel Cylinders, and Solar Panels), China submits data for each of the three varieties. The United States contests the remedy-year sales estimates of China for all ten products, and proposes alternative estimates based on estimates for each of the three varieties of all ten products.<sup>442</sup>

3.208. The parties' disagreements concern several issues, including estimation methodologies, data sources, and product scope. Several of these disagreements relate to more than one product. Accordingly, before addressing each product individually, we examine these general, cross-cutting disagreements and issues.

#### 3.4.2.1 General disagreements affecting remedy-year market size

3.209. The parties rely on USITC reports pertaining to the products and years at issue for total market size and variety estimates when such reports are available. However, unlike for the year-prior, USITC reports with the appropriate product scope covering the remedy year are available

<sup>438</sup> Table IV-4 reports USD 1,729 million of solar module imports from China, Table IV-2 reports USD 1,799 million (Exhibit CHN-45).

<sup>439</sup> See para. 3.9 above.

<sup>440</sup> China's methodology paper, para. 66; United States' written submission, para. 28 (referring to China's methodology paper, para. 4).

<sup>441</sup> Exhibit CHN-120.

<sup>442</sup> Exhibit USA-156 (BCI).

only for two products (OCTG and Solar Panels)<sup>443</sup> and even in these two cases they only apply to a subset of varieties. As a result, for remedy-year market size estimates, the parties rely on other sources or extrapolate data from USITC reports of earlier years.

3.210. Each party criticizes the adjustments chosen by the other party. In particular, the United States questions China's use of a gross domestic product (GDP) deflator to extrapolate data, whereas China criticizes the United States' reliance on confidential USCBP data to obtain estimates for imports from China. We address these two disagreements in turn.

#### **3.4.2.1.1 Remedy year data estimates obtained using a GDP deflator**

3.211. As China explains, for five products<sup>444</sup> it uses information from either a USITC sunset review or a USITC report from another investigation involving the same product scope for estimating the sales of the three varieties and calculating total market size. However, as the reports on three of those five products (Pressure Pipe, Print Graphics, and Aluminum Extrusions) were published prior to 2017, China scales data from the latest year with reported market data available to 2017 values using a GDP deflator.<sup>445</sup> For a sixth product, Steel Cylinders, China uses data on import supply from a USITC sunset review and adjusts it by a GDP deflator for the import varieties, and uses domestic data that is available directly for 2017 from the sole US producer for the domestic sales variety.<sup>446</sup> For the other four products (Line Pipe, Kitchen Shelving, Wire Strand, and Seamless Pipe), no subsequent USITC reports dated after the relevant year-prior are available or the information therein is redacted, so China estimates the 2017 market size by scaling the size of the whole market in the relevant year-prior for each product using a GDP deflator without differentiating by variety.<sup>447</sup> In other words, China adjusts USITC data from years preceding the remedy year using a GDP deflator, whether for all or only some varieties, for all products except OCTG and Solar Panels.

3.212. The United States argues that China's GDP deflator approach is unsound and overstates the level of N/I.<sup>448</sup> According to the United States, China's GDP deflator approach is not a valid method for estimating market size in the remedy year since applying a GDP deflator to data from previous years merely shows the market size of the original data year in terms of 2017 dollars, rather than the actual market size in 2017. The United States claims that, in effect, China is assuming constant consumption between the original data year and 2017.<sup>449</sup>

3.213. The United States adds that, while the underlying USITC data are likely to be accurate for the original data year, there is no evidence that putting the US market size for that original data year in terms of 2017 dollars, by applying a GDP deflator, would accurately reflect the size of the US market in 2017.<sup>450</sup> According to the United States, as a measurement of inflation, the GDP deflator can be used on a given year's value to calculate what that value would be in terms of another year's dollars; however, a GDP deflator is not an appropriate proxy for projecting the future demand or consumption, or measuring the past demand or consumption, for a product.<sup>451</sup>

3.214. The United States notes that, unlike the estimates generated by China's GDP deflator, the actual US market size, as reported in USITC reports, has varied, sometimes dramatically, year-to-year.<sup>452</sup> According to the United States, there is no relationship between the actual 2017 market size and the projected 2017 value based on applying the GDP deflator to the value from the latest year for which USITC data is available.<sup>453</sup> In particular, the United States argues that if a remedy year happened to be determined as 2009 or any other year that the economy was in recession, the GDP deflator would fail to reflect the actual decline and instead would show growth in consumption. The United States maintains that, "[b]ecause a GDP deflator is not able to accurately estimate consumption for every year, it simply is not an appropriate tool for estimating consumption

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<sup>443</sup> Exhibits CHN-46 and USA-148.

<sup>444</sup> Pressure Pipe, OCTG, Print Graphics, Aluminum Extrusions, and Solar Panels.

<sup>445</sup> China's methodology paper, para. 99; Exhibit CHN-120.

<sup>446</sup> China's methodology paper, para. 100; Exhibit CHN-120.

<sup>447</sup> China's methodology paper, para. 101.

<sup>448</sup> United States' written submission, paras. 148-150.

<sup>449</sup> United States' response to question No. 23, para. 132.

<sup>450</sup> United States' response to question No. 23, para. 133.

<sup>451</sup> United States' response to question No. 23, para. 133.

<sup>452</sup> United States' response to question No. 23, para. 134, including Figures 3-5 (referring to Exhibit USA-102 (BCI)).

<sup>453</sup> United States' response to question No. 23, Figures 3-5.

for any given year".<sup>454</sup> The United States adds that it is also inappropriate to assume that the year China chose as an original data year is the best proxy for the remedy year in terms of apparent consumption.<sup>455</sup>

3.215. The United States claims that China seems to calculate the market size for 2017 by not taking into account specific factors related to the products when estimating US domestic shipments, by not providing the relevant customs information on the actual product, and by not taking into account US imports from the RoW.<sup>456</sup> The United States claims that, in contrast, the values of the US market for each product that the United States uses for its analysis is based on actual shipment data for the relevant product, which is significantly more accurate than China's estimate based on a GDP deflator.<sup>457</sup>

3.216. From the outset, China recognizes that in *US – Anti-Dumping Methodologies (China) (Article 22.6 – US)*, the arbitrator expressed a preference for directly measuring the size of the market in the remedy year. China argues that this preference is precisely why it gathered information from later USITC reports when such reports were available. However, China argues, the USITC has not provided any non-redacted information for Kitchen Shelving, Line Pipe, Seamless Pipe, or Wire Strand, and hence adjusting market size by the inflation rate (as proxied by the GDP deflator) is a reasonable approach.<sup>458</sup>

3.217. China rejects the alternative estimates advanced by the United States.<sup>459</sup> China reiterates that it applied the same approach in all cases for measuring the total US market size in the remedy year.<sup>460</sup> In particular, China recalls, in five cases<sup>461</sup> it has used USITC reports that are more recent than the year-prior to produce its remedy-year estimates, and notes that in each of these cases the GDP deflator adjustment was minor – no more than a 6% adjustment for inflation. Thus, China argues, unless the United States is proposing that the USITC reports China relies upon are inaccurate, there can be little debate over China's estimate of the remedy-year market size. As regards a sixth product, Steel Cylinders, China claims that it has used an up-to-date Form-10K report from the only US domestic producer along with remedy-year HTS trade data to compute the overall remedy-year market size.<sup>462</sup> In the remaining four cases (Line Pipe, Kitchen Shelving, Seamless Pipe, and Wire Strand), China claims that there were no more recent USITC reports covering the subject product, and argues that "[c]onsistent with the principles of consistency and transparency, ... adjusting the year-prior market size to estimate the remedy-year market size is perfectly reasonable".<sup>463</sup>

3.218. China adds that the United States proposes using a mix of confidential data and *ad hoc* adjustments to publicly available data.<sup>464</sup> China criticizes the United States' use of confidential USCBP data for imports from China arguing that it cannot confirm its accuracy.<sup>465</sup> Regarding imports from the RoW, China rejects the *ad hoc, ex post* adjustments to the public HTSUS trade data that the United States proposes with respect to Seamless Pipe.<sup>466</sup> Regarding domestic production, China claims that the approach of the United States is problematic because it discards verified USITC data in favour of a series of arbitrary assumptions, and, thus, there is no reason to presume that such an approach would lead to a more accurate estimate of the domestic industry's size. On the contrary, according to China, its reliance on the GDP deflator is based on verified data and assumes that domestic production is stable in real value terms and grows with inflation.<sup>467</sup>

3.219. Further, China argues, if one considers Pressure Pipe, Seamless Pipe, and Print Graphics, in each of these cases, the United States downsizes the value of imports in the *remedy* year from

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<sup>454</sup> United States' response to question No. 23, para. 135. (emphasis original)

<sup>455</sup> United States' response to question No. 23, para. 135.

<sup>456</sup> United States' written submission, para. 148.

<sup>457</sup> United States' written submission, para. 8.

<sup>458</sup> China's methodology paper, para. 102.

<sup>459</sup> China's written submission, paras. 78-85.

<sup>460</sup> China's written submission, para. 80.

<sup>461</sup> Pressure Pipe, OCTG, Print Graphics, Aluminum Extrusions, and Solar Panels.

<sup>462</sup> China's written submission, para. 80.

<sup>463</sup> China's written submission, para. 81.

<sup>464</sup> China's written submission, paras. 82-84.

<sup>465</sup> China's response to Arbitrator question No. 24, para. 61.

<sup>466</sup> China's response to Arbitrator question No. 24, para. 62.

<sup>467</sup> China's response to Arbitrator question No. 24, para. 63.

other import supply sources using an *ad hoc* scaling metric based on adjustments from the original investigation (which is eight or more years-prior). China finds the United States' position untenable. China argues that, while the United States opposes China's GDP deflator-based approach which occasionally uses information from original investigation USITC reports (if later reports are unavailable), the United States relies on those same reports when it proposes *ad hoc* adjustments to lower the market size in the remedy year.<sup>468</sup>

3.220. For China, adjusting the best verifiable, publicly available data to get an estimate for the remedy year would be a relatively easy task in this dispute, because for six of the cases, the timeframe requiring inflation adjustment is short, making it unlikely that different price indices will imply large differences in the adjustment.<sup>469</sup> China concludes by stating that the United States' position that the GDP deflator approach cannot measure market changes is inaccurate. According to China, the fact that it used US market size information from USITC reports from 2015 or 2016, for example, to estimate the size of the US market in 2017, is hardly unreasonable. The relevant question, China claims, is whether another price deflator would be more appropriate than the GDP deflator.<sup>470</sup> According to China, the United States presents no evidence that any other deflator is superior to what China has proposed, and in most cases, the GDP deflator's impact on the estimate of the US market size is quite modest.<sup>471</sup>

3.221. In principle, we do not consider it *a priori* unreasonable to rely on data from years that are close to the remedy year adjusted by an appropriate index that captures changes in market size if reliable sales data from the remedy year is unavailable. However, such an approach does not appear warranted when reliable data for the actual remedy year is available.

3.222. In addition, assuming that data less recent than the remedy year is reliable as a point of departure for estimating remedy-year sales, we do not consider a GDP deflator to be an appropriate index for adjusting such data in the context of this dispute. According to the United States Bureau of Economic Analysis (USBEA), the source of China's data,<sup>472</sup> the GDP deflator "measures changes in the prices of goods and services produced in the United States".<sup>473</sup> The USBEA adds that the GDP deflator is "a measure of inflation".<sup>474</sup> Hence, as argued by the United States, using a GDP deflator would imply assuming constant consumption levels over time with only prices changing. We agree with the United States that such an assumption is unreasonable given that the United States has provided several examples in which consumption has varied significantly over time.<sup>475</sup>

3.223. We also note that the arbitrator in *US – Anti-Dumping Methodologies (China) (Article 22.6 – US)* rejected China's suggested inflation-based adjustment of data from earlier calendar years in order to calculate remedy-year sales as "not reasonable or objective":

China's suggestion to use inflation-adjusted values from the year prior to the imposition of the anti-dumping orders, rather than 2017 values, is not reasonable or objective. We

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<sup>468</sup> China's written submission, para. 83.

<sup>469</sup> China's response to Arbitrator question No. 26, para. 72. According to China, only for four cases (Line Pipe, Kitchen Shelving, Wire Strand, and Seamless Pipe) the timeframe requiring inflation adjustment would be long, since for the other products China either provided data for 2015 (i.e. Pressure Pipe, Print Graphics, and Aluminum Extrusions), or for 2013 (i.e. OCTG), or no adjustment is needed (i.e. for Steel Cylinders and Solar Panels). (China's response to Arbitrator question No. 26, para. 73).

<sup>470</sup> In a response to a question from the Arbitrator asking for other publicly available deflators, China presented an alternative to its GDP deflator in the form of a product-specific Producer Price Index ("PPI"). According to China, the overall impact of using product-specific PPI data rather than the GDP deflator is modest. However, while the PPI varies slightly from case to case and from the GDP deflator, it is not obvious for China that the PPI is a preferred metric to adjust the public data to evaluate the market size in 2017 since the PPI focuses on the very broad output of US producers including not only the goods and services purchased by producers as inputs in their own operations or as investment, but also goods and services bought by consumers from retail sellers and directly from the producer. China argues that, in contrast, the GDP deflator, as a measure of inflation, is a better representation of the real changes in markets size for the products at issue (China's response to Arbitrator question No. 26, paras. 70-71; Exhibits CHN-103 and CHN-104).

<sup>471</sup> China's written submission, para. 85.

<sup>472</sup> See Exhibit CHN-53. We note that China indicates Federal Reserve Economic Data as source, which identifies as original source the USBEA (see <https://fred.stlouisfed.org/series/GDPDEF>, last accessed 1 October 2021).

<sup>473</sup> <https://www.bea.gov/data/prices-inflation/gdp-price-deflator>, accessed on 5 October, 2021.

<sup>474</sup> <https://www.bea.gov/data/prices-inflation/gdp-price-deflator>, accessed on 5 October, 2021.

<sup>475</sup> See para. 3.214 above.

recall that our mandate is to determine the level of nullification or impairment caused by the United States' failure to implement the DSB recommendations and rulings by the expiry of the reasonable period of time. We also recall that the parties agreed to use calendar year 2017 as the reference period. Thus, we consider it appropriate to use the actual 2017 values of the US market, including the actual 2017 value of US shipments, when applying the Armington model to simulate the impact of reducing the WTO-inconsistent anti-dumping duties from the actual 2017 duty rates to the counterfactual duty rates. If we were to use the values of the US market in the year prior to the imposition of the anti-dumping orders, inflation-adjusted or not, we would be simulating the impact of reducing the WTO-inconsistent anti-dumping duties at a point in time where these duties had not yet been imposed. In our view, this would not be in accordance with our mandate.<sup>476</sup>

3.224. China argues that by using the latest USITC reports available or other transparent market information, it has addressed this criticism by the arbitrator in *US – Anti-Dumping Methodologies (China) (Article 22.6 – US)*.<sup>477</sup> We disagree. If reliable data from the actual remedy year is available, using data from earlier USITC reports does not address the criticism since it would still be simulating the impact of reducing the WTO-inconsistent CVDs before the end of the RPT, which would not correspond to the parties' agreed view as to our mandate.

3.225. We note China's argument that, by relying on the year-prior data of certain CVDs to make adjustments to remedy-year data that admittedly does not have the appropriate product scope, the United States essentially mirrors China's approach and, therefore, acts inconsistently with its own criticism of China's GDP deflator-based methodology. However, we consider it more reasonable to assume that certain consumption ratios remain constant over time than the assumption that total consumption remains constant over time. For example, the United States scales for Pressure Pipe 2017 RoW imports from basket HTSUS codes using the share of subject product in these HTSUS codes obtained with information from the original USITC reports.<sup>478</sup> This assumes that the ratio of subject product in the more aggregated HTSUS codes has remained constant. Adjusting actual 2017 import data with such a ratio still ensures that the resulting estimate is based on data from the remedy year. In contrast, assuming constant consumption over time leads to an estimate that is based on year-prior data.

3.226. We also note that for three products (Pressure Pipe, Kitchen Shelving, and Aluminum Extrusions), there is no remedy-year data on the record for domestic shipments since both parties rely on data from prior years. In such a case, a scaling exercise might be reasonable, but we consider that an appropriate index for this exercise should optimally consider changes in both quantities and prices, and not just in one of them as is the case for the GDP deflator. Such indices are publicly available in the form of growth rates for national or industrial output.

3.227. In light of the above, we reject China's remedy-year estimates for all products that are obtained using a GDP deflator for the purposes of these proceedings. We shall proceed to reviewing the data provided for each of the three varieties of each product at issue, and, subject to such data being reasonable, we will use it in order to determine the total remedy-year market size for each product as detailed in our product-by-product analysis in section 3.4.2.2.

#### **3.4.2.1.2 Use of USCBP data for imports from China as submitted by the United States**

3.228. The United States relies on data obtained from USCBP to submit remedy-year data from 2017 for the Chinese import variety of all ten products. The United States repeatedly argues that this data was used by the arbitrator in *US – Anti-Dumping Methodologies (China) (Article 22.6 – US)* and should therefore be considered appropriate also for our proceedings.<sup>479</sup>

3.229. China argues that relying on such USCBP data is inappropriate. According to China, we should rely in the first instance on verified data reported by the USITC even if it relates to years earlier than the remedy year, and only turn to other publicly available data where the relevant USITC

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<sup>476</sup> Decision by the Arbitrator, *US – Anti-Dumping Methodologies (China) (Article 22.6 – US)*, para. 7.18. (fn omitted)

<sup>477</sup> China's methodology paper, para. 102.

<sup>478</sup> United States' written submission, paras. 144-147.

<sup>479</sup> See e.g. United States' response to Arbitrator question No. 15, paras. 97-107, and No. 80, para. 35.

data is not publicly available. China considers that the fact that the arbitrator in *US – Anti-Dumping Methodologies (China) (Article 22.6 – US)* relied on exporter-specific USCBP data does not support the use of such data in the present arbitration because the WTO violations at issue in that dispute related to an exporter-specific duty adjustment. According to China, the WTO violation at issue in these proceedings does not vary depending on the exporter and, thus, the only reason to use the exporter-specific USCBP data submitted by the United States would be if the United States could demonstrate that the USCBP data is somehow superior to the data obtained from USITC reports or HTSUS import data submitted by China.<sup>480</sup>

3.230. China adds that USCBP data is confidential and could only be relied upon if the United States submitted additional data reporting imports by exporter to allow both China and the Arbitrator to verify its accuracy.<sup>481</sup> China argues that allowing one party to assert the value of imports subject to the CVD orders without enabling the other party to verify these values would "call the legitimacy of the N/I calculation into question".<sup>482</sup>

3.231. In addition, as regards specifically Line Pipe and OCTG, China claims that the United States' data relies upon customs value, even though USITC deemed landed duty value paid the correct metric to measure imports, which is higher in value. China also claims that for Line Pipe and Solar Panels, some imports that enter under the HTS codes listed in the relevant CVD orders are non-subject products. According to China, the USITC data it submitted excludes any out-of-scope product included in the USCBP data submitted by the United States.<sup>483</sup>

3.232. The United States responds that China has not supported its argument that relying on USCBP data is inappropriate. The United States suggests that China can verify USCBP data by comparing it with export data compiled by the General Administration of Customs China and argues that the United States relies on non-public data only where adequate public data is not available. In particular, the United States argues that, for the remedy-year, USCBP data is the most accurate data source for the products at issue. According to the United States, this is because the USCBP collects data using the description of the product as defined in the relevant CVD order, through its Automated Commercial Environment system.<sup>484</sup>

3.233. Given that our mandate points us to the remedy year, we consider that using actual data from the remedy year is preferable to using data from previous years that are adjusted by inflation or growth rates. Hence, insofar as there are no USITC reports covering 2017, we agree with the United States that USCBP data directly for 2017 appear to be the most accurate remedy-year Chinese import data on the record. The fact that USCBP data is not public does not *a priori* disqualify such data. As a matter of fact, prior arbitrators have relied on non-public data to establish the level of N/I.<sup>485</sup> Also, we agree with the United States that, apart from pointing out the non-public nature of USCBP data, China has not indicated why such data should generally be unreliable.<sup>486</sup>

3.234. Accordingly, when no superior data is available for a certain product at issue, we shall rely on USCBP data for imports from China in the remedy year provided by the United States.

#### **3.4.2.2 Remedy-year market size per product**

3.235. As mentioned, the parties disagree on remedy-year market size estimates for all ten products. As noted, the parties' disagreements concern several aspects including estimation methodologies, data sources and product scope. We address these data issues put forward by the parties with regard to each of the ten products at issue, including as regards the three sales varieties.

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<sup>480</sup> China's response to Arbitrator question No. 44, para. 35, and No. 73, para. 23; comments on the United States' response to Arbitrator question No. 110, paras. 84-85; and opening statement at the meeting of the Arbitrator, para. 55.

<sup>481</sup> China's response to Arbitrator question No. 12, para. 42; No. 24, para. 61; and No. 25, para. 67.

<sup>482</sup> China's response to Arbitrator question No. 12, para. 42.

<sup>483</sup> China's response to Arbitrator question No. 73, para. 22; opening statement at the meeting of the Arbitrator, para. 56.

<sup>484</sup> United States' response to Arbitrator question No. 15, paras. 97-107 and No. 82, para. 41.

<sup>485</sup> See, e.g. Decision by the Arbitrator, *US – Anti-Dumping Methodologies (China) (Article 22.6 – US)*.

<sup>486</sup> We note that China states in the context of, for instance, Kitchen Shelving, that "the United States does have confidential USCBP data that could be helpful for assessing trade in the remedy year, but it has not made that data available to China" (China's response to Arbitrator question No. 25, para. 67).

### 3.4.2.2.1 Pressure Pipe

3.236. China obtains estimates for the three varieties by applying a GDP deflator to 2015 data from USITC Publication 4644.<sup>487</sup> The United States presents data for the domestic variety based on the same USITC report but, for imports from China and from the RoW, the United States relies on USCBP and HTSUS-based US Census data respectively.<sup>488</sup> The HTSUS-based US Census data for imports from the RoW includes, according to the United States, out-of-scope product. Therefore, the United States scales this data using the average ratio over the years 2007-2009 of USITC Publication 4064 data<sup>489</sup> with the appropriate scope to the HTSUS data with a larger scope.<sup>490</sup>

3.237. Regarding sales of the **US domestic variety**, both parties use USITC Publication 4644 as a data source, but they disagree on which year's data within that report to use as a starting point for calculating remedy-year sales and they use different indices to scale data in order to reach an estimate for 2017. While China uses data for the full year of 2015, the United States annualizes data from the first quarter (January-March) of 2016 and scales it by the year-on-year growth rate of sales in this specific variety from the first quarter of 2015 to the first quarter of 2016.<sup>491</sup>

3.238. We note that according to USITC Publication 4644 actual annual sales in 2015 were 10% smaller than annualized first quarter sales of that year.<sup>492</sup> Further, we consider that relying on the first quarter of 2016 as opposed to the full year of 2015 involves a relatively small difference in terms of how recent the underlying data is. Hence, we consider it appropriate to rely on data for the full year of 2015, as suggested by China, and not on annualized first quarter data for 2016, as suggested by the United States.

3.239. Regarding the scaling of the data to the remedy year, the parties use different indices. China uses the GDP deflator, whereas the United States scales by an index based on market-size changes from the first quarter of 2015 to the first quarter of 2016. As indicated, we disagree with China's suggested GDP deflator.<sup>493</sup> Among other reasons, we consider this index inappropriate for the current proceedings as it does not account for changes in consumption levels in the remedy year or previous years. In this context, we note that the index used by the United States also ignores possible changes in consumption levels between 2016 and 2017, the remedy year, and assumes that growth simply continues in a linear fashion. Further, the index proposed by the United States is based on a comparison of a single quarter only and, therefore, might not be representative of the full annual development. As a result, we consider that neither China's nor the United States' proposed indices are appropriate.

3.240. We recall that to obtain year-prior domestic shipment data in the context of a different product, Kitchen Shelving, China and the United States appear to rely on the US Census' Annual Survey of Manufactures<sup>494</sup>, which reports annual shipment data at the 6-digit NAICS industry level.<sup>495</sup> As noted regarding year-prior data for Kitchen Shelving<sup>496</sup>, we consider this survey as a reliable data source. Hence, we consider that growth rates obtained on the basis of this survey for the primary 6-digit NAICS codes associated with the products at issue in the context of Pressure Pipe can serve as a more reliable approximation for market-size changes at the more disaggregated product level than the indices advanced by the parties. In particular, we consider that 6-digit-level, or industry-level, growth rates for the relevant years may better capture product-level growth rates in the relevant period than the national price changes advanced by China in the form of a GDP

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<sup>487</sup> Exhibits CHN-5 and CHN-120. GDP deflator data is reported in Exhibit CHN-53.

<sup>488</sup> Exhibits CHN-5; USA-65; USA-66 (BCI); and USA-156 (BCI).

<sup>489</sup> Exhibit CHN-4.

<sup>490</sup> United States' written submission paras. 144-146 and Table 11.

<sup>491</sup> Exhibit USA-61.

<sup>492</sup> Exhibit CHN-5, Table IV-3. The annualized value is USD 94,912,000 for 2015 while the actual value is USD 85,540,000.

<sup>493</sup> See section 3.4.2.1.1 above.

<sup>494</sup> See Exhibits CHN-53 and USA-61.

<sup>495</sup> In years where a full economic census is conducted (every five years including the remedy year), these figures are reported in the Economic Census instead of the Annual Survey of Manufactures.

<sup>496</sup> See section 3.4.1.2.3 above.

deflator or the past product-level growth rates relied upon by the United States.<sup>497</sup> Therefore, to obtain the value of domestic sales of Pressure Pipe for the remedy year, we will calculate a scaling index based on this data and apply it to 2015 sales data for the full year from USITC Publication 4644.<sup>498</sup>

3.241. As regards the two **import varieties**, China obtains estimates by applying a GDP deflator to 2015 data from a USITC Publication 4644, resulting in an estimate of zero for Chinese remedy-year imports. In turn, the United States relies on remedy-year data from the USCBP for Chinese imports and on remedy-year HTSUS-based US Census data for RoW imports, which the United States scales to correct for any out-of-scope products.

3.242. As explained<sup>499</sup>, we disagree with China's suggested GDP deflator. As regards the data submitted by the United States for imports from China, China challenges the United States' estimates due to reliance on USCBP data, which we have addressed earlier.<sup>500</sup> Considering that the United States' data is based on information from the actual remedy year, and no other data from that year is available, we consider the estimate for Chinese imports provided by the United States superior to China's 2015 data scaled by a GDP deflator and to be the best available data on the record, and we will rely upon this data.

3.243. For imports from the RoW, China criticizes the United States' correction for out-of-scope products to its HTSUS-based estimate. As mentioned, the United States implements this correction by scaling the data using the average ratio over the years 2007-2009 of USITC report data with the appropriate product scope to the HTSUS data with a larger scope. China argues that using an *ad hoc* scaling metric based on adjustments from the original investigation is inconsistent with the United States' criticism of China's use of market-size estimates based on data from the original investigation combined with a GDP deflator. China adds that the adjustment only serves to diminish the size of the market in the remedy year.<sup>501</sup>

3.244. We note that China acknowledges<sup>502</sup> that the USITC report it relies upon indicates that the HTSUS codes pertaining to Pressure Pipe include out-of-scope products.<sup>503</sup> Hence, we consider it reasonable to adjust for such scope issues. As explained, we consider such a scope adjustment to be more reasonable than assuming constant consumption over time as implied by China's GDP

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<sup>497</sup> We note that the annual growth rate from 2015 to 2016 based on 6-digit NAICS industry statistics matches the United States' estimated growth rate obtained from comparing the first quarters of 2015 and 2016 at the more disaggregated product-level as reported in USITC Publication 4644 quite closely. Industry-level shipments shrank by 9.9% while the United States' first quarter comparison suggests a decline of 11.3% at the product-level. We also note that the industry-level growth rate from 2014 to 2015 (19.4%) was similar to the product-level growth reported by USITC (26.4%). According to industry statistics, the market recovered in 2017 partly with a growth rate of 15.1% (or 3.7% compared to 2015). This is in stark contrast to the United States' assumption, which is not substantiated by concurrent data, that the market continued to shrink by 11.3%. See US Census' Annual Survey of Manufactures 2015 and 2016 and Economic Census of 2017 data for NAICS code 331110 available at: <https://www.census.gov/data/tables/time-series/econ/asm/2013-2016-asm.html> (accessed 1 October 2021) (Tables "2015 Value of Product Shipments" and "2016 Value of Product Shipments") and <https://www.census.gov/data/tables/2017/econ/economic-census/naics-sector-31-33.html> (accessed 1 October 2021) (Table "EC1700BASIC").

<sup>498</sup> To obtain shipment estimates at the 6-digit NAICS-level for the industry associated with Pressure Pipe, we follow China's methodology (see Exhibit CHN-53) used for determining year-prior market values of Kitchen Shelving. In other words, we use the NAICS-HTS concordance by Pierce and Schott (2012) to match the HTS codes listed in USITC Publication 4644 to a 6-digit NAICS code (331110 – "Iron and steel mills and ferroalloy manufacturing") (Justin R. Pierce and Peter K. Schott, "A Concordance Between Ten-Digit U.S. Harmonized System Codes and SIC/NAICS Product Classes and Industries" (2012), *Journal of Economic and Social Measurement*, 37(1-2):61-96). We then obtain shipments data for this NAICS code from the Annual Survey of Manufactures and the Economic Census and deduct exports obtained from USITC's Dataweb. See Annex C-5 for the identification of the primary NAICS code, Annex C-6 for the calculation of the scaling index, and Annex C-8 for the calculation of the resulting remedy year figure. We note that these steps were not criticised by the United States in the context of year-prior data of Kitchen Shelving. In fact, the United States also relies on primary NAICS codes for that product.

<sup>499</sup> See section 3.4.2.1.1 above.

<sup>500</sup> See section 3.4.2.1.2 above.

<sup>501</sup> China's written submission, paras. 82 and 83.

<sup>502</sup> China's response to Arbitrator question No. 46, para. 37.

<sup>503</sup> See USITC Publication 4064, p. IV-6 (Exhibit CHN-4).

deflator-based estimate.<sup>504</sup> As a result, we adopt the United States' estimates for imports from the RoW.

3.245. Therefore, with regard to Pressure Pipe, we shall rely on the following variety-specific figures for the purposes of calculating the total remedy-year market size:

**Table 17: Remedy-year market sales for Pressure Pipe**

Varieties	Total sales
<b>US domestic variety</b>	USD 89,091,000
<b>Imports from China</b>	[[***]]
<b>Imports from the rest of the world</b>	USD 156,207,000
<b>TOTAL MARKET SIZE</b>	<b>[[***]]</b>

### 3.4.2.2.2 Line Pipe

3.246. In the case of Line Pipe, China does not report sales data by variety but calculates an estimate for the total market size in the remedy year (2017) obtained by applying a GDP deflator to its estimated total sales data for the year-prior (2007).<sup>505</sup> The United States calculates its remedy-year total US market-size figure as the sum of sales estimates and data for the three varieties.<sup>506</sup> The United States' estimate for sales of the US domestic variety in 2017 is based on industry data from Preston Pipe and Tube, a private data and consulting company.<sup>507</sup> For imports from China and from the RoW, the United States relies on USCBP and HTSUS-based US Census data respectively.<sup>508</sup>

3.247. As explained<sup>509</sup>, we do not consider the use of a GDP deflator, as suggested by China, to be a reliable approach for calculating remedy-year sales. Hence, we review the remedy-year data for all three varieties provided by the United States, as well as China's arguments against relying on such data, before calculating the total value of remedy-year sales.

3.248. Regarding sales of the **US domestic variety**, the United States' data includes price and quantity information at a disaggregated level, used to obtain an estimate which the United States argues is in line with the scope of the CVD order. In particular, the United States multiplies the average US price for welded pipe of 16 inches or less in diameter by the 2017 production quantity of that pipe type and size. It obtains the production quantity by multiplying the share of line pipe that is 16 inches or less in diameter in total line pipe shipments with the total amount of welded pipes shipped domestically. China criticizes the United States' estimate as being based on arbitrary assumptions, as well as unverifiable data sources and calculations.<sup>510</sup> China adds that, while Preston Pipe and Tube is a well-known source for pipe data, its data does not match the product scope under the relevant CVD order. In particular, China claims that the product scope is limited to pipes not greater than 14 inches in outside diameter, whereas the Preston Pipe and Tube data reports data only for pipes up to 16 inches in diameter. China concludes that the United States' estimate includes out-of-scope products.<sup>511</sup>

3.249. The United States responds that China appears to have erroneously cited the product scope of Pressure Pipe, which is limited to pipes not greater than 14 inches in diameter. The United States argues that, in contrast, the product scope of Line Pipe, the product at issue in this context, includes pipes up to 16 inches in diameter.<sup>512</sup>

<sup>504</sup> See para. 3.225 above.

<sup>505</sup> Exhibit CHN-120. See also Exhibit CHN-53 for reported GDP deflator data.

<sup>506</sup> Exhibit USA-156 (BCI).

<sup>507</sup> Exhibits USA-60 and USA-136 (BCI).

<sup>508</sup> Exhibits USA-59 and USA-64 (BCI).

<sup>509</sup> See section 3.4.2.1.1 above.

<sup>510</sup> China's response to Arbitrator question No. 24, para. 63 and Table 5.

<sup>511</sup> China's response to Arbitrator question No. 83, paras. 47-49.

<sup>512</sup> United States' comments on China's response to Arbitrator question No. 83, para. 32.

3.250. We note that, as argued by the United States, the product scope of the relevant order, as defined in the relevant notice of CVD order issued by the Department of Commerce, is "circular welded carbon quality steel pipe of a kind used for oil and gas pipelines (welded line pipe), not more than 406.4 mm (16 inches) in outside diameter, regardless of wall thickness, length, surface finish, end finish or stenciling".<sup>513</sup>

3.251. In light of the clarification regarding product scope and while we agree with China that the United States' estimate is based on a set of assumptions, we still consider that the estimate is preferable to China's estimate which assumes constant consumption levels over a 10-year period. The United States' estimate is based on actual 2017 data and each of its assumptions appear to be reasonable. In particular, we consider that assuming that the share of line pipe that is 16 inches or less in diameter is the same in total line pipe sales and welded line pipe sales not unreasonable in the absence of welded line pipe sales data. We also consider that applying the average price across different welded line pipes 16 inches or less in diameter to this sales estimate is reasonable in the absence of more disaggregated sales data that would allow for a better matching between disaggregated price and line pipe types.

3.252. As regards the two **import varieties**, the parties' disagreements with respect to the United States' estimates for imports from China revolve around the use of USCBP data. As explained, if no superior data is available, we consider the use of USCBP data for the remedy year to be reasonable.<sup>514</sup> As regards imports from the RoW, China does not challenge the scope of the HTSUS-data based estimate of the United States. In light of this and since it is the only data for Line Pipe imports from the RoW on the record for the remedy year, we adopt the estimate based on HTSUS data provided by the United States. As we have rejected China's GDP deflator approach, we adopt the United States' estimates for the two import varieties.<sup>515</sup>

3.253. Therefore, with regard to Line Pipe, we shall rely on the following variety-specific figures for the purposes of calculating the total remedy-year market size:

**Table 18: Remedy-year market sales for Line Pipe**

Varieties	Total sales
US domestic variety	USD 542,483,000
Imports from China	[[***]]
Imports from the rest of the world	USD 605,500,000
<b>TOTAL MARKET SIZE</b>	<b>[[***]]</b>

### 3.4.2.2.3 Kitchen Shelving

3.254. In the case of Kitchen Shelving, China estimates the remedy year (2017) total sales in the US market by applying a GDP deflator to its estimated total sales for the year-prior agreed by the parties (2008).<sup>516</sup> The United States calculates the remedy year total market size figure as the sum of its sales estimates for the three varieties. The United States' estimate for sales of the US domestic variety in 2017 is calculated using the same methodology the United States employs to estimate the year-prior equivalent, namely as a certain percentage of NAICS-level total remedy-year sales of kitchen appliances in the United States informed by Kitchen Shelving cost share estimates less imports. The United States' estimate for Kitchen Shelving imports from China are based on USCBP data for 2017. Its estimates for imports from the RoW are calculated by deducting the above imports from China from estimated total imports obtained using the United States' methodology for

<sup>513</sup> Exhibit CHN-8.

<sup>514</sup> See section 3.4.2.1.2 above.

<sup>515</sup> We note that in its later submissions (Exhibits USA-79 (BCI) and USA-156 (BCI)), the United States' figure for imports from the RoW differs by USD 100,000 from the figure contained in Exhibit USA-59, which the United States refers to as the source of Exhibit USA-156 (BCI). Exhibits USA-79 (BCI) and USA-156 (BCI) indicate a value of USD 605,600,000, whereas Exhibit USA-59 indicates USD 606,500,000. Given that the United States argues that Exhibit USA-59 is the source of its data, we rely on the figure contained therein, i.e. USD 606,500,000.

<sup>516</sup> Exhibit CHN-120. See also Exhibit CHN-53 for reported GDP deflator data.

estimating the year-prior imports from China. The United States uses two HTSUS codes to calculate imports of oven-related kitchen shelving from the US Census and multiplies this number by two to account for all other types of kitchen shelving.<sup>517</sup>

3.255. As explained, we do not consider the use of a GDP deflator, as suggested by China, to be a reliable approach for calculating remedy-year sales.<sup>518</sup> Hence, we review the remedy-year data for all three varieties provided by the United States as well as China's arguments against relying on such data, before calculating the total value of remedy-year sales.

3.256. For sales of the **US domestic variety**, the United States criticizes the assumptions underlying the use of a GDP deflator<sup>519</sup>. China criticizes the United States' estimation methodology as based on *ad hoc*, unverified, and unattributed statements. China adds that the cost share estimates upon which the United States' methodology rests are ranges rather than specific figures implying that the United States' estimate, which uses the mid-point of the range, could be substantially misestimating the true value.<sup>520</sup>

3.257. As noted, we do not consider that applying a GDP deflator to market size estimates of previous years, especially if the period at issue covers nine years, is reasonable.<sup>521</sup> We further agree with China that the United States' estimate is based on a series of unfounded assumptions, in particular insofar as it rests on its import estimates as indicated below. We therefore reject both parties' estimates for the remedy-year sales of the domestic variety of Kitchen Shelving.

3.258. To assess whether reasonable alternative estimates for the US domestic variety are available, we turn to the parties' year-prior estimates because both parties emphasize the importance of using consistent product definitions across the year-prior and the remedy year.<sup>522</sup> We recall that we have relied on China's methodology for estimating year-prior sales of the domestic variety, which rests on adjusting NAICS-level sales estimates downwards to correct for out-of-scope products, as reasonable. Therefore, we apply this methodology to remedy-year data to obtain an estimate of remedy-year sales of the domestic variety that is consistent with the definition used in the year-prior.<sup>523</sup>

3.259. For **import varieties** data, we note that as regards imports from China, the parties' disagreements revolve around the use of USCBP data, which we have addressed earlier.<sup>524</sup> Accordingly, since no data superior to USCBP data is available, we adopt the United States' estimate of imports from China based on direct USCBP data for 2017.

3.260. As regards imports from the RoW, in the absence of direct remedy-year data, the United States employs the same methodology to imports from the RoW in the remedy year as in the case of the year-prior sales of the domestic variety of Kitchen Shelving. As in the case of the

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<sup>517</sup> Exhibits USA-61; USA-66 (BCI); and USA-156 (BCI).

<sup>518</sup> See section 3.4.2.1.1 above.

<sup>519</sup> See section 3.4.2.1.1 above.

<sup>520</sup> China's response to Arbitrator question No. 11, para. 25, and No. 25, para. 66.

<sup>521</sup> See section 3.4.2.1.1 above.

<sup>522</sup> China's response to Arbitrator question No. 40, para. 29; United States' response to Arbitrator question No. 40, para. 35.

<sup>523</sup> The methodology is explained in detail by China in Exhibit CHN-53. Following this methodology, we obtain NAICS 6-digit level domestic shipments using the primary NAICS code, 335221 (Household cooking appliance manufacturing), pertaining to Kitchen Shelving from the Economic Census 2017 (available at: <https://www.census.gov/data/tables/2017/econ/economic-census/naics-sector-31-33.html> (accessed 1 October 2021) (Table "EC1700BASIC")) and correct it by exports obtained from USITC Dataweb. As no data is reported for the relevant code in 2017, we use 2016 data from the Annual Survey of Manufactures 2016 (available at: <https://www.census.gov/data/tables/time-series/econ/asm/2013-2016-asm.html> (accessed 1 October 2021) (Table "2016 Value of Product Shipments")) and scale it using the growth rate of the more aggregated 5-digit industry 33522 for which data is available. To correct for out-of-scope products within the NAICS 6-digit industry, we apply to this figure an import-data-based estimate. We calculate aggregate imports for all HTSUS codes associated with the NAICS industry and calculate the share of imports pertaining to HTSUS codes referenced in the CVD order in this aggregate import figure. See Annex C-5 for the identification of the primary NAICS code, Annex C-6 for the calculation of the scaling index, Annex C-7 for the scope adjustment, and Annex C-8 for the calculation of the resulting remedy year figure. See also fn 498 to para. 3.240 above.

<sup>524</sup> See section 3.4.2.1.2 above.

year-prior, China argues that the United States' approach is based on a series of arbitrary assumptions.<sup>525</sup>

3.261. As discussed in the context of the year-prior, we agree with China that the United States' figure rests on arbitrary assumptions regarding the share of subject imports in HTSUS categories under which Kitchen Shelving is classifiable, which could lead to an underinclusive estimate.<sup>526</sup> Therefore, to maintain a certain correlation between the scope of the year-prior and the remedy-year estimates, we turn to our year-prior estimate for imports from the RoW.<sup>527</sup> This estimate is based on the mid-point between the figures of China and the United States. This mid-point estimate implies that a certain share of all imports that entered the United States under the eight HTSUS codes referenced in the CVD order is subject product. We consider that applying this share of subject product to the total remedy-year imports from the RoW under the eight HTSUS codes gives us an estimate that is consistent with our approach in the year-prior. Accordingly, we adopt this approach.

3.262. As a result, with regard to Kitchen Shelving, we shall rely on the following variety-specific figures for the purposes of calculating the total remedy-year market size:

**Table 19: Remedy-year market sales for Kitchen Shelving**

Varieties	Total sales
<b>US domestic variety</b>	USD 278,363,000
<b>Imports from China</b>	[[***]]
<b>Imports from the rest of the world</b>	USD 412,630,000
<b>TOTAL MARKET SIZE</b>	[[***]]

#### 3.4.2.2.4 OCTG

3.263. China relies on a 2020 USITC report on OCTG that covers the remedy year for sales of all the three varieties.<sup>528</sup> However, for the import varieties, China submits only a combined estimate, since the USITC report in question does not list imports from China separately.<sup>529</sup> The United States, in turn, relies on the same 2020 USITC Report as the data source for its domestic variety estimate, but uses USCBP data for imports from China and HTSUS-based data from US Census for imports from the RoW.<sup>530</sup>

3.264. Regarding sales of the **US domestic variety**, the parties rely on the same 2020 USITC report (USITC Publication 5090) but their figures differ because they rely on different tables within that report. While China relies on Tables I-11/III-11 stating apparent consumption<sup>531</sup>, the United States relies on Table III-8 stating US shipments. The United States explains that the quantities reported in both tables are the same and that the small difference in values arises because Table I-11 includes the value of toll processing on domestic OCTG, while Table III-8 does not. The United States adds that this technical adjustment by the USITC serves to reduce any potential reclassification or double-counting of imports for purposes of calculating the value of US apparent consumption.<sup>532</sup> China argues that the values from Table III-11 are used by the USITC when computing market shares in Table III-14 and claims that the data used by the USITC for calculating market shares provides the correct basis for year-prior data and should also be used here.<sup>533</sup>

3.265. As regards the relevant table to be used for determining domestic sales data, we note that both parties consistently rely on apparent consumption tables.<sup>534</sup> While the United States explains

<sup>525</sup> China's response to Arbitrator question No. 25, para. 68.

<sup>526</sup> See section 3.4.1.2.3 above.

<sup>527</sup> See section 3.4.1.2.3 above.

<sup>528</sup> USITC Publication 5090 (Exhibit USA-148).

<sup>529</sup> Exhibit CHN-120. See also Exhibit CHN-53 for reported GDP deflator data.

<sup>530</sup> Exhibits USA-59; USA-64 (BCI); and USA-156 (BCI).

<sup>531</sup> Table III-11 reproduces the relevant values indicated in Table I-11.

<sup>532</sup> United States' response to Arbitrator question No. 85, para. 48.

<sup>533</sup> China's comments on the United States' responses to Arbitrator question Nos. 85 and 86, paras. 33-37.

<sup>534</sup> See also para. 3.204 above.

where the difference between the two tables in USITC Publication 5090 stems from, it does not indicate why it deviates from this approach in this context. In the absence of such a justification, we consider it more reasonable to use the figures from Table I-11/III-11, as suggested by China.

3.266. China proposes to adjust the value in Table III-11 to include shipments related to the incremental value from heat-treating imports as this information is redacted in the report but listed as part of the domestic shipments. China adds that these shipments create value to the domestic industry and are therefore regarded as domestic sales. China notes that an earlier USITC report on OCTG from 2014<sup>535</sup> provides sufficient information for such an adjustment in the form of unit values for unfinished and finished OCTG in the years 2011 to 2013. Based on this information, China calculates that the incremental value from heat-treating, imported, unfinished OCTG ranged during that period from 30.5% to 38.3% and argues that this suggests that the confidential treatment of the value of heat-treating imports "could be quite large".<sup>536</sup> The United States argues that USITC includes the incremental value from heat treatment of imported OCTG by domestic producers to reduce any potential reclassification or double-counting of imports for purposes of calculating the value of apparent consumption by the United States. According to the United States, it has selected the value reported in Table III-8, which does not incorporate this technical adjustment, because that value represents unadjusted data that is not linked to the calculation of apparent consumption.<sup>537</sup>

3.267. As regards the need to adjust for the incremental value from heat-treating imported OCTG, we note that in USITC Publication 4124, which relates to the underlying CVD investigation on Chinese imports and serves as the parties' data source in the year-prior, there is no indication that the value from heat-treating imported unfinished OCTG would be excluded from the scope of the investigation.<sup>538</sup> In addition, subsequent investigations explicitly include such heat-treated imported unfinished OCTG within their scope. In particular, USITC Publication 5090, which is relied upon by the parties as the remedy-year data source, defines the incremental value from heat-treating imported OCTG as part of domestic shipments<sup>539</sup>, and states that:

the Commission rejected a respondent argument that the Commission should find a separate like product for U.S. heat treated semi-finished OCTG or "green tubes". The Commission found that there was not a clear dividing line between green tubes and finished OCTG.<sup>540</sup>

3.268. We also note that China's reference to unit value data highlights that adjusting for such OCTG is not negligible and that an exclusion from the market size estimate could lead to an underestimated level of N/I.

3.269. Therefore, we adjust the figure based on Table I-11/III-11 in USITC Publication 5090 to include the incremental value of heat-treating imported unfinished OCTG as suggested by China.<sup>541</sup>

3.270. As regards the two **import varieties**, China only submits a figure for RoW imports, which is identical to the total imports amount determined by USITC in USITC Publication 5090. Since USITC Publication 5090 does not list imports from China separately, China submits that Chinese imports

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<sup>535</sup> USITC Publication 4489 (Exhibit CHN-24).

<sup>536</sup> China's comments on the United States' response to Arbitrator question No. 86, para. 37.

<sup>537</sup> United States' response to Arbitrator question No. 85, para. 48.

<sup>538</sup> USITC Report 4124 (Exhibit CHN-23).

<sup>539</sup> USITC Publication 5090, Table I-11/III-11.

<sup>540</sup> Exhibit USA-148, p. 7.

<sup>541</sup> We perform such adjustment by relying on Table I-2 in USITC publication 5090 (Exhibit USA-148). The table states the market share of U.S. producers' U.S. shipments of fully domestic value (57.8%) and the market share of shipments related to the incremental value of heat-treating imports (2.6%) in total apparent consumption in 2013. The ratio of these two numbers, 4.5%, is the value of the shipments related to the incremental value of heat-treating imports relative to the value of fully domestic shipments. Considering that this information is the best available data on the record, we apply it to the value of fully domestic shipments in 2017 in table I-11 (USD 3,108,763,000) to obtain an estimate of the incremental value of heat-treating imports in the remedy year. This estimate can be added to the figure for fully domestic shipments in table I-11 such that the estimate for OCTG sales of the domestic variety that we rely on reflects the incremental value of heat-treating imports. In particular, we perform the following calculation:  $3,108,763,000 + 3,108,763,000 \times (2.6/57.8) = 3,248,604,000$ .

amount to zero. We consider China's estimate for the total value of imports based on USITC Publication 5090, without differentiating between Chinese and RoW imports<sup>542</sup>, to be reasonable.

3.271. While in principle we do not consider it inappropriate to rely on the United States' import data sources (USCBP and US Census), we are not of the view that the United States has shown that they are more reliable, especially as China has submitted direct USITC import data for the remedy year. In fact, the United States acknowledges that the difference between the parties' RoW import figures is small and appears to arise only from the way the imports are assessed with USITC reporting figures on a landed, duty-paid value basis and US Census reporting figures on a customs value basis. The United States adds that it relies on US Census data because the arbitrator in *US – Anti-Dumping Methodologies (China) (Article 22.6 – US)* used it, noting that the arbitrator did not have access to the USITC report used by China since it had only been published in 2020.<sup>543</sup> We consider, though, that this argument does not raise relevant doubts about China's figure in this context.

3.272. Therefore, with regard to OCTG, we shall rely on the following domestic and import figures for the purposes of calculating the total remedy-year market size:

**Table 20: Remedy-year market sales for OCTG**

Varieties	Total sales
<b>US domestic variety</b>	USD 3,248,604,000
<b>Imports from China and the RoW</b>	USD 3,107,415,000
<b>TOTAL MARKET SIZE</b>	<b>USD 6,356,019,000</b>

#### 3.4.2.2.5 Wire Strand

3.273. In the case of Wire Strand, China does not report sales data by variety but instead calculates a total sales estimate for remedy year (2017) in the US market by applying a GDP deflator to its estimated total sales data for the year-prior advanced by China and accepted by us (2008).<sup>544</sup> In turn, the United States calculates its remedy-year total US market-size figure as the sum of sales estimates for the three varieties. The United States obtains its estimate for sales of the US domestic variety in 2017 using several steps and several data sources as outlined in the next paragraph.<sup>545</sup> The United States' estimates for imports from China are based on USCBP data for 2017 and imports from the RoW are based on HTSUS data from the US Census.<sup>546</sup>

3.274. As explained, we do not consider the use of a GDP deflator, as suggested by China, to be a reliable approach for calculating remedy-year sales.<sup>547</sup> Hence, we review the remedy-year data for all three varieties provided by the United States, as well as China's arguments against relying on such data, before calculating the total value of remedy-year sales.

3.275. As regards the **domestic variety**, the United States estimates the sales of the domestic variety using data for wire rod, an input into wire strand production, from the World Steel Association.<sup>548</sup> In particular, the United States uses data from USITC Publication 4569 on wire strand production to calculate the 2007-2009 ratio of US wire strand production to US wire rod production, and infers the quantity of wire strand sales by applying this ratio to 2017 US wire rod production.<sup>549</sup> The United States then multiplies this estimated wire strand quantity by wire strand unit values for 2017. These unit values are obtained by scaling unit values data for 2009 from the aforementioned

<sup>542</sup> As explained before, only the total market size on the remedy year matters for the purposes of implementing the second step of the two-step Armington model. Therefore, considering that neither party has raised scope issues as to the HTSUS codes relied upon by USITC for the total imports figure in the relevant USITC report, we consider it to be sufficient to assess only the total value of OCTG imports in the remedy year without differentiating between imports from China and imports from the RoW.

<sup>543</sup> United States' response to Arbitrator question No. 84, paras. 45 and 46.

<sup>544</sup> Exhibit CHN-120. See also Exhibit CHN-53 for reported GDP deflator data.

<sup>545</sup> Exhibits USA-61 and USA-156 (BCI).

<sup>546</sup> Exhibits USA-65; USA-66 (BCI); and USA-156 (BCI).

<sup>547</sup> See section 3.4.2.1.1 above.

<sup>548</sup> See Exhibits USA-85, Table 9; USA-86, Table 9.

<sup>549</sup> See Exhibits USA-25 and USA-61.

USITC Publication 4569 and by using the trend in the unit price of imported wire strand varieties taken from USITC DataWeb.<sup>550</sup>

3.276. According to China, the United States performs an assumption-intensive calculation that essentially mirrors China's approach by using an industry trend to scale domestic production reported by the USITC for the period prior to the WTO-inconsistent duty being imposed. China adds that its approach is superior as it maintains the real value of domestic shipments in a more straightforward manner.<sup>551</sup> While noting that the World Steel Association is a well-known industry group, China argues that it reports only wire rod production data, hence the United States relies on assumptions that are unlikely to hold. China argues that an increase in demand for domestic wire strand triggered by the CVD orders at issue might lead to a different wire rod to wire strand production ratio given that wire rod is used for many other outputs. China considers that using unit values of imports as proxy for domestic prices ignores that the CVD order at issue distorts import and domestic prices in opposite directions. China adds that both parties' figures require an assumption about the change in wire strand prices between the year-prior and 2017 but, whereas its own assumption could be unaffected by the CVD duties, the United States' estimate is downward biased as a result of the duties.<sup>552</sup>

3.277. We consider that China's concerns regarding the United States' estimate appear valid. Nonetheless, despite its shortcomings, we consider that the United States' estimate is the best estimate on the record since it is the only estimate informed by actual 2017 data. While China explains how the CVD order might lead to certain inaccuracies when inferring 2017 wire strand sales from 2017 wire rod production quantities, it does not address our concern that China's GDP deflator-based estimate might miss any changes in consumption quantities that might occur between 2008 and 2017.<sup>553</sup> Further, we disagree with China's claim that the United States' methodology effectively mirrors China's methodology simply because the United States also relies on a price trend.<sup>554</sup> The fact that the resulting figures of both parties are similar does not automatically support that standpoint, and it does not imply that China's approach of ignoring possible changes in consumption levels is reasonable. Therefore, we rely on the United States' estimate for sales of the domestic variety.

3.278. For **import varieties** data, we note that as regards imports from China, the parties' disagreements revolve around the use of USCBP data, which we addressed earlier.<sup>555</sup> Since we find that no data superior to USCBP data is available on the record, we consider the use of USCBP data for the remedy year to be reasonable. Accordingly, as we have rejected China's GDP deflator approach, we adopt the estimate of imports from China based on USCBP data provided by the United States.

3.279. As regards imports from the RoW, China does not challenge the scope of the HTSUS-data based estimate of the United States. In light of this and since it is the only data for wire strand imports from the RoW on the record for the remedy year, we adopt the estimate based on HTSUS data provided by the United States.

3.280. Therefore, with regard to Wire Strand, we shall rely on the following variety-specific figures for the purposes of calculating the total remedy-year market size:

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<sup>550</sup> See Exhibit USA-61.

<sup>551</sup> China's response to Arbitrator question No. 24, para. 63, Table 5.

<sup>552</sup> China's response to Arbitrator question No. 58, paras. 56-59.

<sup>553</sup> See section 3.4.2.1.1 above.

<sup>554</sup> China's response to Arbitrator question No. 24, para. 63, Table 5.

<sup>555</sup> See section 3.4.2.1.2 above.

**Table 21: Remedy-year market sales for Wire Strand**

Varieties	Total sales
<b>US domestic variety</b>	USD 201,603,000
<b>Imports from China</b>	[[***]]
<b>Imports from the rest of the world</b>	USD 91,619,000
<b>TOTAL MARKET SIZE</b>	[[***]]

#### 3.4.2.2.6 Seamless Pipe

3.281. In the case of Seamless Pipe, China does not report sales data by variety but calculates a total sales estimate for the remedy year (2017) in the US market by applying a GDP deflator to its estimated total sales for the year-prior agreed by the parties (2009).<sup>556</sup> The United States calculates its remedy-year total market size figure as the sum of sales estimates for the three varieties. For the US domestic variety, the United States estimates sales in 2017 by annualizing sales in the first quarter (January-March) of 2017 obtained from USITC Publication 4731.<sup>557</sup> The United States' estimates of imports from China are based on USCBP data for 2017, whereas imports from the RoW are estimated by using HTSUS data from the US Census Bureau, which, according to the United States, has a larger scope than the actual subject product.<sup>558</sup> As in the case of Pressure Pipe<sup>559</sup>, the United States adjusts the scope by multiplying the average ratio of USITC report data over the years 2007 to 2009 with the appropriate scope to the aforementioned HTSUS data with a larger scope.<sup>560</sup>

3.282. As explained<sup>561</sup>, we do not consider the use of a GDP deflator, as suggested by China, to be a reliable approach for calculating remedy-year sales. Hence, we review the remedy-year data for all three varieties provided by the United States, as well as China's arguments against relying on such data, before calculating the total value of remedy-year sales.

3.283. As regards the **domestic variety**, China criticizes the United States' estimate based on USITC Publication 4731 as being of a narrower scope than the CVD order at issue as it refers to only 26 HTSUS codes, while the original report of the CVD order at issue referred to 38 HTSUS codes. China claims that this corresponds to only 68% of HTSUS codes cited in the original report and argues that this is relevant because the United States' proposed 2017 value for domestic shipments is 69% of the 2009 value of domestic shipments verified and reported by USITC. According to China, this would suggest that the shortfall in domestic shipments is related to this alternative scope. Thus, China proposes that, if we were to use the United States' estimate, such estimate should accordingly be scaled by 1/0.68. China adds that the CVD order at issue refers to domestic shipments of all seamless pipe while the USITC report used by the United States' reports domestic shipments only for small diameter seamless pipe, which may explain the difference in HTSUS codes.<sup>562</sup> China claims that, in terms of quantities, small diameter seamless pipe may account for only 40% of the market.<sup>563</sup>

3.284. The United States contends that the product scope in both investigations is nearly identical. According to the United States, USITC Publication 4731 covers seamless pipe from Japan and Romania and only the product scope of imports from Romania is limited to small diameter seamless pipe, while the scope for imports from Japan appears to be identical to the scope set out in the CVD order at issue in this proceeding. The United States argues that the difference in HTSUS codes is irrelevant. Referring to the USITC reports in both investigations, the United States indicates that reference HTSUS codes serve primarily customs purposes, whereas the USDOC's product description

<sup>556</sup> Exhibit CHN-120. See also Exhibit CHN-53 for reported GDP deflator data.

<sup>557</sup> Exhibit CHN-105.

<sup>558</sup> United States' written submission, para. 146 and Table 10.

<sup>559</sup> See section 3.4.2.2.1 above.

<sup>560</sup> Exhibits USA-59; USA-60; USA-64 (BCI); and USA-156 (BCI). See also United States' written submission, paras. 144-146 and Table 10, for scope adjustments based on USITC Publication 4595 (Exhibits USA-16 and USA-67).

<sup>561</sup> See section 3.4.2.1.1 above.

<sup>562</sup> China's response to Arbitrator question No. 24, para. 62, and Table 5.

<sup>563</sup> China's response to Arbitrator question No. 80, para. 43.

determines the product scope. The United States adds that it is unreasonable to assume that simply because the ratio of HTSUS codes across two USITC reports is 68%, the corresponding values of domestic shipments should also equal 68%.<sup>564</sup>

3.285. We note that, as argued by China, the table in USITC Publication 4731 that the United States relies on reports data for small diameter seamless pipe only<sup>565</sup>, which the report defines as "less than or equal to 4.5 inches".<sup>566</sup> We do not consider it relevant that the investigation underlying the aforementioned USITC report also covers large seamless pipe since the data for large seamless pipe is redacted from the report. As a result, we agree with China that the United States' estimate is underinclusive. However, we agree with the United States that the HTSUS codes are not informative for establishing the size of the under-inclusion since we have no information on the actual sales values related to each HTSUS code.

3.286. As a result, we consider that neither China's nor the United States' figures are reasonable estimates of remedy-year sales of the domestic variety. While we would rely preferably on remedy-year estimates based on data inputs from the actual remedy year, this appears impossible in the case of Seamless Pipe. Absent any information on the share of small diameter seamless pipe sales in total subject sales of the domestic variety in 2017, we cannot use the data provided by the United States. Instead, we have to rely on the latest available market size estimate on the record that encompasses the full product scope, which is the estimate for the year 2009 on the basis of a USITC report accepted by both parties, and scale it to obtain an estimate for sales of the domestic variety in the remedy year.

3.287. Since we do not consider China's GDP deflator to be a reasonable scaling index, we will rely instead on the market size change of the primary 6-digit NAICS industry associated with Seamless Pipe between 2009 and 2017 to scale the 2009 value.<sup>567</sup> This follows the approach we have taken for calculating the 2017 US domestic variety sales of Pressure Pipe and Kitchen Shelving, where alternative estimates were needed following the rejection of both parties' estimates.

3.288. For **import varieties** data, we note that, as regards imports from China, the parties' disagreements revolve around the use of USCBP data, addressed earlier.<sup>568</sup> As explained, if no superior data is available, we consider the use of USCBP data for the remedy year to be reasonable.<sup>569</sup> As we have rejected China's GDP deflator approach<sup>570</sup>, we adopt the United States' estimate for imports from China based on USCBP data.

3.289. As regards imports from the RoW, China criticizes the United States' correction for out-of-scope products to its HTSUS-based estimate for imports from the RoW.<sup>571</sup> As in the case of Pressure Pipe, we note that a scope adjustment seems justified in light of several scope exclusions undertaken by the USDOC in the course of its proceedings.<sup>572</sup> As explained, we consider such a scope adjustment to be more reasonable than assuming constant consumption over time as implied by China's GDP deflator-based estimate.<sup>573</sup> As a result, we adopt the United States' estimate for imports from the RoW.

3.290. Therefore, with regard to Seamless Pipe, we shall rely on the following variety-specific figures for the purposes of calculating the total remedy-year market size:

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<sup>564</sup> United States' response to Arbitrator question No. 59, paras. 74-77.

<sup>565</sup> USITC Publication 4731 (CHN-105), Appendix C, Table C-1.

<sup>566</sup> USITC Publication 4731 (CHN-105), p.10.

<sup>567</sup> The primary 6-digit NAICS code is 331110 (Iron and Steel Mills and Ferroalloy Manufacturing) in the remedy year and 331111 in 2009 due to changes in the NAICS classification in 2012 (see 2007 NAICS to 2012 NAICS concordance available at: <https://www.census.gov/naics/?68967> (accessed 1 October 2021)). This results in a scaling factor of 1.48. See Annex C-5 for the identification of the primary NAICS code, Annex C-6 for the calculation of the scaling index, and Annex C-8 for the calculation of the resulting remedy year figure. See also fn 498 to para. 3.240 above.

<sup>568</sup> See section 3.4.2.1.2 above.

<sup>569</sup> See section 3.4.2.1.2 above.

<sup>570</sup> See section 3.4.2.1.1 above.

<sup>571</sup> China's written submission, para. 83; response to Arbitrator question No. 24, paras. 61-63; and comments on the United States' response to Arbitrator question No. 91, paras. 42-45.

<sup>572</sup> USITC Publication 4190 (Exhibit CHN-32), p. I-9.

<sup>573</sup> See para. 3.225 above.

**Table 22: Remedy-year market sales for Seamless Pipe**

Varieties	Total sales
<b>US domestic variety</b>	USD 294,963,000
<b>Imports from China</b>	[[***]]
<b>Imports from the rest of the world</b>	USD 390,161,000
<b>TOTAL MARKET SIZE</b>	[[***]]

### 3.4.2.2.7 Print Graphics

3.291. In the case of Print Graphics, China relies on the 2015 figure for the total sales in the US market from USITC Publication 4656<sup>574</sup>, and adjusts this figure by a GDP deflator to represent remedy year (2017) total sales in the United States.<sup>575</sup> The United States calculates its remedy-year total market size figure as the sum of sales estimates for the three varieties.<sup>576</sup> The United States' estimate for sales of the US domestic variety in 2017 is based on 2015 sales in USITC Publication 4656<sup>577</sup>, scaled by a growth rate taken to be the average decrease of Print Graphics shipments of the domestic variety from 2010 to 2015.<sup>578</sup> The United States' estimates of imports from China are based on USCBP data for 2017<sup>579</sup>, whereas imports from the RoW are estimated by using HTSUS data from the US Census Bureau<sup>580</sup>, which the United States argues has a larger scope than appropriate, and adjusts it by the average ratio over the years 2007-2009 of USITC report data with the appropriate scope to the aforementioned HTSUS data with a larger scope.<sup>581</sup>

3.292. As explained, we do not consider the use of a GDP deflator, as suggested by China, to be a reliable approach for calculating remedy year sales.<sup>582</sup> Hence, we review the remedy-year data for all three varieties provided by the United States, as well as China's arguments against relying on such data, before calculating the total value of remedy-year sales.

3.293. Regarding sales of the **US domestic variety**, both parties rely on the same USITC report which contains data for 2015 but they disagree on how to scale the data to the 2017 remedy year. China relies on a GDP deflator, which the United States criticizes and which we, as explained earlier, do not consider to be a reliable approach for calculating remedy year sales.<sup>583</sup>

3.294. The United States relies on past (2010 to 2015) domestic variety growth rates, assuming that these predict growth of domestic variety sales from 2015 to 2017.<sup>584</sup> China considers this assumption to be unreasonable and notes that the resulting estimate differs substantially from the estimate used by the arbitrator in *US – Anti-Dumping Methodologies (China) (Article 22.6 – US)*.<sup>585</sup> China adds that, unlike its own index, the United States' index is not informed by data from 2016 or 2017.<sup>586</sup>

3.295. We agree with China's arguments regarding the United States' scaling index. As is the case for the United States' scaling index for Pressure Pipe, the United States' index for Print Graphics does not capture actual changes in consumption levels or prices between 2015 and 2017 and assumes that growth simply continues linearly.

3.296. Therefore, we consider that both parties' scaling indices are inappropriate. As in the case of Pressure Pipe, Kitchen Shelving, and Seamless Pipe, we shall use instead an index that relies on the growth rate from 2015 to 2017 of the more aggregate 6-digit NAICS industry, to which Print Graphics

<sup>574</sup> Exhibit CHN-51.

<sup>575</sup> Exhibit CHN-120. See also Exhibit CHN-53 for reported GDP deflator data.

<sup>576</sup> Exhibit USA-156 (BCI).

<sup>577</sup> Exhibit CHN-51.

<sup>578</sup> Exhibit USA-60.

<sup>579</sup> See Exhibit USA-64 (BCI).

<sup>580</sup> See Exhibit USA-59.

<sup>581</sup> United States' written submission paras. 144-146 and Table 9.

<sup>582</sup> See section 3.4.2.1.1 above.

<sup>583</sup> See section 3.4.2.1.1 above.

<sup>584</sup> Exhibit USA-60.

<sup>585</sup> China's response to Arbitrator question No. 80, para. 41.

<sup>586</sup> China's comments on the United States' response to Arbitrator question No. 87, para. 38.

pertains, to calculate the 2017 US domestic variety sales of Print Graphics.<sup>587</sup> This index takes into account actual consumption level and price developments until the remedy year and is more specific to the product and variety at issue than country-wide indices, such as China's GDP deflator.

3.297. For **import varieties** data, we note that, as regards imports from China, the parties' disagreements revolve around the use of USCBP data, addressed earlier.<sup>588</sup> As explained, if no superior data is available, we consider the use of USCBP data for the remedy year to be reasonable.<sup>589</sup> As we have rejected China's GDP deflator approach<sup>590</sup>, we adopt the United States' estimate for imports from China based on USCBP data.

3.298. As regards imports from the RoW, China criticizes the United States' correction for out-of-scope product to its HTSUS-based estimate for imports from the RoW. As in the case of Pressure Pipe and Seamless Pipe, we consider that a scope adjustment seems justified in light of several scope exclusions undertaken by the USDOC.<sup>591</sup> As explained, we consider such a scope adjustment to be more reasonable than assuming constant consumption over time as implied by China's GDP deflator-based estimate.<sup>592</sup>

3.299. We note, however, that the United States' scope adjustment relies on data from the USITC Publication 4192 report, data relied upon by the United States for the year-prior, even though a more recent USITC report, USITC Publication 4656, is available. Both parties rely on this more recent report for their domestic variety data, which suggests that it is a reliable source. We recall that the United States' scope adjustment is implemented by multiplying remedy-year imports from the RoW under all HTSUS codes pertaining to the CVD order with the average share of subject product imports from the RoW, as reported in the original USITC report, in total imports from the RoW under the relevant HTSUS codes over a three-year period. We note though that this share can also be calculated based on the more recent USITC report to obtain a scope adjustment factor that may be more representative for the remedy year due to its recency.

3.300. We consider this ratio superior to the one advanced by United States, not only because of its recency, but also because it appears to generate a more reasonable estimate. The ratio calculated on the basis of the more recent USITC report is approximately three times the size of the ratio submitted by the United States, i.e. 0.92 as opposed to 0.32.<sup>593</sup> This produces an estimate for imports from the RoW of USD 961,770,000. We consider this estimate more reasonable than the United States' estimate of USD 500,834,000, because the more recent USITC Publication 4656 reports imports from the RoW with the correct scope that vary for the years 2011 to 2015 between USD 1,224,321,000 and USD 1,107,198,000, with only slight year-to-year fluctuations, and amount to USD 500,810,000 for the first six months of 2016 alone. Hence, we use 0.92 as the scope adjustment factor.

3.301. Therefore, with regard to Print Graphics, we shall rely on the following variety-specific figures for the purposes of calculating the total remedy-year market size:

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<sup>587</sup> The primary 6-digit NAICS code is 322121 (Paper (except newsprint) mills). This results in a scaling factor of 0.91 reflecting a decrease in the value of domestic shipments. See Annex C-5 for the identification of the primary NAICS code, Annex C-6 for the calculation of the scaling index, and Annex C-8 for the calculation of the resulting remedy year figure. See also fn 498 to para. 3.240 above.

<sup>588</sup> See section 3.4.2.1.2 above.

<sup>589</sup> See section 3.4.2.1.2 above.

<sup>590</sup> See section 3.4.2.1.1 above.

<sup>591</sup> USITC Publication 4656 (Exhibit CHN-51), p. I-19.

<sup>592</sup> See para. 3.225 above.

<sup>593</sup> We obtain the more recent scope adjustment factor by calculating the 2011-2015 average ratio of US imports from the RoW ("Nonsubject sources of free sheet CCP") as reported in Table I-9 of USITC Publication 4656 to imports from the RoW obtained under the HTSUS codes referenced by USITC in fn 19 of USITC Publication 4656 as reported by USITC Dataweb. We exclude the year 2010 from the calculation as USITC seems to not have relied on HTSUS codes for that year according to fn. 19 of USITC Publication 4656. See Annex C-7 for the calculation of the scope adjustment.

**Table 23: Remedy-year market sales for Print Graphics**

Varieties	Total sales
<b>US domestic variety</b>	USD 1,100,263,000
<b>Imports from China</b>	[[***]]
<b>Imports from the rest of the world</b>	USD 961,770,000
<b>TOTAL MARKET SIZE</b>	[[***]]

### 3.4.2.2.8 Aluminum Extrusions

3.302. In the case of Aluminum Extrusions, China relies on the 2015 figure for the total sales in the US market from USITC Publication 4677<sup>594</sup>, and adjusts this figure by a GDP deflator to calculate remedy year (2017) total sales in the United States.<sup>595</sup> In turn, the United States calculates its remedy-year total US market-size figure as the sum of sales estimates for the three varieties.<sup>596</sup> The United States' estimate for sales of the US domestic variety in 2017 is based on 2015 US domestic sales in USITC Publication 4677 scaled up by year-on-year real growth rates.<sup>597</sup> The United States' estimate for imports from China is based on USCBP data for 2017, whereas imports from the RoW are estimated by adjusting 2017 imports based on HTSUS data from the US Census Bureau under HTS codes from 2011 to represent imports under older HTS codes that the United States considers to represent the appropriate product scope.<sup>598</sup>

3.303. As explained, we do not consider the use of a GDP deflator, as suggested by China, to be a reliable approach for calculating remedy-year sales.<sup>599</sup> Hence, we review the remedy-year data for all three varieties provided by the United States, as well as China's arguments against relying on such data, before calculating the total value of remedy-year sales.

3.304. Regarding sales of the **US domestic variety**, both parties rely on the same USITC report, which contains data for 2015, but they disagree on how to scale that data to the 2017 remedy year. China relies on a GDP deflator, which the United States criticizes and which we, as explained earlier, do not consider to be a reliable approach for calculating remedy year sales.<sup>600</sup> The United States uses real growth rates, i.e. quantity-based growth rates not capturing price changes, from the Aluminum Association, a trade association for aluminium production, fabrication, and recycling industries, and their suppliers.<sup>601</sup> The growth rate is based on shipments of aluminium extruded products by US and Canadian producers. China criticizes this growth rate claiming it includes shipments by US firms to Canada, and by Canadian firms to the United States.<sup>602</sup> China adds that the United States' choice of a real growth rate is entirely arbitrary and inconsistent with the United States' approach for other products and with the type of year-to-year *price* adjustments made by prior arbitrators. China refers to the *US – Washing Machines (Article 22.6 – US)* as an instance of an Article 22.6 arbitrator using a price adjustment.<sup>603</sup>

3.305. We note that, as argued by China, the United States attempts to make a market size adjustment rather than a price adjustment. We further note that the arbitrator in *US – Washing Machines (Article 22.6 – US)* used a price adjustment to account for inflation. That, however, is a very different exercise from the one that we have been asked to undertake in assessing the size of the market in the remedy year based on market size estimates from previous years. While we agree with China that including shipments by US firms to Canada and by Canadian firms to the United States is a concern, we also note that the United States' proposed scaling index is highly product-specific and captures actual market size developments between 2015 and 2017.

<sup>594</sup> Exhibit CHN-37, Table I-9.

<sup>595</sup> Exhibit CHN-120. See also Exhibit CHN-53 for reported GDP deflator data.

<sup>596</sup> Exhibit USA-156 (BCI).

<sup>597</sup> Exhibit USA-149 (BCI).

<sup>598</sup> Exhibits USA-62 (BCI) and USA-63 (BCI).

<sup>599</sup> See section 3.4.2.1.1 above.

<sup>600</sup> See section 3.4.2.1.1 above.

<sup>601</sup> Exhibits USA-149 (BCI) and USA-156 (BCI).

<sup>602</sup> China's comments on the United States' response to Arbitrator question No. 93, paras. 48-49.

<sup>603</sup> China's comments on the United States' response to Arbitrator question No. 92, para. 46.

3.306. We further consider that China is correct in stating that "[t]he specific economic issue is how the value of sales ('p times q') changes over time".<sup>604</sup> China adds that "one could imagine using either a quantity index or a price index to capture change over time".<sup>605</sup> As indicated, we consider that if the issue is how the value of sales, i.e. the market size, changes over time, then one should optimally account for changes in p(prices) and q(quantities) rather than just prices or just quantities, which is what the indices by China and the United States do. Indeed, when scaling of less recent data was necessary, we have relied on indices that capture both changes.<sup>606</sup>

3.307. Therefore, we decide to implement the market size adjustment of the United States but to complement it with an index that captures changes in prices. We note in that regard that the United States argues that it would be more accurate for this exercise to use a wholesale price index or consumer price index than a GDP deflator.<sup>607</sup> We note that we neither have these indices on the record nor do they appear to be publicly available. However, we consider that the Producer Price Index (PPI) data pertaining to "Metals and Metal Products-Aluminum castings" submitted by China can also be applied to this exercise as it is relatively product-specific.<sup>608</sup> Hence, we calculate sales of the domestic variety by scaling 2015 USITC data with real growth rates provided by the United States and a PPI-based inflation index provided by China.<sup>609</sup>

3.308. For sales of the **import varieties**, we note that, as regards imports from China, the parties' disagreements revolve around the use of USCBP data, as addressed earlier.<sup>610</sup> As explained, if no superior data is available, we consider the use of USCBP data for the remedy year to be reasonable.<sup>611</sup> As we have rejected China's GDP deflator approach<sup>612</sup>, we adopt the United States' estimate for imports from China based on USCBP data.

3.309. As regards imports from the RoW, China criticizes the HTSUS codes that the United States uses for its estimate, arguing that they could be potentially underinclusive since the set of HTS codes subject to the WTO-inconsistent duty has changed since the duties were originally imposed.<sup>613</sup> The United States responds that the data it relies on has been used by the arbitrator in *US – Anti-Dumping Methodologies (China) (Article 22.6 – US)* and that the HTSUS codes it uses are as listed in both USITC Publication 4229 from 2011 and USITC Publication 4677 from 2017, which the parties have relied on in the course of these proceedings.<sup>614</sup>

3.310. We note that the ratio of imports under the HTSUS codes used by the United States (as reported by USITC DataWeb) to the imports from the RoW reported in USITC Publication 4677 varies between 0.97 and 0.99 in the years 2008 to 2015. Thus, it appears that imports under the HTSUS codes used by the United States lead to a close approximation of actual non-subject imports from the RoW and that the under-inclusion issue is negligible. We further note that the United States' figure is considerably larger than China's figure due to a relevant increase in imports from the RoW in 2017<sup>615</sup>, which suggests that China's figure is even more subject to mismeasurement and under-inclusion in this instance. Accordingly, and having rejected China's GDP deflator<sup>616</sup>, we adopt the United States' estimate for imports from the RoW.

3.311. Therefore, with regard to Aluminum Extrusions, we shall rely on the following variety-specific figures for the purposes of calculating the total remedy-year market size:

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<sup>604</sup> China's comments on the United States' response to Arbitrator question No. 92, para. 46.

<sup>605</sup> China's comments on the United States' response to Arbitrator question No. 92, para. 46.

<sup>606</sup> See Annex C-6 for the scaling indices used for the domestic varieties of Pressure Pipe, Kitchen Shelving, Seamless Pipe, and Print Graphics.

<sup>607</sup> United States' response to Arbitrator question No. 92, para. 68.

<sup>608</sup> Exhibit CHN-103.

<sup>609</sup> Based on Exhibit CHN-103, the average PPI for "Metals and Metal Products-Aluminum Castings" is 185.6 in 2015 and 184.8 in 2017, implying a scaling factor of 0.995. We note that China reports in Exhibit CHN-104 a scaling factor of 1.0159 for the identical exercise. We do not know how China has obtained this value and, hence, rely on a scaling factor of 0.995.

<sup>610</sup> See section 3.4.2.1.2 above.

<sup>611</sup> See section 3.4.2.1.2 above.

<sup>612</sup> See section 3.4.2.1.1 above.

<sup>613</sup> China's response to Arbitrator question No. 61, paras. 62-66.

<sup>614</sup> United States' response to Arbitrator question No. 61, para. 81.

<sup>615</sup> USITC Publication 4677 (Exhibit CHN-37).

<sup>616</sup> See section 3.4.2.1.1 above.

**Table 24: Remedy-year market sales for Aluminum Extrusions**

Varieties	Total sales
<b>US domestic variety</b>	USD 5,514,091,000
<b>Imports from China</b>	[[***]]
<b>Imports from the rest of the world</b>	USD 1,077,900,000
<b>TOTAL MARKET SIZE</b>	[[***]]

### 3.4.2.2.9 Steel Cylinders

3.312. In the case of Steel Cylinders, China estimates the 2017 total US market size as the sum of three figures. For the two import varieties, China relies on the figures for 2016 sales contained in USITC Publication 4738<sup>617</sup>, and adjusts these figures by a GDP deflator to represent sales of import varieties in 2017.<sup>618</sup> For the 2017 sales of the US domestic variety, China uses data from TriMas Corporation's 2018 SEC Annual Report Co (Form 10-K)<sup>619</sup>, and uses this data to estimate the domestic sales of Norris Cylinder, which, as indicated in the context of the year-prior<sup>620</sup>, is a sub-unit in the Engineered Components Division of TriMas Corporation, and the only company producing steel cylinders in the United States. Since Form 10-K does not separate revenue by different subunits of TriMas Corporation, China assumes that half of TriMas Corporation's Engineered Components Division's reported 2017 revenue is attributable to Norris Cylinder, and China further assumes that two thirds of Norris Cylinder's estimated revenue stem from domestic sales.<sup>621</sup>

3.313. The United States calculates its remedy-year total market size figure as the sum of sales estimates for the three varieties.<sup>622</sup> The United States' sales of the US domestic variety in 2017 are based on actual sales reported by Norris Cylinder.<sup>623</sup> Sales data for imports from China are based on USCBP data for 2017, and imports from the RoW are based on 2017 HTSUS aggregated data from the US Census Bureau.<sup>624</sup>

3.314. Regarding sales of the **US domestic variety**, we have already noted in the section on year-prior market shares for Steel Cylinders that the evidence provided by the United States seems to us to be the best available data on the record, since it contains an exact figure, without requiring assumptions or estimation methodologies, and has been issued directly by Norris Cylinder.<sup>625</sup> Accordingly, we adopt the United States' figure for the remedy-year sales of the domestic variety.

3.315. For sales of the **import varieties**, we note that, as regards imports from China, the parties' disagreements revolve around the use of USCBP data, addressed earlier.<sup>626</sup> As explained<sup>627</sup>, if no superior data is available, we consider the use of USCBP data for the remedy year to be reasonable. As we have rejected China's GDP deflator approach<sup>628</sup>, we adopt the United States' estimate for imports from China based on USCBP data.

3.316. As regards imports from the RoW, we note that China has not criticized the scope of the United States' HTSUS-based figure informed by actual data for the remedy year. Hence, and in light of our rejection of China's GDP deflator<sup>629</sup>, we adopt the United States' figure.

<sup>617</sup> Exhibit CHN-73, Table I-3.

<sup>618</sup> Exhibit CHN-120. See also Exhibit CHN-53 for reported GDP deflator data.

<sup>619</sup> Exhibit CHN-56.

<sup>620</sup> See section 3.4.1.2.9 above.

<sup>621</sup> Exhibits CHN-94 and CHN-120.

<sup>622</sup> Exhibit USA-156 (BCI).

<sup>623</sup> Exhibit USA-116 (BCI).

<sup>624</sup> Exhibits USA-59 and USA-64 (BCI).

<sup>625</sup> See para. 3.189 above.

<sup>626</sup> See section 3.4.2.1.2 above.

<sup>627</sup> See section 3.4.2.1.2 above.

<sup>628</sup> See section 3.4.2.1.1 above.

<sup>629</sup> See section 3.4.2.1.1 above.

3.317. Therefore, with regard to Steel Cylinders, we shall rely on the following variety-specific figures for the purposes of calculating the total remedy-year market size:

**Table 25: Remedy-year market sales for Steel Cylinders**

Varieties	Total sales
<b>US domestic variety</b>	[[***]]
<b>Imports from China</b>	[[***]]
<b>Imports from the rest of the world</b>	USD 5,200,000
<b>TOTAL MARKET SIZE</b>	[[***]]

**3.4.2.2.10 Solar Panels**

3.318. In the case of Solar Panels, China relies on 2017 import varieties figures obtained from USITC Publication 4874<sup>630</sup>, and calculates sales of the domestic variety based on an assumed market share of that variety in the total market.<sup>631</sup> Similarly, the United States calculates its remedy-year total market size figure as the sum of sales estimates for the three varieties.<sup>632</sup> The United States' estimate for sales of the domestic variety in 2017 is based on prices reported by the US Department of Energy, and production quantity reported by the International Energy Agency.<sup>633</sup> The United States' estimate for imports from China is based on USCBP data for 2017, and the estimate for imports from the RoW is based on 2017 HTSUS aggregated data from the US Census Bureau.<sup>634</sup>

3.319. Regarding sales of the **US domestic variety**, China's estimate is based on the assumption that imports account for 90% of the total market size.<sup>635</sup> The United States criticizes this approach as unsupported and not suitable, claiming that China has not provided a basis for its assumption.<sup>636</sup> China responds that its estimate is based on data from GreenTech Media Research and the Solar Energy Industries Association, which indicates that solar panel consumption accounted for by domestically produced crystalline silicon photovoltaic (CSPV) modules is 6.4%.<sup>637</sup> China argues that the United States' estimate, in turn, is from reputable sources but hardly differs from its own estimate as to its relative impact on the total market size.<sup>638</sup>

3.320. We note that, although both parties rely on different sources, they report identical production quantities and convert them to shipment values based on an assumption as to how average prices apply to these. Given these similarities, we fail to see how the United States' estimation methodology would be superior to China's methodology. Hence, we adopt China's estimation methodology.

3.321. That said, the main input into China's estimation is the quantity-based market share of the domestic variety, which China assumes to be 10%. China, however, submits evidence showing that the quantity-based market share of the domestic variety is in fact 6.4% rather than 10%, without explain this discrepancy between the evidence and its implementation. Accordingly, we rely on the 6.4% figure supported by China's evidence to obtain the sales value of the US domestic variety, rather than the 10% figure advanced by China.<sup>639</sup>

3.322. As regards the two **import varieties**, we note that China's estimates rely on a USITC report from a sunset review pertaining to the CVD order at issue that provides data for the remedy year. The United States provides estimates based on other sources that differ substantially from China's estimates, without explaining why these estimates should be preferable to USITC data. The United States merely refers to the fact that its figures were used by the arbitrator in

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<sup>630</sup> Exhibit CHN-46, Table I-10.  
<sup>631</sup> Exhibit CHN-120.  
<sup>632</sup> Exhibit USA-156 (BCI).  
<sup>633</sup> Exhibits USA-19; USA-20; and USA-60.  
<sup>634</sup> Exhibits USA-59 and USA-64 (BCI).  
<sup>635</sup> Exhibit CHN-120.  
<sup>636</sup> United States' response to Arbitrator question No. 23, paras. 131 and 138.  
<sup>637</sup> China's response to Arbitrator question No. 63, para. 68; Exhibit CHN-112 (BCI).  
<sup>638</sup> China's response to Arbitrator question No. 64, paras. 69-70.  
<sup>639</sup> We obtain an estimate of USD 259,535,000 based on the equation *Imports from China + Imports from the Row + 0.064\*Total Market Size = Total Market Size*, using figures for imports submitted by China and reported in Table I-10 of USITC Publication 4874 (Exhibit CHN-46).

*US – Anti-Dumping Methodologies (China) (Article 22.6 – US)*.<sup>640</sup> In contrast, China submits evidence that, at least with respect to the United States' HTSUS-based estimate for imports from the RoW, the difference between the parties' figures arises from the inclusion of out-of-scope products by the United States.<sup>641</sup> Hence, we adopt China's figures for the two import varieties.

3.323. Therefore, with regard to Solar Panels, we shall rely on the following variety-specific figures for the purposes of calculating the total remedy-year market size:

**Table 26: Remedy-year market sales for Solar Panels**

Varieties	Total sales
<b>US domestic variety</b>	USD 259,535,000
<b>Imports from China</b>	USD 441,381,000
<b>Imports from the rest of the world</b>	USD 3,354,314,000
<b>TOTAL MARKET SIZE</b>	<b>USD 4,055,230,000</b>

### 3.4.3 Elasticities

3.324. The parties agree that a two-step Armington model would require data on three types of elasticities for each of the ten products at issue: (i) supply elasticities for domestic producers, Chinese imports, and RoW imports<sup>642</sup>; (ii) demand elasticities; and (iii) elasticities of substitution.<sup>643</sup>

3.325. Initial disagreements between the parties regarding the specific values of these elasticities were ultimately resolved in the course of the proceedings.<sup>644</sup> Accordingly, we rely on the parties' shared elasticity values in our own calculation of the level of N/I.

### 3.5 Implementation and final N/I calculation

3.326. Having identified the counterfactual and the required data inputs, we proceed to implement the Armington model under the two steps.<sup>645</sup>

<sup>640</sup> United States' response to Arbitrator question No. 94, para. 73.

<sup>641</sup> China's response to Arbitrator question No. 94, paras. 53-55. See also para. 3.202 above concerning the same issue with respect to year-prior market shares.

<sup>642</sup> Both parties use a value of 10 for import supply elasticities for all the CVD orders at issue (Exhibits CHN-120 and USA-159). China explains that this follows the approach adopted by the *US – Anti-Dumping Methodologies (China) (Article 22.6 – US)* arbitrator since those elasticities are not provided in the USITC reports. (China's methodology paper, para. 96).

<sup>643</sup> China's methodology paper, para. 96; United States' written submission, para. 128.

<sup>644</sup> From the outset, the parties agreed on supply elasticities for imports from China and from the RoW but disagreed on the other elasticity estimates for certain products, mostly because they relied on different USITC reports for such products. Specifically, the parties' elasticities data differed with regard to: (i) domestic supply elasticities for OCTG, Print Graphics, Aluminum Extrusions, and Solar Panels; (ii) demand elasticities for OCTG; and (iii) elasticities of substitution for Print Graphics. Subsequently, China indicated that whether to use elasticities as originally reported or as later updated in the relevant USITC reports is a relatively minor issue. Ultimately, in its final data exhibit (Exhibit CHN-120), China relied on the values suggested by the United States, thus eliminating any remaining disagreement between the parties on elasticity figures. (China's methodology paper, para. 96; United States' written submission, paras. 130 and 132; China's response to Arbitrator question No. 18, para. 60; and No. 79, para. 37; United States' response to Arbitrator question No. 16, paras. 108-109; No. 17, paras. 111-112; No. 18, paras. 115-116; No. 19, paras. 117-119; No. 50, para. 59; and No. 51, para. 60. See also Exhibits CHN-36; CHN-37; CHN-45; CHN-46; CHN-50; CHN-51; CHN-53; CHN-120; USA-46; USA-47 (BCI); USA-79 (BCI); and USA-154.

As regards the related but separate issue of the parties' continued disagreement on the ratio of micro- and macro-elasticities, we have concluded that we would be using a "nested approach" to elasticities of substitution with a ratio of the square root of two (i.e. approximately 1.41). In other words, we consider that elasticities of substitution between imports from different sources (micro-elasticity) are approximately 1.41 times larger than elasticities of substitution between imports and US domestic goods (macro-elasticity). See section 3.3.1 above.

See Exhibits CHN-120 and USA-154 for the final elasticity values provided by the parties.

<sup>645</sup> The GAMS code (do-file) used to implement the Armington model is reported in Annex C-9. It is based on Exhibit CHN-54. The relevant data input is reported in Annex C-10.

3.327. As the first step, we apply the Armington model to the US market as it existed in the year-prior to simulate, for each CVD order, the impact of imposing the relevant WTO-inconsistent CVDs on the market shares of imports from China, imports from the RoW, and on sales of the US domestic variety.<sup>646</sup> We then apply the market shares of imports from China simulated under the first step to the actual 2017 total value of the US market in order to obtain the simulated 2017 total value of US imports from China.

3.328. As the second step, we apply the Armington model to the 2017 US market with the market shares simulated under the first step to simulate, for each CVD order, the impact of reducing the WTO-inconsistent CVDs from the actual duty rates to the counterfactual duty rates on the value of imports from China, imports from the RoW, and sales of the domestic variety. The value of imports from China simulated under the second step corresponds to the counterfactual value of imports from China.

3.329. We then estimate the level of N/I concerning the CVD orders at issue by calculating, for each order, the difference between the 2017 value of imports from China, simulated under the first step, and the counterfactual value of imports from China, simulated under the second step.

3.330. The table below presents the level of N/I estimated for each CVD order at issue by applying the two-step Armington model, as well as the total estimated level of N/I.

**Table 27: Estimated level of nullification and impairment**

CVD order	Level of nullification and impairment (million USD)
Pressure Pipe	[[***]]
Line Pipe	[[***]]
Kitchen Shelving	[[***]]
OCTG	365.370
Wire Strand	[[***]]
Seamless Pipe	[[***]]
Print Graphics	[[***]]
Aluminum Extrusions	[[***]]
Steel Cylinders	[[***]]
Solar Panels	20.646
<b>Total level of nullification and impairment</b>	<b>645.121</b>

#### 4 CONCLUSION

4.1. For the reasons set out above, we determine that the level of N/I of benefits accruing to China as a result of the WTO-inconsistent methodologies used by the United States in the CVD proceedings concerning products imported from China is USD 645.121 million *per annum*. Therefore, in accordance with Article 22 of the DSU, China may request authorization from the DSB to suspend concessions or other obligations at a level not exceeding USD 645.121 million *per annum*.

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<sup>646</sup> The simulated WTO-inconsistent and WTO-consistent market shares are presented in Annex C-11.



26 January 2022

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**UNITED STATES – COUNTERVAILING DUTY MEASURES ON CERTAIN PRODUCTS  
FROM CHINA**

DECISION BY THE ARBITRATOR

*Addendum*

*BCI omitted, as indicated [[\*\*\*]]*

This *addendum* contains Annexes A to C to the Decision of the Arbitrator to be found in document WT/DS437/ARB.

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**ANNEX A**

WORKING PROCEDURES OF THE ARBITRATOR

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## **ANNEX A-1**

### **WORKING PROCEDURES OF THE ARBITRATOR**

*Adopted on 8 January 2020*

#### **General**

1. (1) In this proceeding, the Arbitrator shall follow the relevant provisions of the Understanding on Rules and Procedures Governing the Settlement of Disputes ("DSU"). In addition, the following Working Procedures apply.  
  
(2) The Arbitrator reserves the right to modify these procedures as necessary, after consultation with the parties.

#### **Confidentiality**

2. (1) The deliberations of the Arbitrator and the documents submitted to it shall be kept confidential. Members shall treat as confidential information that is submitted to the Arbitrator by another Member which the submitting Member has designated as confidential.  
  
(2) In accordance with the DSU, nothing in these Working Procedures shall preclude a party from disclosing statements of its own positions to the public.  
  
(3) If a party submits a confidential version of its written submissions to the Arbitrator, it shall also, upon request of a Member, provide a non-confidential summary of the information contained in its submissions that could be disclosed to the public. A party should endeavour to promptly provide a non-confidential summary to any Member requesting it, and if possible within 10 days of receiving the request.  
  
(4) Upon request, the Arbitrator may adopt appropriate additional procedures for the treatment and handling of confidential information after consultation with the parties.

#### **Submissions**

3. (1) Before the substantive meeting of the Arbitrator with the parties, China shall transmit to the Arbitrator and to the United States a communication explaining the basis for its request, including the methodology and data supporting it, in accordance with the timetable adopted by the Arbitrator.  
  
(2) Each party to the dispute shall also transmit to the Arbitrator a written submission in which it presents the facts of the case and its arguments, in accordance with the timetable adopted by the Arbitrator.  
  
(3) The Arbitrator may invite the parties to make additional submissions during the proceeding, including with respect to requests for preliminary rulings in accordance with paragraph 4 below.

#### **Preliminary rulings**

4. (1) If the United States considers that the Arbitrator should make a ruling before the issuance of the Decision that certain measures, claims or issues are not properly before the Arbitrator, the following procedure applies. Exceptions to this procedure shall be granted upon a showing of good cause.

- a. The United States shall submit any such request for a preliminary ruling at the earliest possible opportunity. China shall submit its response to the request at a time to be determined by the Arbitrator in light of the request.
- b. The Arbitrator may issue a preliminary ruling on the issues raised in such a preliminary ruling request before, during or after the substantive meeting, or the Arbitrator may defer a ruling on the issues raised by a preliminary ruling until it issues its Decision to the parties.
- c. If the Arbitrator finds it appropriate to issue a preliminary ruling before the issuance of its Decision, the Arbitrator may provide reasons for the ruling at the time that the ruling is made, or subsequently in its Decision.

(2) This procedure is without prejudice to the parties' right to request other types of preliminary or procedural rulings during the proceeding, and to the procedures that the Arbitrator may follow with respect to such requests.

### **Evidence**

5. (1) Each party shall submit all evidence to the Arbitrator no later than its written submission under paragraph 3(2) above, except evidence necessary for purposes of rebuttal, or evidence necessary for answers to questions or comments on answers provided by the other party. Additional exceptions may be granted upon a showing of good cause.  
  
(2) If any new evidence has been admitted upon a showing of good cause, the Arbitrator shall accord the other party an appropriate period of time to comment on the new evidence submitted.
6. (1) If the original language of an exhibit or portion thereof is not a WTO working language, the submitting party shall simultaneously submit a translation of the exhibit or relevant portion into the WTO working language of the submission. The Arbitrator may grant reasonable extensions of time for the translation of exhibits upon a showing of good cause.  
  
(2) Any objection as to the accuracy of a translation should be raised promptly in writing, preferably no later than the next filing or the meeting (whichever occurs earlier) following the submission which contains the translation in question. Any objection shall be accompanied by an explanation of the grounds for the objection and an alternative translation.
7. (1) To facilitate the maintenance of the record of the dispute and maximize the clarity of submissions, each party shall sequentially number its exhibits throughout the course of the dispute, indicating the submitting Member and the number of each exhibit on its cover page. Exhibits submitted by China should be numbered CHN-1, CHN-2, etc. Exhibits submitted by the United States should be numbered USA-1, USA-2, etc. If the last exhibit in connection with a submission was numbered CHN-5, the first exhibit in connection with the next submission thus would be numbered CHN-6. If a party withdraws an exhibit or leaves one or more exhibits intentionally blank, it should indicate this on the cover page that provides the number of the blank exhibit.  
  
(2) Each party shall provide an updated list of exhibits (in Word or Excel format) together with each of its submissions, oral statements, and responses to questions.  
  
(3) If a party submits a document that has already been submitted as an exhibit by the other party, it should explain why it is submitting that document again.  
  
(4) Insofar as a party considers that the Arbitrator should take into account a document already submitted as an exhibit in the prior panel proceedings, it should resubmit that document as an exhibit for the purpose of this proceeding. In its list of exhibits, it should refer to the number of the original exhibit in the original panel proceeding (OP) and Article 21.5 panel proceedings (CP), if applicable (example: CHN-1 (CHN-21-OP), USA-2 (USA-11-CP)).

(5) If a party includes a hyperlink to the content of a website in a submission, and intends that the cited content form part of the official record, the cited content of the website shall be provided in the form of an exhibit along with an indication of the date that it was accessed.

### **Editorial Guide**

8. In order to facilitate the work of the Arbitrator, each party is invited to make its submissions in accordance with the WTO Editorial Guide for Submissions (electronic copy provided).

### **Questions**

9. The Arbitrator may pose questions to the parties at any time, including:

a. Before the meeting, the Arbitrator may send written questions, or a list of topics it intends to pursue in questioning orally during the meeting. The Arbitrator may ask different or additional questions at the meeting.

b. The Arbitrator may put questions to the parties orally during the meeting, and in writing following the meeting, as provided for in paragraph 16 below.

### **Substantive meeting**

10. The Arbitrator shall meet in closed session.

11. The parties shall be present at the meetings only when invited by the Arbitrator to appear before it.

12. (1) Each party has the right to determine the composition of its own delegation when meeting with the Arbitrator.

(2) Each party shall have the responsibility for all members of its delegation and shall ensure that each member of its delegation acts in accordance with the DSU and these Working Procedures, particularly with regard to the confidentiality of the proceeding and the submissions of the parties.

13. Each party shall provide to the Arbitrator the list of members of its delegation no later than 5.00 p.m. (Geneva time) three working days before the first day of the meeting with the Arbitrator.

14. A request for interpretation by any party should be made to the Arbitrator as early as possible, preferably at the organizational stage, to allow sufficient time to ensure availability of interpreters.

15. There shall be one substantive meeting with the parties.

16. The substantive meeting of the Arbitrator with the parties shall be conducted as follows:

a. The Arbitrator shall invite the United States to make an opening statement to present its case first. Subsequently, the Arbitrator shall invite China to present its point of view. Before each party takes the floor, it shall provide the Arbitrator with a provisional written version of its statement. If interpretation is needed, each party shall provide additional copies for the interpreters.

b. Each party should avoid lengthy repetition of the arguments in its submissions. Each party is invited to limit the duration of its opening statement to not more than 60 minutes. If either party considers that it requires more time for its opening statement, it should inform the Arbitrator and the other party at least 10 days prior to the meeting, together with an estimate of the expected duration of its statement. The Arbitrator will accord equal time to the other party.

c. After the conclusion of the opening statements, the Arbitrator shall give each party the opportunity to make comments or ask the other party questions.

- d. The Arbitrator may subsequently pose questions to the parties.
- e. Once the questioning has concluded, the Arbitrator shall afford each party an opportunity to present a brief closing statement, with the United States presenting its statement first. Before each party takes the floor, it shall provide the Arbitrator and other participants at the meeting with a provisional written version of its closing statement, if available.
- f. Following the meeting:
  - i. Each party shall submit a final written version of its opening statement no later than 5.00 p.m. (Geneva time) on the first working day following the meeting. At the same time, each party should also submit a final written version of any prepared closing statement that it delivered at the meeting.
  - ii. Each party shall send in writing, within the timeframe established by the Arbitrator before the end of the meeting, any questions to the other party to which it wishes to receive a response in writing.
  - iii. The Arbitrator shall send in writing, within the timeframe established by the Arbitrator, any questions to the parties to which it wishes to receive a response in writing.
  - iv. Each party shall respond in writing to the questions from the Arbitrator, and to any questions posed by the other party, within the time-frame established by the Arbitrator.

#### **Descriptive part and executive summaries**

17. The description of the arguments of the parties in the Decision of the Arbitrator shall consist of executive summaries provided by the parties, which shall be annexed as addenda to the Decision. These executive summaries shall not in any way serve as a substitute for the submissions of the parties in the Arbitrator's examination of the case.

18. Each party shall submit one integrated executive summary, which shall summarize the facts and arguments as presented to the Arbitrator in the party's submissions and statements, and may also include a summary of its responses to questions and comments thereon following the substantive meeting.

19. Each integrated executive summary shall be limited to 15 pages.

20. The Arbitrator may request the parties to provide executive summaries of facts and arguments presented in any other submissions to the Arbitrator for which a deadline may not be specified in the timetable.

#### **Service of documents**

21. The following procedures regarding service of documents apply to all documents submitted by parties during the proceeding:

- a. Each party shall submit all documents to the Arbitrator by submitting them with the DS Registry (office No. 2047).
- b. Each party shall submit 2 paper copies of its submissions and 2 paper copies of its Exhibits to the Arbitrator by 5.00 p.m. (Geneva time) on the due dates established by the Arbitrator. The DS Registrar shall stamp the documents with the date and time of submission. The paper version submitted to the DS Registry shall constitute the official version for the purposes of submission deadlines and the record of the dispute. If an exhibit is in a format that is impractical to submit as a paper copy, then the party may submit such exhibit in electronic format (by email or on a CD-ROM, DVD or USB key). In this case, the cover page of the exhibit should indicate that the exhibit is only available in electronic format.

- c. Each party shall also send an email to the DS Registry, at the same time that it submits the paper versions, attaching an electronic copy of all documents that it submits to the Arbitrator, preferably in both Microsoft Word and PDF format. All such emails to the Arbitrator shall be addressed to DSRegistry@wto.org, and copied to other WTO Secretariat staff whose email addresses have been provided to the parties during the proceeding. If it is not possible to attach all the Exhibits to one email, the submitting party shall provide the DS Registry with four copies of the Exhibits in electronic form on USB keys, CD-ROMs or DVDs.
- d. In addition, each party is invited to submit all documents through the WTO e-filing system within 24 hours following the deadline for the submission of the paper versions. If the parties have any questions or technical difficulties relating to the WTO e-filing system, they are invited to contact the DS Registry at DSRegistry@wto.org.
- e. Each party shall serve any document submitted to the Arbitrator directly on the other party. A party may submit its documents to another party by email or other electronic format acceptable to the recipient without having to serve a paper copy, unless the recipient party has requested a paper copy at least five working days before the filing. Each party shall confirm, in writing, that copies have been served on the parties, as appropriate, at the time it provides each document to the Arbitrator.
- f. Each party shall submit its documents with the DS Registry and serve copies on the other party by 5.00 p.m. (Geneva time) on the due dates established by the Arbitrator.
- g. All communications from the Arbitrator to the parties will be via email.

**Correction of clerical errors in submissions**

22. The Arbitrator may grant leave to a party to correct clerical errors in any of its submissions (including paragraph numbering and typographical mistakes). Any such request should identify the nature of the errors to be corrected, and should be made promptly following the filing of the submission in question.

## ANNEX A-2

### ADDITIONAL WORKING PROCEDURES OF THE ARBITRATOR CONCERNING BUSINESS CONFIDENTIAL INFORMATION

*Adopted on 8 January 2020*

1. These procedures apply to any business confidential information (BCI) that a party wishes to submit to the Arbitrator, including BCI that was previously treated by the U.S. Department of Commerce as confidential or proprietary information protected by Administrative Protective Order in the course of the countervailing duty proceedings relevant to this dispute. However, these procedures do not apply to information that is available in the public domain. In addition, these procedures do not apply to any BCI if the person who provided the information in the course of the relevant proceedings agrees in writing to make the information publicly available.
2. The first time that a party submits to the Arbitrator BCI, as defined above, from an entity that submitted that information in one of the relevant proceedings, the party shall also provide, with a copy to the other party, an authorizing letter from the entity. That letter shall authorize both China and the United States to submit in this dispute, in accordance with these procedures, any confidential information submitted by that entity in the course of those proceedings.
3. If an entity refuses to grant the authorization letter, a party may bring the situation to the attention of the Arbitrator. The Arbitrator shall consider what steps to take, which may include requesting information pursuant to Article 13 of the DSU.
4. No person may have access to BCI except a member of the Secretariat or the Arbitrator, an employee of a party, and an outside advisor for the purposes of this dispute to a party. An outside advisor may include a person providing to a party advice on any matter related to the dispute. However, an outside advisor is not permitted access to BCI if that advisor is an officer or employee of an enterprise engaged in the production, export, or import of the products that were the subject of the proceedings relevant to this dispute.
5. A party having access to BCI shall treat it as confidential, i.e., shall not disclose that information other than to those persons authorized to receive it pursuant to these procedures. Each party shall have responsibility in this regard for its employees as well as any outside advisors used for the purposes of this dispute. BCI obtained under these procedures may be used only for the purpose of providing information and argumentation in this arbitration and for no other purpose.
6. The party submitting BCI shall mark the cover and/or first page of the document containing BCI, and each page of the document, to indicate the presence of such information. The specific information in question shall be placed between double brackets, as follows: [[xx,xxx.xx]]. The first page or cover of the document shall state "Contains business confidential information on pages xxxxxx", and each page of the document shall contain the notice "Contains Business Confidential Information" at the top of the page.
7. Where a party submits a document containing BCI to the Arbitrator, the other party referring to that BCI in its documents, including written submissions and oral statements, shall clearly identify all such information in those documents. All such documents shall be marked as described in paragraph 6. In the case of an oral statement containing BCI, the party making such a statement shall inform the Arbitrator before making it that the statement will contain BCI, and the Arbitrator will ensure that only persons authorized to have access to BCI pursuant to these procedures are in the room to hear that statement.
8. The Arbitrator will not disclose BCI, in its decision or in any other way, to persons not authorized under these procedures to have access to BCI. The Arbitrator may, however, make statements of conclusion drawn from such information. Before the Arbitrator circulates its final decision to the Members, the Arbitrator will give each party an opportunity to review the decision to ensure that it does not contain any information that the party has designated as BCI.

### **ANNEX A-3**

#### **ADDITIONAL WORKING PROCEDURES OF THE ARBITRATOR CONCERNING MEETINGS WITH REMOTE PARTICIPATION**

*Adopted on 20 October 2020*

#### **General**

1. These Additional Working Procedures set out terms for holding meetings with the Arbitrator which some participants may attend by remote means.

#### **Definitions**

2. For the purposes of these Additional Working Procedures:

**"Remote participant"** means any registered person attending the meeting with the Arbitrator by remote means.

**"Platform"** means the software or system through which remote participants attend the meeting with the Arbitrator.

**"Host"** means the designated person within the WTO Secretariat responsible for the management of the platform.

#### **Equipment and technical requirements**

3. Each party shall ensure that all remote participants of its delegation join the meeting using the designated platform, and meet the minimum equipment and technical requirements set out by the platform provider for the effective conduct of the meeting.

#### **Technical support**

4. (1) Each party is responsible for providing technical support to the remote participants of its delegation.  
  
(2) The host will assist remote participants in accessing and using the platform in preparation of, and during, the meeting with the Arbitrator.

#### **Pre-meeting**

##### Registration

5. Each party shall provide to the Arbitrator the list of the members of its delegation, on a dedicated form to be provided by the WTO Secretariat, no later than 5:00 p.m. (Geneva time) two weeks before the first day of the meeting with the Arbitrator. Such list shall include all members of the party's delegation, regardless of whether they participate in person or by remote means.

##### Advance testing

6. Before the meeting with the Arbitrator, the WTO Secretariat will hold two testing sessions with all remote participants of each party: (i) a separate one for each party's remote participants, and (ii) a joint session with all participants in the meeting, including all remote participants of the parties and the arbitrators joining remotely. Such sessions will seek to reflect, as far as possible, the conditions of the meeting.

### **Confidentiality and security**

7. All remote participants shall follow the Additional Working Procedures of the Arbitrator concerning Business Confidential Information and the security rules contained in these Additional Working Procedures as well as any additional security guidance that may be provided by the host.

### **Conduct of the meeting**

#### Access to the virtual meeting room

8. (1) The host will invite remote participants via email to join the virtual meeting room on the platform.  
  
(2) For security reasons, access to the virtual meeting room will be password-protected and limited to registered participants. Remote participants shall not forward or share the meeting link or password.  
  
(3) Each party shall ensure that only registered participants from its delegation join the virtual meeting room.

#### Advance log-on

9. (1) The virtual meeting room will be accessible 60 minutes in advance of the scheduled start time of each session of the meeting with the Arbitrator.  
  
(2) All remote participants shall log on to the platform at least 30 minutes in advance of the scheduled start time of each session of the meeting with the Arbitrator.

#### Document sharing

10. (1) Each party shall provide the Arbitrator and other participants with a provisional written version of its opening statement and, if available, of its closing statement, before delivery at the meeting.  
  
(2) Any participant wishing to share a document with the Arbitrator and other participants during the meeting shall do so before first referring to such document at the meeting.

#### Communication breakdown

11. (1) Each party shall designate a contact person who can liaise with the host during the course of the meeting to report any technical issues that arise with respect to the platform. The host can be contacted via the platform, by sending an email to remotemeeting03@wto.org, or by calling +41 (0)22 739 6148.  
  
(2) After consulting the parties, the Arbitrator may pause the session until the technical issue is resolved or may continue the proceedings with those participants that continue to be connected or are physically present in the meeting room at the WTO.

### **Relation with the Working Procedures of the Arbitrator**

12. These Additional Working Procedures complement the Working Procedures of the Arbitrator and prevail over the latter to the extent of any conflict.
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**ANNEX B**

ARGUMENTS OF THE PARTIES

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## ANNEX B-1

### EXECUTIVE SUMMARY OF THE ARGUMENTS OF THE UNITED STATES

#### I. INTRODUCTION

1. Contrary to the requirements of the *Understanding on Rules and Procedures Governing the Settlement of Disputes* ("DSU"), the level of suspension of concessions that China has requested is not equivalent to the level of nullification or impairment.

2. Pursuant to Article 22.7 of the DSU, the task of an arbitrator is to determine whether the requested level of suspension of concessions or other obligations is equivalent to the level of nullification or impairment of benefits accruing to the complaining party under the relevant covered agreement(s), as required under Article 22.4. China, in its DSU Article 22.2 request, has proposed to suspend concessions at a level of \$2.4 billion annually; the United States has objected to that level, referring the matter to arbitration; and the United States has made a *prima facie* case (including through China's concession that \$2.4 billion exceeds the level of nullification or impairment and by demonstrating fundamental defects in China's methodology and data) that China's requested level of suspension is inconsistent with Article 22.4 of the DSU.

3. Thus, it is appropriate for the Arbitrator to reject China's requested level of nullification or impairment and continue the analysis, pursuant to Article 22.7, to determine the level of suspension that it considers to be equivalent to the level of nullification or impairment, as other arbitrators have done in prior Article 22.6 proceedings. The United States has provided the Arbitrator ample evidence to sustain its factual assertions in order to assist the Arbitrator in determining the correct methodology (including correct underlying assumptions) and the correct data that can be used to accurately estimate a level of suspension that is equivalent to the level of nullification or impairment.

4. The level of nullification or impairment should be determined by estimating the trade effects of removing the WTO-inconsistent aspects of the U.S. countervailing duty ("CVD") measures following the expiration of the reasonable period of time ("RPT"), through a counterfactual of reducing the CVD rate by the relevant WTO-inconsistent Less-Than-Adequate-Remuneration ("LTAR") rate. China agrees with this approach, but has incorrectly identified the WTO-inconsistent CVD rates to use to calculate the counterfactual WTO-consistent CVD rates. The United States has shown that the rates from the final determinations of the section 129 proceedings ("section 129 rates"), which were the compliance measures reviewed in the Article 21.5 proceedings in this dispute, are the correct WTO-inconsistent CVD rates, and the counterfactual WTO-consistent CVD rate for each product should be calculated by reducing the section 129 CVD rate by the relevant WTO-inconsistent LTAR rate.

5. With respect to the methodology to simulate the counterfactual, a two-step Armington-based imperfect substitutes partial equilibrium model is appropriate for the purpose of this proceeding, but only with certain necessary adjustments to be able to accurately estimate the level of nullification or impairment caused by the WTO-inconsistent CVD measures at issue –and not caused by any other factors. While China's methodology uses a two-step Armington-based model, it fails to apply the necessary adjustments, consequently generating distorted counterfactual market shares and grossly overestimating the trade effects of the CVD measures at issue.

6. The two necessary adjustments identified by the United States are: (1) controlling for the trade effects of the antidumping ("AD") duties that also were imposed on the same products; and (2) controlling for the trade effects of the positive supply shocks for imports of the same products from third countries, making them more competitive in the U.S. market. These adjustments are necessary to generate a counterfactual market representation which accurately estimates how the U.S. market would be different if the CVD rates were made WTO-consistent at the expiration of the RPT (*i.e.*, in 2017), and thus properly isolate the trade effects of the CVD measures at issue.

7. Finally, contrary to the incorrect data used by China, the United States has proposed to use the same data and data estimation methods chosen by the arbitrator in DS471 – save for certain instances where data-based adjustments were necessary. In estimating the counterfactual value of imports from China, the United States has provided the Arbitrator data that accurately reflect imports from China that are subject to the CVD measures at issue in this proceeding. This contrasts with China's reliance on basket tariff categories and blanket use of an economy-wide GDP deflator to estimate the market size for each discrete product.

8. As the United States has demonstrated, when proper analysis is employed and correct data are used, the actual level of nullification or impairment is no more than **\$105.77 million** annually.

## **II. APPROPRIATE CALCULATION OF THE LEVEL OF NULLIFICATION OR IMPAIRMENT FOR THE COUNTERVAILING DUTY MEASURES AT ISSUE**

### **A. Article 22 of the DSU Requires that the Proposed Level of Suspension Be Equivalent to the Level of Nullification or Impairment**

9. Pursuant to Article 22.4 of the DSU, the DSB is not to authorize the suspension of concessions or other obligations unless "the level" of suspension is "equivalent" to the level of nullification or impairment. Article 22.7 of the DSU further provides that where a matter is referred to arbitration, the arbitrator "shall determine whether the level of . . . suspension is equivalent to the level of nullification or impairment." The starting point in the analysis of a suspension request is to determine the extent to which any WTO-inconsistent measure maintained following the expiration of the RPT nullifies or impairs benefits accruing to the complaining Member under the relevant covered agreement(s).

10. Thus, an analysis of the level of nullification or impairment must focus on the "benefit" accruing to the complaining party under a covered agreement that is allegedly nullified or impaired as a result of the breach found by the DSB. Arbitrators in past proceedings have uniformly based their determinations on hard evidence and have refused to "accept claims that are 'too remote', 'too speculative', or 'not meaningfully quantified.'" As the arbitrators in *EC – Hormones (US) (Article 22.6 – EC)* and *EC – Hormones (Canada) (Article 22.6 – EC)* found, "we need to guard against claims of lost opportunities where the causal link with the [WTO-] inconsistent [measure] is less than apparent, i.e., where exports are allegedly foregone not because of the [WTO-inconsistent measure] but due to other circumstances."

11. In previous Article 22.6 proceedings, the arbitrators compared the level of trade for the complaining party under the WTO-inconsistent measure to what the complaining party's level of trade would be expected to be had the Member concerned brought the WTO-inconsistent measure into conformity following the expiration of the RPT. The situation in which the Member concerned has removed the WTO inconsistency is referred to as the "counterfactual." The difference in the level of trade under these two situations typically represents the level of nullification or impairment. Other Article 22.6 arbitrators have recognized that a counterfactual was an appropriate method in those proceedings to calculate a level of nullification or impairment.

12. Similarly, in this proceeding, both the United States and China have proposed a counterfactual in which the WTO-inconsistent aspect of each of the CVD measures at issue (*i.e.*, the WTO-inconsistent LTAR rate) is removed following the expiration of the RPT. China, however, has proposed to use incorrect rates as the WTO-inconsistent CVD rates, which also results in incorrect counterfactual WTO-consistent CVD rates. The appropriate analysis requires a comparison between the baseline value of imports of each product from China to the United States and the value of imports from China to the United States that would have been expected had the CVD rates been WTO-consistent following the expiration of the RPT (the counterfactual). As described below, China's incorrect WTO-inconsistent rates and incorrect counterfactual WTO-consistent rates result in an incorrect outcome of the counterfactual analysis.

### **B. The Correct Counterfactual is Reduction of the Section 129 CVD Rate by the Relevant WTO-Inconsistent LTAR Rate**

13. In this proceeding, the correct counterfactual is the estimated value of imports of relevant products from China to the United States if the WTO-inconsistent CVD measures were modified,

following the expiration of the RPT, to comply with the DSB recommendations, holding all other factors constant. China, in its methodology paper, acknowledges that the Article 21.5 compliance panel in this dispute reviewed and found to be WTO-inconsistent the section 129 determinations, which are the basis of the WTO-inconsistent CVD rates used by the United States. Yet, China has disregarded this fact and has used the rates from the CVD orders, rather than the section 129 rates, as the baseline rates for the counterfactual analysis.

14. The relevant rates to be used as the WTO-inconsistent CVD rates are the section 129 rates because the section 129 determinations were the measures that were actually "found to be WTO-inconsistent" in this dispute.

**C. The Correct Methodology for Determining the Level of Nullification or Impairment Must Incorporate Other Relevant Factors and Rely on a Correct Assumption Regarding Elasticities of Substitution**

15. As explained above, the key issue in this proceeding is the impact on trade flows of the maintenance of the WTO-inconsistent CVD measures following the expiration of the RPT. The United States and China generally agree that a version of the two-step Armington approach used by the arbitrators in DS464 and DS471 is appropriate. However, the United States disagrees with China's proposed version of the two-step Armington approach because it not only fails to address the fundamental deficiencies of the unadjusted two-step Armington approach but also further distorts the model by relying on a flawed assumption about elasticities of substitution.

16. In contrast, the U.S. methodology corrects the fundamental deficiencies of the two-step Armington approach used in DS464 and DS471 by implementing two necessary adjustments. These adjustments are necessary to capture China's true relative competitiveness and correctly estimate the level of nullification or impairment attributable to the CVD measures at issue. Moreover, the U.S. methodology is based on a correct assumption about elasticities of substitution.

**1. The Correct Methodology Properly Isolates the Trade Effects of the WTO-Inconsistent CVD Measures by Adjusting for Other Factors that Demonstrably Affected the Evolution of Market Shares Between the Time of Imposition of the Relevant CVD Measure and Remedy Year**

17. The two-step Armington approach, as applied by the arbitrators in DS464 and DS471, begins by calibrating a standard partial equilibrium Armington model using market share data from the year prior to the imposition of the CVD measure ("the year-prior") for three entities: U.S. domestic producers, China, and the rest of the world ("ROW"). In this type of model, market shares observed in the year-prior data are assumed to capture relative competitiveness in the U.S. market in that year. The year-prior data in this proceeding, however, do not reflect an accurate picture of China's underlying competitiveness because the U.S. market was distorted by subsidies and dumping, prior to the imposition of the relevant CVD and AD measures.

18. Using the year-prior data and calibrated parameters, step one of the two-step Armington approach, as applied by the arbitrators in DS464 and DS471, simulates the application of WTO-inconsistent CVD measures on imports from China. The counterfactual market shares resulting from step one are ostensibly assumed to represent the relative competitiveness of each entity (*i.e.*, domestic shipments, imports from China, and imports from ROW) after the expiration of the RPT, that is, in 2017.

19. In step two of the two-step Armington approach, the counterfactual market shares generated in step one are used to calibrate a new benchmark model. The market shares are used to divide up the total value of the U.S. market in 2017, as observed in the data, constructing an alternative 2017 market in which no factors other than the CVD measures on imports from China have affected relative competitiveness among the entities between the date of imposition of the CVD measure and the remedy year (2017). This constructed market is assumed to be representative of the market in 2017. This new benchmark model is then used to simulate the trade effects of modifying the WTO-inconsistent CVD rates to be WTO-consistent in 2017, including estimating each entity's market share under the counterfactual WTO-consistent CVD rates. The level of nullification or impairment is the difference between the simulated value of 2017 U.S. imports from China under the WTO-

inconsistent rates and the simulated value of 2017 U.S. imports from China under the modified, counterfactual WTO-consistent rates.

20. As recognized by the authors of a recent paper discussing the DS471 arbitration, the two-step Armington approach used in that arbitration had a fundamental deficiency: it incorrectly attributed trade damage solely to the AD duties at issue in that proceeding by failing to account for other factors that affected the evolution of relative competitiveness in the U.S. market (*i.e.*, market shares) between the date of imposition of the duties and the remedy year. The CVD duties at issue in this proceeding were among those factors. China, in DS471, appears to have anticipated this problem when it proposed to "tak[e] into account the impact of CVD measures" in its alternative methodology for estimating the level of nullification or impairment caused by the AD measures that were at issue in that proceeding.

21. The U.S. methodology in this proceeding offers a solution that corrects this deficiency by incorporating two adjustments. These adjustments ensure that the model controls for economic forces other than the CVD measures at issue and properly isolates the trade effects of the CVD measures. In contrast, the unadjusted two-step Armington model that fails to account for other relevant factors would essentially estimate trade damage based on an incorrect counterfactual market, in which factors observed to have affected the actual 2017 market shares are absent, thus overestimating the level of nullification or impairment.

**a. First, the Two-Step Armington Approach Must Account for the Effect of Dumping and the Corresponding Antidumping Duties on China's U.S. Market Share**

22. An unadjusted two-step Armington approach fails to account for the parallel AD measures that applied to the products at issue in this proceeding – meaning the model essentially asks how the market would be different if CVD rates were WTO-consistent at the expiration of the RPT and if AD duties were never imposed in the first place. But there is no question that the AD measures were imposed simultaneously or almost simultaneously with the CVD measures at issue, and that China's actual relative competitiveness in 2017 was directly affected by these AD measures. Thus, it would not be proper under the correct counterfactual to assume that AD duties never existed or affected relative competitiveness in the U.S. market.

23. Accordingly, the model in step one of the two-step Armington approach must account for the parallel AD duties to be able to estimate China's actual relative competitiveness and generate an adequate representation of the counterfactual 2017 market. Otherwise, the step two model calibrated with incorrect counterfactual 2017 market shares would, in turn, overestimate China's relative competitiveness in 2017 because it would not account for the correction for dumping – the AD duties – that was in effect at the end of the RPT. Therefore, only a two-step approach that properly accounts for the parallel AD measures can accurately simulate the 2017 market shares and thus accurately estimate the level of nullification or impairment.

24. The U.S. methodology takes the AD duty rates as they are and incorporates them with the WTO-inconsistent CVD rates in step one and the counterfactual WTO-consistent CVD rates in step two. This prevents the two-step Armington model from simulating an incorrect counterfactual 2017 market in which the parallel AD duties were never imposed, thereby properly controlling for the effects of the AD duties.

**b. Second, the Two-Step Armington Approach Must Account for Third-Country Supply Shock, *i.e.*, Factors Other than Trade Remedy Measures that Influenced the Evolution of Market Shares in the Interim Period Between Imposition of the Relevant CVD Measure and Remedy Year**

25. As explained above, the unadjusted two-step model used by the DS471 arbitrator ignores the trade effects of other factors on the evolution of relative competitiveness during the interim period between the imposition of the CVD measures and 2017. In reality, however, entry of new market participants and increased capacity of countries other than China to supply the U.S. market influenced China's (and other suppliers') relative competitiveness. In several of the product markets at issue in this proceeding, investments of private firms or changes in government policy allowed

certain third country suppliers to improve their relative competitiveness in the U.S. market during the interim period.

26. A model that fails to account for such third-country supply shocks fails to answer the relevant question; rather, it assesses how the market would be different if CVD rates were WTO-consistent and if third-country market shares were held proportionally constant. Such a model cannot accurately estimate the nullification or impairment caused by the WTO-inconsistent CVD measures at issue in this proceeding. The resulting estimate of nullification or impairment would either understate or overstate the actual level of nullification or impairment, depending on the underlying circumstances.

27. The United States has provided evidence for five of the products (Aluminum Extrusions, OCTG, Solar Panels, Line Pipe, Pressure Pipe) that investments of private firms or changes in government policy boosted the supply potential of certain third countries and resulted in imports from those countries gaining U.S. market share at China's expense. In other words, these positive supply shocks improved the relative competitiveness of those third countries and led to the relative deterioration of China's competitive position in the U.S. market during the interim period. Such changes during the interim period should be reflected in the step one counterfactual market that is used to calibrate the step two model. Otherwise, the step one counterfactual market would not represent China's actual relative competitiveness in 2017, and in turn, cannot be used to correctly estimate the level of nullification or impairment. Accordingly, the United States has quantified and incorporated those supply shocks into its model using a historical simulation approach based on the economics literature.

28. In principle, the two-step Armington approach should incorporate a supply shock adjustment for every product for which the relative competitiveness of third-country suppliers has changed between the date of imposition of the CVD measures and 2017. However, it is not possible to directly observe supply shocks and their magnitude by country. As the best alternative, the United States has relied on two types of information to make the best effort to identify the relevant supply shocks: (1) trade data showing trends of disproportionate increases in certain third countries' market shares relative to other exporting countries between the year in which the CVD measure was imposed and 2017, and (2) analyses documented in relevant U.S. International Trade Commission ("USITC") investigations of any industry investment or government policy changes in those third countries during the same period.

29. Using this evidence-based method, the United States has identified the "Rising Supplier" countries for Aluminum Extrusions, OCTG, Solar Panels, Line Pipe, and Pressure Pipe, and has detailed the government policies or industry investments that are linked to the expansion of their supply potential. Based on evidence, the adjustment also includes a net decline in relative competitiveness of India, Malaysia, Thailand, and Vietnam in the U.S. Pressure Pipe market due to U.S. trade remedies against Pressure Pipe from those countries in 2014 and 2016, which ultimately boosted China's relative competitiveness. The United States has not found sufficient evidence to recommend implementing the supply shock adjustment for the remaining five products.

30. Both the AD adjustment and the third-country supply shock adjustment stem from the fact that the correct methodology for this proceeding should control for any other factors that affected the evolution of relative competitiveness in the U.S. market for the products at issue between the imposition of the measure at issue and the remedy year, as long as there is evidence to support those effects and sufficient quantitative information to incorporate them into the model. The United States has controlled for these two factors because there is sufficient evidence to demonstrate their effects on the evolution of relative competitiveness between the imposition of the relevant CVD measures and 2017. On the other hand, the United States has not adjusted for any other factors due to lack of sufficient evidence that any other factors (including any other duties or non-tariff actions) meaningfully affected the evolution of relative competitiveness during the interim period.

31. China falsely argues that incorporating the necessary adjustments proposed in the U.S. methodology would be equivalent to adopting a one-step Armington model. However, the step one counterfactual market shares generated by the U.S. methodology are consistently and significantly greater than China's actual 2017 market shares that would be used in a one-step Armington model. The U.S. methodology corrects the critical deficiency in the unadjusted two-step Armington model so that the model can generate accurate counterfactual 2017 market shares and thus estimate the

level of nullification and impairment that is properly attributable to the CVD measures at issue – the very purpose of adopting a two-step Armington model.

**2. The Correct Methodology Relies on the Correct Assumption that the Elasticity of Substitution across Imported Varieties is Same as the Elasticity of Substitution Between Imported Goods and Domestic Goods**

32. Contrary to China's argument, the so-called "Rule of Two" is not the correct assumption for the methodology in this proceeding. The Rule of Two is an *ad hoc* assumption that the elasticity of substitution across imported varieties ("micro-elasticity") is two times the elasticity of substitution between imported goods and domestic goods ("macro-elasticity"). This proposition has serious implications, as it would result in a significantly higher estimate of the level of nullification or impairment. However, China has not sufficiently demonstrated why the Arbitrator should deviate from the more reasonable assumption that the micro-elasticity and the macro-elasticity are constant (*i.e.*, the Rule of One), which is the standard in Armington partial equilibrium modeling in the academic literature and which has been used in previous WTO arbitrations, including DS471.

33. While China has frequently referenced *Feenstra et al.*, there simply is no evidence in the paper to conclude that the micro-elasticity is double the macro-elasticity for the products at issue in this proceeding. Rather, China has misinterpreted the statistical data presented in the paper. The corrected outcome provided by the United States is, in fact, evidence in favor of the null hypothesis that the macro-elasticity and micro-elasticity are equal.

34. Moreover, the results of *Feenstra et al.* do not support China's position because they do not apply to the products at issue here and cannot be generalized. The sample examined in *Feenstra et al.* only covers 0.5 percent of all Harmonized Tariff Schedule of the United States ("HTSUS") categories at the 10-digit level. In addition, it appears that the only overlap between the sample in *Feenstra et al.* and the products at issue in this proceeding is a limited subset of the products subject to the OCTG CVD measure. From a statistical perspective, it is unreasonable to generalize the weak results of *Feenstra et al.* The small sample in *Feenstra et al.* is not randomly sampled from the population of all products, and there is no evidence that it is a representative sample. In fact, the authors of *Feenstra et al.* themselves do not assert that the paper's results are generalizable outside of the specific sample, contrary to China's argument. The weak evidence in *Feenstra et al.* that the micro-elasticities may be higher than the macro-elasticities for the products sampled in the paper does not support the application of the Rule of Two for the specific products at issue in this proceeding that are largely from different industries.

35. Further, a nested approach – which encompasses the Rule of Two and other model arrangements in which the elasticity of substitution is not assumed to be constant across all sources of supply – is not appropriate in this proceeding because trade diversion is not expected for the products at issue. A nested approach could be used where there is evidence that buyers are more likely to substitute one source of supply over another in response to a change in the price of the subject variety. However, product-specific evidence reported by the USITC shows that the domestic variety, imports from China, and imports from ROW are not systematically differentiated, but rather are comparable and interchangeable in terms of product quality, terms of sale, and use. That is, there is no basis to assume that an increase in the price of imports from China would lead U.S. buyers to systematically and disproportionately substitute toward imports from ROW, over U.S. domestic products. And there is certainly no evidence that buyers are likely to substitute toward imports from ROW at double the rate of substitution toward U.S. domestic products.

36. Accordingly, the correct methodology should rely on the standard Rule of One and thus use the substitution elasticity estimates reported by the USITC for both micro- and macro-elasticities. These USITC elasticities (which were developed under the implicit assumption that the micro-elasticity and macro-elasticity are equal) are tailored to the specific products subject to the duties and are based on analysis of responses from purchasers, producers, and importers to questionnaires concerning the pertinent market, as well as arguments made by interested parties.

**D. The Correct Data Inputs that Would Be Used in Applying the Two-Step Armington-Based Partial Equilibrium Model**

37. In an effort to identify the best data available for this proceeding, the United States has maintained a reasoned and consistent approach of using the same year-prior and 2017 U.S. market data that the arbitrator in DS471 chose to use for the seven products for which AD measures were at issue in the DS471 arbitration proceeding (Aluminum Extrusions, Line Pipe, OCTG, Print Graphics, Seamless Pipe, Solar Panels, and Steel Cylinders). For the other three products that were not at issue in DS471 (Kitchen Shelving, Pressure Pipe, and Wire Strand), the United States has estimated the U.S. market data by applying estimation methods that are similar to those applied by the DS471 arbitrator. In contrast, China has unnecessarily deviated from the data and data estimation methods used by the DS471 arbitrator and has proposed data that are not suitable for accurately estimating the level of nullification or impairment.

**1. Year-Prior U.S. Market Data**

38. China has chosen the wrong year-prior for three of the products (OCTG, Line Pipe, and Pressure Pipe). Since step one of the two-step Armington approach uses the year-prior data to generate market shares that reflect relative competitiveness in the U.S. market in 2017, it is necessary to ensure that the two-step approach uses the correct year-prior – that is, the year prior to the imposition of the final CVD measure. However, China has attempted to deviate from the approach taken by the arbitrators in DS471 and DS464 by arguing that the year-prior should be based on the date of imposition of the preliminary CVD measure.

39. However, the imposition of a CVD measure is not made final until both the U.S. Department of Commerce and the USITC make affirmative final determinations. Any cash deposits collected following an affirmative preliminary CVD determination are merely provisional and subject to refund depending on the outcome of the final determination. Moreover, for all of the products at issue, no provisional CVD duties were collected for a "gap period" of several months between the expiration of the preliminary CVD measure and the publication of the final CVD measure. China has not explained how, or why, any changes in trade flows during the gap period should be attributed to CVD duties when there were no CVD duties in place. Therefore, the United States has maintained the use of the year prior to the imposition of the final CVD measure, rather than a temporary preliminary CVD measure.

40. In addition to misidentifying the relevant year-prior and thus using incorrect year-prior data, China has also misidentified the relevant domestic shipments or imports values for three other products (Print Graphics, Steel Cylinders, and Solar Panels). For Kitchen Shelving, China's estimated imports values improperly rely on "basket" HTSUS categories that broadly include a number of products that fall outside the scope of the Kitchen Shelving CVD measure.

41. In contrast, the United States has correctly identified the year-prior for each product in a manner that is consistent with the year-prior identified by the arbitrator in DS471, and has used the domestic shipments and imports values that were either used by the DS471 arbitrator, or calculated those values using sources and methods similar to those relied on by the DS471 arbitrator. There are only two exceptions. First, for the domestic shipments value for Steel Cylinders, whereas the DS471 arbitrator relied on an estimate based on industry data, the United States has replaced the estimate with actual data, which became available after the release of the DS471 decision. Second, for Kitchen Shelving, the United States has corrected for the overinclusion problem of relying on basket tariff categories by incorporating industry data-based adjustments to data collected in the relevant USITC investigations.

**2. 2017 U.S. Market Data**

42. With respect to the 2017 data, the United States has generally used the data already reported by the DS471 arbitrator for the seven products that were also at issue in that arbitration. Where the United States has adjusted data used by the DS471 arbitrator due to an overinclusion issue (Print Graphics and Seamless Pipe imports from ROW) or due to the availability of more recent or better data (OCTG and Steel Cylinders domestic shipments), ample evidence and explanations have been submitted for the application of those adjustments.

43. As for the three products that were not at issue in DS471, the United States has calculated an estimate using industry-specific data to estimate each component of the U.S. market for each product (*i.e.*, domestic shipments, imports from China, and imports from ROW). This is the method that the DS471 arbitrator used and also the method that the USITC uses in its investigations.

44. While the United States has used HTSUS-based data for the year-prior data due to lack of a better alternative, the United States has used, for 2017 imports from China, USCBP data reporting company-specific imports of subject merchandise that are subject to the CVD measures at issue. USCBP data, which are collected by the U.S. federal agency that enforces CVD measures at the time of importation, provide the most accurate estimates of the imports from China that were subject to the CVD measures at issue in this proceeding.

45. In contrast, China has abandoned the reasoned approach of estimating each component of the U.S. market using industry-specific data, and has instead resorted to a novel approach of applying a GDP deflator to the reported value of the U.S. market for a specific product in an earlier year and extrapolating the value of the 2017 U.S. market for that product. This is not supported by economic theory. A GDP deflator is based on the entire U.S. economy and is not tailored to specific products. A GDP deflator, which is nominal GDP divided by real GDP, is a measurement of inflation. Accordingly, the outcome of China's GDP deflator approach merely states the value of the earlier U.S. market in terms of 2017 dollars – it does not estimate the size of the 2017 U.S. market. By attempting to project a future market size using a GDP deflator, China improperly assumes that the U.S. market for each individual product grew in line with the prices of all final goods and services produced in the United States between the earlier data year and the remedy year. Furthermore, regardless of the number of years over which a GDP deflator is applied, the deflator's estimate for the 2017 market size would vary depending on the year that the deflator happens to extrapolate from – which demonstrates that the GDP deflator method is not a reliable proxy for projecting a future market size.

46. While China has suggested the Producer Price Index (PPI) as an alternative, applying the PPIs would also merely state the value of an earlier U.S. market in terms of 2017 dollars, similar to the GDP deflator approach. Moreover, the PPIs, while narrower in product coverage than the economy-wide GDP deflator, are not tailored to the specific products at issue in this proceeding and are unsuitable for estimating the market size for these products. Generally, applying the PPIs would include the price effects of many other, non-subject products that are often produced by different manufacturers or distributed through different channels.

#### **E. The Level of Nullification or Impairment that Would Result from the Application of an Appropriate Armington-Based Partial Equilibrium Model**

47. As a result of applying the two-step Armington-based approach that incorporates the two necessary adjustments proposed by the United States, the level of nullification or impairment from the maintenance following the expiration of the RPT of the U.S. WTO-inconsistent CVD measures on Aluminum Extrusions, Print Graphics, OCTG, Solar Panels, Steel Cylinders, Line Pipe, Seamless Pipe, Kitchen Shelving, Pressure Pipe, and Wire Strand from China is no more than **\$105.77 million** per year.

## **II. CONCLUSION**

48. For the reasons given throughout this proceeding, the United States respectfully requests that the Arbitrator find that the level of suspension of concessions or other obligations requested by China is not "equivalent" to the level of nullification or impairment. The United States requests that the Arbitrator find that the level of nullification or impairment is no more than **\$105.77 million** annually.

## ANNEX B-2

### EXECUTIVE SUMMARY OF THE ARGUMENTS OF CHINA

#### I. INTRODUCTION

1. This proceeding under Article 22.6 of the Dispute Settlement Understanding ("DSU") commenced because of the United States' continued refusal to comply with the recommendations and rulings of the Dispute Settlement Body ("DSB") in *United States – Countervailing Measures (China)* ("DS437").

2. On 15 August 2019, the DSB adopted the compliance panel's report in DS437, as modified by the Appellate Body Report. In that report, the Appellate Body upheld the compliance panel's findings that the United States had acted inconsistently with Articles 1.1(b) and 14(d) of the Agreement on Subsidies and Countervailing Measures ("SCM Agreement") in four countervailing duty ("CVD") investigations. The Appellate Body also upheld the compliance panel's findings that the United States had acted inconsistently with Article 2.1(c) of the SCM Agreement in those same four investigations and in an additional seven countervailing duty investigations.

3. The DSB ruled that the U.S. measures at issue are inconsistent with the relevant provisions of the SCM Agreement and recommended that the United States bring its measures into conformity with its obligations under that agreement. Despite these findings, the United States has refused to bring its measures into compliance with the recommendations and rulings of the DSB.

4. Because the United States has refused to bring its unlawful measures into compliance with its WTO obligations, China is seeking authorization to suspend concessions or other obligations under the covered agreements in the amount of USD **788.75 million**. For the reasons set out in China's methodology paper, written submission, oral statements, responses to questions from the Arbitrator, and comments on the United States' responses to questions from the Arbitrator, China submits that the United States has failed to demonstrate that China's proposed level of suspension is not equivalent to the level of nullification and impairment suffered by China as a result of the U.S. failure to bring its measures into conformity with the recommendations and rulings of the DSB.

#### II. CHINA'S PROPOSED COUNTERFACTUAL SCENARIO IS PLAUSIBLE AND REASONABLE

5. Pursuant to Article 22.4 of the DSU, "[t]he level of the suspension of concessions or other obligations authorized by the DSB shall be equivalent to the level of the nullification or impairment." Pursuant to Article 22.7 of the DSU, it is the Arbitrator's task to "determine whether the level of such suspension is equivalent to the level of nullification or impairment." Specifically, it is the Arbitrator's task to determine whether the level of suspension proposed by China is equivalent to the level of nullification and impairment caused by the United States' continued non-compliance with the recommendations and rulings of the DSB concerning the measures at issue.

6. WTO arbitrators have consistently adopted the approach of examining the relevant "counterfactual" scenario, i.e. a hypothetical scenario that describes what would have happened in terms of trade flows had the responding party implemented the DSB recommendations and rulings.<sup>1</sup>

7. The compliance panel's findings as affirmed by the Appellate Body concern the USDOC's incorrect interpretation and application of Articles 14(d) and 2.1(c) of the SCM Agreement and its resulting incorrect determination that China provides inputs for less than adequate remuneration ("LTAR"). The only reasonable inference that can be drawn in light of these findings is that had the USDOC sought to bring its measures into conformity with its obligations under the SCM Agreement by properly interpreting and applying Articles 14(d) and 2.1(c), it would not have identified a countervailable subsidy in respect of the alleged provision of inputs for LTAR. Consequently, the benefit that China could have legitimately expected to receive as a result of the recommendations and rulings of the DSB was that any countervailing duties applied to the products at issue would be

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<sup>1</sup> See China's methodology paper, para. 15.

calculated so as to exclude the portion of the total CVD margin attributed to the alleged input subsidy programmes.

8. Accordingly, in this proceeding China proposed a plausible and reasonable counterfactual scenario of modifying the relevant CVD orders to exclude the portion of the total CVD margin attributable to the alleged input subsidy programmes. The United States has agreed that the appropriate counterfactual analysis would entail modifying the relevant CVD rates by deducting the portion of the total CVD rate attributable to the input subsidy programs.<sup>2</sup>

### **III. CHINA'S PROPOSAL TO CALCULATE NULLIFICATION OR IMPAIRMENT USING THE TWO-STEP ARMINGTON MODEL IS REASONABLE AND CONSISTENT WITH THE APPROACH ADOPTED BY PRIOR ARBITRATORS**

#### **A. Overview of China's Application of the Two-Step Armington Model**

9. China has proposed that the Arbitrator utilize a two-step Armington elasticities model consistent with the approach implemented in two recent Article 22.6 proceedings: *US – Washing Machines (Korea)* ("DS464") and *US – Anti-Dumping Methodologies (China)* ("DS471"). The Armington elasticities model estimates the impact of the WTO-inconsistent countervailing duties on China's 2017 exports of the subject products to the United States.

10. At step one, China applied the Armington model to the U.S. market as it existed prior to the imposition of the WTO-inconsistent CVD orders in order to simulate, for each CVD order, the impact of imposing the WTO-inconsistent countervailing duties on the sales of Chinese exporters, exporters from the rest of the world ("ROW"), and U.S. producers. These counterfactual sales were then used to compute counterfactual market shares for each supplier.

11. At step two, China multiplied the counterfactual market shares simulated under the first step by the actual 2017 total value of the U.S. market, i.e. the total value of the U.S. market in the remedy year, in order to obtain a counterfactual 2017 value of U.S. imports from Chinese exporters, ROW exporters, and sales by U.S. producers. China then applied the Armington model to these counterfactual 2017 sales in order to estimate, for each CVD order, the impact of changing the countervailing duties from WTO-inconsistent rates to WTO-consistent rates. This second step yielded new counterfactual estimates of the value of U.S. imports from China, ROW exporters, and sales by U.S. producers.

12. For each CVD order, China then computed the amount of nullification and impairment suffered by China by subtracting China's counterfactual export value with WTO-inconsistent duties (step one) from China's simulated export value with WTO-consistent duties (step two). Adding the amount of nullification and impairment for each of the underlying cases yielded China's estimate of the total amount of nullification and impairment suffered by China.<sup>3</sup>

13. In its submissions, China explained in detail why a two-step approach to the Armington model is appropriate for the purposes of calculating nullification and impairment caused by the United States' WTO-inconsistent CVD duties in this proceeding. A simpler one-step approach is not appropriate because implicit in that approach is the assumption that the change from the WTO-*inconsistent* countervailing duty to the WTO-*consistent* countervailing duty occurs quickly, i.e. it is essentially a short-run analysis. That assumption does not hold if the WTO-inconsistent countervailing duties are in place for many years.<sup>4</sup>

14. In each of the underlying cases at issue, the WTO-inconsistent countervailing duties were imposed between 2008 and 2012. The remedy year is 2017. Thus, for each of the underlying cases, a considerable period of time has passed since the countervailing duty was originally imposed. It would therefore be inappropriate to assume either that the market share of the three types of suppliers in the remedy year is a reasonable benchmark from which to evaluate the trade impact of the long-ago imposed countervailing duties or that the size of the overall U.S. market in the year prior to the imposition of WTO-inconsistent duties is a reasonable proxy for the size of the market

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<sup>2</sup> See China's written submission, Section II.

<sup>3</sup> See China's methodology paper, Section III.B.

<sup>4</sup> See, e.g. China's methodology paper, Section III.

in the remedy year. Accordingly, step one of the two-step approach is necessary to account for the small market shares resulting from the trade-depressing effect of the WTO-inconsistent duties.

15. China incorporated two advancements to the two-step Armington methodology applied by prior arbitrators. First, China allowed the elasticity of substitution to vary by source. China provided strong factual and academic support for the proposition that the Arbitrator use a nested approach, rather than the single elasticity approach used in DS464 and DS471, including the use of the standard "Rule of Two", i.e. setting the elasticity across different import sources at twice the elasticity between domestic and import varieties.<sup>5</sup>

16. China pointed out that this "nested" approach to Armington modelling has been used by the WTO in its Global Trade model and the U.S. International Trade Commission ("USITC"). The practice of using the nested approach should carry over to partial-equilibrium analyses of disaggregated products where significant trade diversion to other importers can be expected. Failing to account for the higher rates of substitution across import varieties would lead to an understatement of nullification or impairment because the model would understate the diversion of trade to non-subject sources induced by the WTO-inconsistent duties.<sup>6</sup>

17. Second, China discovered a critical programming error in the DS471 computer code. China explained the nature of this error and provided corrected computer code to the Arbitrator. Specifically, the computer code includes a new variable named "NI\_fixed", which calculates the amount of nullification or impairment net of duty payments, which is the correct approach and consistent with that reported in DS464.<sup>7</sup> The parties agree that the Arbitrator should calculate nullification and impairment net of duties because duties do not accrue to the producers of the subject imports.<sup>8</sup>

18. China has also proposed that the Arbitrator implement the two-step approach using public, verifiable data. Step one of the two-step Armington model requires three sets of data: (i) actual U.S. market data (the sales of the domestic producers, Chinese exporters, and ROW exporters); (ii) Armington elasticity model parameters; and (iii) the WTO-inconsistent CVD rate imposed in each case.

19. For eight of the underlying cases, the public version of the relevant USITC investigation report contained all necessary market sales information. For three other cases, some of the necessary market information was not provided in the relevant final USITC report. Accordingly, for these three cases, China used the HS10 tariff codes listed in the relevant USITC reports to obtain the value of trade for Chinese exporters and ROW exporters from USITC Dataweb. For domestic sales value, China relied on public data, including 10K reports and North American Industry Classification System ("NAICS") industry data.<sup>9</sup>

20. With respect to Armington elasticity parameters, three elasticities are reported in the relevant final USITC reports: demand elasticity, domestic supply elasticity, and the elasticity of substitution between domestic and imported products. Import supply elasticities, however, are not provided in those reports. China therefore followed the approach adopted by the arbitrator in DS471 and assumed a value of 10 for each of these elasticities. For the elasticity of substitution between the imported varieties, China proposed a separate elasticity: the standard "Rule of Two".<sup>10</sup>

21. China submitted to the Arbitrator the relevant WTO-inconsistent countervailing duty rates at the time of the expiry of the reasonable period of time ("RPT").<sup>11</sup>

22. Step two of the two-step Armington model requires two additional sets of data: (i) the total value of the U.S. market in 2017 and (ii) the WTO-consistent CVD rate for each case. For five cases, China used information from either a USITC sunset review, a USITC report from a subsequent trade dispute involving the same product scope, or a publicly available 10K report. For cases where those

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<sup>5</sup> See China's methodology paper, Section III.C.5.

<sup>6</sup> See China's written submission, Section V.A.

<sup>7</sup> See China's methodology paper, para. 78.

<sup>8</sup> See China's oral statement, para. 9.

<sup>9</sup> See China's methodology paper, Section IV.B.

<sup>10</sup> See China's methodology paper, para. 96.

<sup>11</sup> See China's methodology paper, Section IV.B.3.

subsequent reports were published prior to 2017, China scaled data from the latest year with reported market data to 2017 values using the GDP deflator. For the other cases, all relevant market information was redacted in all subsequent USITC reports. China therefore estimated 2017 market size by scaling the size of the market prior to the WTO-inconsistent duties being imposed using the GDP deflator.<sup>12</sup>

23. China submitted to the Arbitrator the WTO-consistent countervailing duty rates calculated by deducting the inputs for LTAR subsidy rate from the total CVD rate for each of the CVD orders at issue.<sup>13</sup> China has acknowledged that the USDOC's methodology for calculating the All-Others rate varies depending on the rates calculated for the individually-investigated respondents and accepted the U.S. proposal that the All-Others WTO-consistent rate for *Solar Panels* and *Aluminum Extrusions* be calculated using the same methodology applied by the USDOC in the underlying proceeding, i.e. using a weighted average of the rates assigned to the two mandatory respondents in each case, rather than a simple average. China's estimates also reflect certain other revisions proposed by the United States to the relevant CVD rates.<sup>14</sup>

24. Thus, China has reasonably proposed that the Arbitrator implement the two-step Armington methodology developed and applied by prior arbitrators incorporating the "Rule of Two", correcting the error in the DS471 computer code, and using public, verifiable data.

**B. The Arbitrator Should Reject the U.S. Proposed "Adjustments" to the Two-Step Armington model**

25. The United States has purportedly agreed with China that the appropriate methodology for estimating the level of nullification or impairment in this dispute is a two-step approach to the Armington model. In reality, however, the United States seeks to revert to a one-step approach.

26. The U.S. objective to revert to a one-step approach is apparent from its two proposed "adjustments" to the two-step model, both of which are designed to depress China's market shares in the remedy year and reduce the level of nullification and impairment. The first proposed adjustment is to incorporate other trade remedy measures into the two-step approach, in this case, the effects of parallel antidumping ("AD") duties on the relevant Chinese products. The United States refers to this approach as the "CVD+AD model".<sup>15</sup>

27. Parallel duties were also present in DS464 and DS471. In both of those disputes, the arbitrator correctly computed nullification and impairment by isolating the impact of the specific WTO-inconsistent measures at issue in each dispute. In fact, a major reason for the two-step Armington method implemented in DS464 and DS471 was that it allowed the arbitrator in those cases to separately identify and evaluate the effect of the specific measures under scrutiny. Within the two-step Armington framework, there is no basis for the U.S. proposal to incorporate parallel AD duties into the analysis.<sup>16</sup>

28. The second proposed adjustment is to account for "other factors" that allegedly influenced the evolution of market shares. The United States proposes, in particular, to implement a so-called "supply shock", based on supposed changes that contributed to China's decline in imports separately from the WTO-inconsistent CVD duties. The supply shock is a transparent attempt by the United States to ignore the objective of the two-step approach and use the duty-distorted trade levels of the remedy year as the basis for the nullification and impairment calculation. The issue of distortion of trade levels in the remedy year is the primary reason why the arbitrator in DS464 developed the two-step approach. Thus, there is again no basis for the U.S. proposal to incorporate "supply shocks" within the two-step Armington framework.<sup>17</sup>

1. The Arbitrator Should Reject the U.S. Proposal to "Adjust" the Two-Step Armington Model to Account for Parallel Anti-Dumping Duties

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<sup>12</sup> See China's methodology paper, Section IV.C.1.

<sup>13</sup> See China's methodology paper, Section IV.C.2.

<sup>14</sup> See, e.g. China's written submission, para. 25.

<sup>15</sup> China's written submission, para. 4.

<sup>16</sup> See China's written submission, para. 4.

<sup>17</sup> See China's written submission, paras. 4 and 5.

29. Adjusting the two-step Armington model to incorporate the parallel AD duties would prevent the model from accurately estimating the effect of the WTO-inconsistent CVD duties and fail to capture the full amount of nullification and impairment caused by those duties.

30. The U.S. approach of adjusting for parallel AD duties necessarily distorts the base upon which nullification and impairment is calculated and therefore cannot be used to calculate the level of suspension "equivalent" to the amount of nullification and impairment caused by the measures at issue as required by Article 22.4 of the DSU. The U.S. approach ignores the non-linear nature of contemporaneous duties. China demonstrated that this non-linearity means that imposing other duties inevitably reduces the impact of the incremental measure at issue. Consequently, the U.S. approach of first adjusting for any contemporaneous duties necessarily underestimates the amount of nullification and impairment attributable to the measures at issue.<sup>18</sup>

31. This is true regardless of when the AD duties were imposed or their duration. Alleged dumping in the year-prior, the remedy year, or the period in between is not relevant to the analysis of nullification and impairment caused by the WTO-inconsistent CVD measures. In all cases, the effect of the WTO-inconsistent CVD duties would be distorted by adjusting for the AD duties. The relatively contemporaneous nature of the specific AD duties that the United States proposes to incorporate in the context of this proceeding does not make it appropriate to consider those duties as part of the counterfactual analysis. Trade actions other than the measures at issue, regardless of their nature, timing, duration, or WTO-consistency or inconsistency, do not form part of the counterfactual analysis under Article 22.6 of the DSU.<sup>19</sup>

32. The United States argues that because the sum of the AD and CVD nullification and impairment calculated *separately* does not equal the level of nullification and impairment when the effects of the two duties are modelled *together*, the "unadjusted" model must be attributing *more* than the full amount of nullification and impairment to the WTO-inconsistent CVD duties.<sup>20</sup> The United States is mistaken. China has shown that the U.S. assertion fails to take into account the non-linear effects of duties (or other measures) that affect trade.<sup>21</sup>

33. The United States would have the Arbitrator arbitrarily first reduce China's market size through the effects of the duty not at issue in the arbitration and then calculate the level of nullification and impairment on the basis of that already-reduced market size. The level of nullification and impairment resulting from this approach will inevitably understate the true level of nullification and impairment associated with the measure that is the subject of the Article 22.6 inquiry. The proposed U.S. approach therefore cannot determine the "equivalent" level of nullification and impairment in a manner consistent with Article 22.6 of the DSU.<sup>22</sup>

2. The Arbitrator Should Reject the U.S. Proposal to "Adjust" the Two-Step Armington Model for "Supply Shocks"

34. Consistent with the arguments it made in DS464 and DS471, the United States in this dispute argues that information on remedy-year shares is preferred to year-prior shares. The U.S. argument and proposed procedure in this dispute is considerably less transparent, but upon close review, it is unmistakable that the U.S. proposed "supply shift" procedure is designed to reduce the complainant's market share incorporated into the nullification and impairment calculation.

35. First, the United States proposes a decomposition of ROW suppliers into a group of rising-supplier ("RS") countries and other suppliers. Second, the United States uses the model to find a set of "phantom subsidies" on U.S. imports from these RS countries such that a remedy-year target is met. According to some unexplained theory of how market competition works, the phantom subsidies are set to match the ratio of RS to other third-country shares in the remedy year. Crucially, no evidence is given that the fast growth in market share was not a result of the trade-diverting effect of the WTO-inconsistent duties imposed on China.

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<sup>18</sup> See China's response to Arbitrator question No. 104.

<sup>19</sup> See, e.g. China's response to Arbitrator question No. 72.

<sup>20</sup> See China's oral statement, para. 28.

<sup>21</sup> See China's response to Arbitrator question No. 104.

<sup>22</sup> See China's response to Arbitrator question No. 104.

36. With these phantom subsidies in place, the market shares used to calibrate the model at the remedy-year benchmark are substantially consistent with the observed shares in the remedy year. The only reason the U.S. procedure does not fully match the remedy year observation is because the set of phantom subsidies is limited to the RS countries. The United States then purports to run a two-step model similar to that proposed by China. Because the United States assumes large phantom subsidies (whose size is dependent on trade values in the remedy year) the U.S. implementation effectively ties China's market share to the trade-distorted value in the remedy year. By using these "adjusted" step one counterfactual market shares to calibrate the model at step two, the United States effectively eliminates the first step of the two-step approach.<sup>23</sup>

37. China recognizes that adopting the U.S. approach of "adjusting" for other factors would spell the end of the two-step Armington model. With each "adjustment", the model would edge closer to the observed remedy-year market shares that the two-step model explicitly rejects. In contrast to the United States, China has therefore refrained from proposing any such adjustments. Rather, China has requested that the Arbitrator apply the two-step approach in a manner that permits the isolation of the effect of the WTO-inconsistent CVD duties and is consistent with the approach adopted by prior arbitrators, i.e. without any adjustments for the parallel AD duties or so-called "supply shocks".<sup>24</sup>

#### **IV. THE UNITED STATES HAS FAILED TO REBUT CHINA'S PROPOSED APPLICATION OF THE "RULE OF TWO"**

38. The U.S. criticism of China's proposed application of the "Rule of Two" is without merit. The United States ignores the fact that applying the "Rule of Two" is, in fact, the norm for general equilibrium analyses of trade restrictions.<sup>25</sup>

39. The primary basis for the U.S. criticism of the "Rule of Two" is based on its misinterpretation of the results in the Feenstra et al. paper. This paper was submitted by China with its methodology paper. Feenstra et al. estimate macro-elasticities for broad product categories (e.g. Metal Products). Their analysis focuses on the relationship between the product-specific micro-elasticities and the broader product macro-elasticities.

40. Feenstra et al. provide considerable evidence that the micro-elasticities exceed the macro-elasticity and that this should be accommodated through the application of the standard "Rule of Two". Exemplifying the evidence in favour of higher micro-elasticities, Feenstra et al. "find evidence that the former elasticity, which we call the micro-Armington elasticity, is larger than the latter elasticity, the macro-Armington elasticity".<sup>26</sup> Feenstra et al.'s finding is inconsistent with the extreme assumption adopted by the United States; that is, its assumption that the micro- and macro-elasticities are the same.

41. Contrary to the U.S. assertion that the Feenstra et al. study does not cover any of the products at issue in this proceeding, Feenstra et al. do estimate a micro-elasticity of substitution for carbon-steel OCTG (NAICS code 3312100130). This directly corresponds to the carbon-steel OCTG product at issue in this case. Adopting Feenstra et al.'s point estimates of the micro-elasticity would result in a significant increase in nullification and impairment under the two-step Armington model. China has reasonably proposed only that the Arbitrator take into account this evidence in support of the application of the conservative "Rule of Two".<sup>27</sup>

42. The United States argues that the cited USITC reports for the specific products at issue support the restriction of equivalent micro- and macro-elasticities. In fact, they do not. The elasticities of substitution reported in these reports specifically apply to the import-domestic response—not the "micro" import-import response. The United States further appeals to the USITC's discussions of "comparability" and "interchangeability". In the context of economic analysis, comparability and interchangeability among sources does not directly indicate high substitution elasticities.

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<sup>23</sup> See China's written submission, Section IV.B.

<sup>24</sup> See China's oral statement, para. 36; China's response to Arbitrator question No. 105.

<sup>25</sup> See China's written submission, Section V.A.

<sup>26</sup> China's response to Arbitrator question No. 70, para. 3.

<sup>27</sup> See China's response to Arbitrator question No. 70, para. 2.

Furthermore, comparability and interchangeability in no way indicate similar micro-elasticities and macro-elasticities.<sup>28</sup>

43. The United States itself has provided direct evidence that the macro- and micro-elasticities must be different. For *Aluminum Extrusions*, *OCTG*, and *Solar Panels*, the United States has provided evidence that a set of other countries were able to significantly increase import penetration into the U.S. market – the so-called "rising suppliers". This pattern of third-country responses is explained by the fact that the elasticity among import varieties is greater than the elasticity between imports and domestic varieties.<sup>29</sup>

44. To provide further direct evidence that the elasticity among imports is higher than the elasticity between imports and domestic varieties, such that a nested structure is appropriate, China reported the percentage point changes in China's market shares and the changes in China's share of U.S. imports across each product. China demonstrated that the data submitted by the United States shows a substantial diversion away from Chinese imports and toward other import sources. China further demonstrated that the United States' own data shows a systematic bias in the increase in ROW shares over U.S. shares at the same time that China's market shares plummeted.<sup>30</sup>

## **V. THE ARBITRATOR SHOULD REJECT THE U.S. PROPOSAL TO USE INCORRECT AND UNRELIABLE DATA INPUTS**

### **A. The Arbitrator Should Reject the U.S. Proposal to Use CVD Rates Implemented After the Expiry of the Reasonable Period of Time**

45. The United States has proposed incorrectly that in five cases, the Arbitrator should use the CVD rates promulgated pursuant to Section 129 of the Uruguay Round Agreements Act ("Section 129 rates"), despite the fact that these rates were implemented after expiry of the RPT.

46. It is well established that compliance measures implemented after the expiry of the RPT do not form part of the counterfactual analysis under Article 22.6 of the DSU. In *US – Tuna II (Mexico) (Article 22.6 – US)*, the arbitrator rejected the U.S. argument that it should consider the relevant measure to be the latest version of the measure rather than the version that was in force at the time the RPT expired. Contrary to the U.S. contention, the decisions of other arbitrators are consistent with the conclusion reached by the arbitrator in *US – Tuna II (Mexico) (Article 22.6 – US)*.<sup>31</sup>

47. At the time of the expiry of the RPT in this dispute, the applicable CVD rates for *Pressure Pipe*, *Line Pipe*, *OCTG*, *Solar Panels*, and *Seamless Pipe* were not the revised Section 129 rates. The Section 129 rates for these five cases came into effect after the expiry of the RPT on 1 April 2016. The USDOC did not publish the Section 129 determinations in these cases until 9 June 2016 and when it did, it explicitly stated that the effective date of the determinations was 26 May 2016, almost two months after the expiry of the RPT. The USDOC revised the total CVD rates in only three of these five cases: *Line Pipe*, *OCTG*, and *Seamless Pipe*.<sup>32</sup>

48. For this reason, China has submitted that the Arbitrator should not use the revised net subsidy rates from the Section 129 determinations in *Line Pipe*, *OCTG*, and *Seamless Pipe*. Similarly, the Arbitrator should not use the unrevised net subsidy rates from the Section 129 determinations in *Pressure Pipe* and *Solar Panels*. China recognizes that in the context of this proceeding, whether the Arbitrator uses the Section 129 net subsidy rates or the final determination rates will have only a marginal effect on the amount of concessions that China is permitted to suspend. But there is more at stake here than the ultimate retaliation amount. The requirement to bring measures into compliance by the expiry of the RPT is a legal obligation. The Arbitrator should not permit the United States as the respondent in this case to benefit from its failure to comply with that obligation.<sup>33</sup>

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<sup>28</sup> See China's response to Arbitrator question No. 70; China's comment on the U.S. response to Arbitrator question No. 70.

<sup>29</sup> See China's response to Arbitrator question No. 1.

<sup>30</sup> China's comment on the U.S. response to Arbitrator question No. 101.

<sup>31</sup> See China's comment on the U.S. response to Arbitrator question No. 113.

<sup>32</sup> See China's written submission, Section III.A.

<sup>33</sup> See China's oral statement, para. 42.

**B. The Arbitrator Should Reject the U.S. Proposal to Rely on the Incorrect Year-Prior**

49. In addition to proposing incorrect rates for purposes of determining the counterfactual WTO-consistent CVD rates, the United States has relied on the incorrect year-prior for evaluating nullification and impairment in six cases. By definition, any year prior to the year in which duties were imposed cannot include months where duties were already in place.

50. The preliminary determinations in these particular investigations were not at issue in earlier stages of this dispute in respect of China's claims concerning alleged inputs for LTAR subsidies. However, it does not follow that the year-prior may include WTO-inconsistent preliminary duties imposed pursuant to those determinations. The preliminary duties in each of these cases were imposed as part of the same investigation that resulted in the imposition of final duties and both sets of duties suffer from the same legal flaws that the DSB identified in respect of the final determinations, i.e. the USDOC's findings in respect of the alleged "inputs for LTAR" subsidies.

51. In order to accurately estimate nullification and impairment, the effects of the WTO-inconsistent duties in the reference year must be compared to a prior year in which trade flows were not distorted by those duties. Using a year-prior when the preliminary duties were in place for any period of time cannot satisfy that basic requirement. It is irrelevant that the duty liability is not final. From the time that an importer pays a preliminary duty, it is at risk of losing the full amount of that duty. This fact necessarily affects the economic behaviour of exporters.<sup>34</sup>

52. China has shown that distortive effects occur as a result of the preliminary liability imposed on importers. Specifically, China has demonstrated that imports dropped significantly following the imposition of the preliminary duties and submitted economic papers confirming the distortive effects of preliminary duties. In order to ensure that these effects do not compromise the accuracy of the two-step approach, the year-prior must be a year in which neither preliminary nor final duties were in place.<sup>35</sup>

**C. The Arbitrator Should Reject the Incorrect and Unreliable U.S. Proposed Year-Prior and Remedy-Year Data**

53. Furthermore, the United States has adopted an inconsistent, non-transparent, and unreasonable approach to selecting the data for use in the two-step Armington model. Most of the U.S. proposed changes to the data submitted by China are transparent attempts to distort the market share held by Chinese exporters. A number of the U.S. proposals directly contradict the factual record developed by the USITC and ignore the timing of when the WTO-inconsistent duties were levied on China. Critically, the United States mistakenly insists that its confidential exporter-specific data is the only basis to compute nullification and impairment.

54. As China has stressed, the first place the Arbitrator should look for data in this case is the public reports of the USITC. Only if such data does not exist would the Arbitrator need to turn to verifiable outside sources.<sup>36</sup>

55. The U.S. data is not the best data available to the Arbitrator. The United States has submitted USCBP exporter-specific data for imports from China for the year-prior in four cases. In three of these cases, the parties disagree on the year-prior.<sup>37</sup> For these three cases, the U.S. estimates are inevitably under-inclusive because they do not account for exporters that exited the market following the imposition of the preliminary duties, as the USCBP does not track subject imports until the preliminary duties are imposed.

56. The United States has emphasized that the arbitrator in DS471 relied on exporter-specific USCBP data. This fact does not support use of that data in the present arbitration. The WTO violations

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<sup>34</sup> See China's response to Arbitrator question No. 31.

<sup>35</sup> See China's response to Arbitrator question No. 107.

<sup>36</sup> See, e.g. China's response to Arbitrator question No. 57.

<sup>37</sup> See China's response to Arbitrator question No. 73, para. 21 (referring to *OCTG, Steel Cylinders, and Line Pipe*).

at issue in DS471 related to an exporter-specific duty adjustment. In contrast to DS471, the WTO violation at issue in this proceeding does not vary depending on the exporter.<sup>38</sup>

57. In addition to the year-prior issue, there are other serious problems with the exporter-specific USCBP data. In the case of *Solar Panels*, for example, the data submitted by the United States is demonstrably inaccurate. China has shown that the USCBP and U.S. Census figures submitted by the United States contain a significant amount of out-of-scope merchandise. In the case of *OCTG*, the United States proposes measuring imports by customs value. In the case of *Line Pipe*, the U.S. data again is measured using customs value, despite the fact that the USITC deemed landed duty value paid the correct metric to measure imports.<sup>39</sup>

58. The confidential USCBP data that the United States prefers to use for subject imports does not exist for imports from nonsubject suppliers. The public HTS trade data therefore must be the basis for calculating the size of imports from non-subject suppliers in the remedy year.<sup>40</sup>

59. China's approach to scaling the data in the remedy-year is reasonable. The GDP deflator approach used by China assumes that, on average, a particular product sector grows at the same rate as the overall economy. This assumption does not imply that only prices grow or that only quantities grow. Rather, it assumes that the value of the market ( $p$  times  $q$ ) grows at the same rate as the overall economy. If prices grow faster than average, quantities will adjust. This is consistent with the law of demand.<sup>41</sup>

60. China would also reiterate that, in most cases, the number of years for which China applies the GDP deflator is small, which means that China's approach is unlikely to significantly distort the estimate of the total size of the market in the remedy year.<sup>42</sup>

## **VI. THE UNITED STATES HAS FAILED TO SATISFY ITS BURDEN OF PROOF**

61. As China has explained, in proceedings under Article 22.6 of the DSU, the burden of proof is initially allocated to the respondent. As the respondent, the United States bears the burden of establishing a *prima facie* case that the level of suspension proposed by China is not "equivalent" to the level of nullification and impairment caused by the WTO-inconsistent CVD measures at issue.<sup>43</sup>

62. The United States is not relieved of this initial burden by the fact that China submitted a different nullification and impairment estimate in its methodology paper than in its request for authorization to suspend concessions submitted to the DSB. China's decision to revise its nullification and impairment estimate reflects its reasonable choice to adopt the same methodology as the arbitrators in DS464 and DS471.<sup>44</sup>

63. China submits that the United States has not met its initial burden of proof to establish the WTO-inconsistency of the level of suspension proposed by China. The United States has not established a *prima facie* case that the two-step Armington methodology adopted by prior arbitrators should be adjusted to account for AD duties, so-called "supply shocks", or any other tariff or non-tariff trade action. Nor has the United States established a *prima facie* case that the extreme assumption of the "Rule of One" should be applied to any of the cases at issue rather than the standard "Rule of Two", or that any of the verifiable public data submitted by China is inaccurate.<sup>45</sup>

64. China has submitted evidence and argument rebutting the U.S. assertions that its proposed adjustments to the two-step Armington methodology are necessary to correctly calibrate the model and revealing the critical flaws in the United States' year-prior and remedy-year data. Therefore, even assuming, *arguendo*, that the United States had met its initial burden, China has satisfied its burden of rebutting the U.S. *prima facie* case.

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<sup>38</sup> See China's response to Arbitrator question No. 73, para. 23.

<sup>39</sup> See China's response to Arbitrator question No. 73, para. 22.

<sup>40</sup> See, e.g. China's response to Arbitrator question No. 24.

<sup>41</sup> See China's response to Arbitrator question No. 80.

<sup>42</sup> See, e.g. China's response to Arbitrator question No. 26.

<sup>43</sup> See China's oral statement, para. 11.

<sup>44</sup> See China's response to Arbitrator question No. 98.

<sup>45</sup> See, e.g. China's response to Arbitrator question No. 99.

## **VII. CONCLUSION**

65. China has utilized a two-step approach to the Armington elasticities model similar to that implemented in DS464 and DS471 in order to estimate the amount of nullification or impairment caused by the U.S. failure to comply with its WTO obligations. China selected the two-step approach to the Armington model in order to accurately estimate the impact of the WTO-inconsistent countervailing duties at issue in this dispute on China's 2017 exports of the subject products to the United States. The U.S. proposed approach to calculating nullification and impairment in this dispute is not reasonable or verifiable. For the reasons set forth in its submissions, China respectfully requests that the Arbitrator grant China's request to suspend the application of concessions or other obligations under the covered agreements in the amount of **788.75 million**.

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## ANNEX C

### DATA INPUTS AND CALCULATIONS OF THE ARBITRATOR

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## ANNEX C-1

### DATA INPUTS FOR US MARKET VALUES IN THE YEARS-PRIOR<sup>1</sup>

Product	Year-prior	US shipments (1,000 USD)*	US imports from China (1,000 USD)*	US imports from the rest of the world (1,000 USD)*	Data sources
<i>Pressure Pipe</i>	2007	201,460	154,833	158,535	Annualized value of US shipments based on data from USITC Publication 4064 (Exhibit CHN-4). Value of import varieties from USITC Publication 4064 (Exhibit CHN-4).
<i>Line Pipe</i>	2007	757,701	153,881	315,411	Data for all three varieties from USITC Publication 4055 (Exhibit CHN-11).
<i>Kitchen Shelving</i>	2008	84,256	150,477	276,171	Data on value of US shipments provided by China based on US Census estimates for the primary 6-digit NAICS code adjusted to correct for out-of-scope products (Exhibit CHN-53). Values of import varieties based on midpoint estimates between the figures submitted by China (Exhibit CHN-53) and the figures submitted by the United States (Exhibit USA-61).
<i>OCTG</i>	2008	6,148,818	2,805,206	2,572,888	Data for all three varieties from USITC Publication 4124 (Exhibit CHN-23).
<i>Wire Strand</i>	2008	333,721	194,276	21,771	Data for all three varieties from USITC Publication 4162 (Exhibit CHN-28).
<i>Seamless Pipe</i>	2009	199,357	135,240	348,609	Data for all three varieties from USITC Publications 4190 (Exhibit CHN-32) and 4595 (Exhibit USA-16).
<i>Print Graphics</i>	2009	1,023,688	297,527	420,989	Data for all three varieties from USITC Publication 4192 (Exhibit CHN-50).
<i>Aluminum Extrusions</i>	2009	2,888,945	547,968	359,382	Data for all three varieties from USITC Publications 4229 (Exhibit CHN-36) and 4677 (Exhibit CHN-37).
<i>Steel Cylinders</i>	2010	[[***]]	23,009	2,821	Value of US shipments based on data from Norris Cylinders (Exhibit USA-116 (BCI)) provided by the United States.

<sup>1</sup> For the determination of the year-prior for each product and the relevant data, see section 3.4.1 of the Decision of the Arbitrator.

\* The values in this table have been rounded to 1,000 USD for display purposes only. The actual values were used when implementing the Armington model under the two steps to estimate the level of nullification or impairment.

Product	Year-prior	US shipments (1,000 USD)*	US imports from China (1,000 USD)*	US imports from the rest of the world (1,000 USD)*	Data sources
					Value of import varieties based on USITC's online DataWeb system provided by China (Exhibit CHN-74).
<i>Solar Panels</i>	2011	804,853	1,905,220	824,588	Value of US shipments from USITC Publication 4519 (Exhibit USA-21). Value of import varieties from USITC Publication 4360 (Exhibit CHN-45).

## ANNEX C-2

### DATA INPUTS FOR ELASTICITIES<sup>1</sup>

Product	Total demand elasticity	Domestic supply elasticity	Import supply elasticity China	Import supply elasticity RoW	Elasticity of substitution <sup>2</sup>	Data sources
<i>Pressure Pipe</i>	-0.500	7.500	10	10	4.500	Midpoint values for the demand elasticity, domestic supply elasticity and elasticity of substitution from USITC Publication 4064 (Exhibit CHN-4). Import supply elasticities provided by the parties.
<i>Line Pipe</i>	-0.375	4.000	10	10	3.000	Midpoint values for the demand elasticity, domestic supply elasticity and elasticity of substitution from USITC Publication 4055 (Exhibit CHN-11). Import supply elasticities provided by the parties.
<i>Kitchen Shelving</i>	-0.300	7.500	10	10	5.000	Midpoint values for the demand elasticity, domestic supply elasticity and elasticity of substitution from USITC Publication 4098 (Exhibit CHN-19). Import supply elasticities provided by the parties.
<i>OCTG</i>	-0.875	5.000	10	10	4.000	Midpoint values for the demand elasticity, domestic supply elasticity and elasticity of substitution from USITC Publication 5090 (Exhibit USA-148). Import supply elasticities provided by the parties.
<i>Wire Strand</i>	-0.750	4.000	10	10	3.000	Midpoint values for the demand elasticity, domestic supply elasticity and elasticity of substitution from USITC Publication 4162 (Exhibit CHN-28). Import supply elasticities provided by the parties.
<i>Seamless Pipe</i>	-0.750	7.500	10	10	3.000	Midpoint values for the demand elasticity, domestic supply elasticity and elasticity of substitution from USITC Publication 4190 (Exhibit CHN-32). Import supply elasticities provided by the parties.
<i>Print Graphics</i>	-1.000	4.000	10	10	3.000	Midpoint values for the demand elasticity, domestic supply elasticity and elasticity of substitution from USITC Publication 4656

<sup>1</sup> Exhibits CHN-120 and USA-154. See section 3.4.3 of the Decision of the Arbitrator.

<sup>2</sup> The Elasticity of Substitution in this column refers to the macroelasticity (i.e. the elasticity between the domestic and imported varieties). For the Elasticity of Substitution among imported varieties, we use a value of the square root of two. See section 3.3.1 of the Decision.

Product	Total demand elasticity	Domestic supply elasticity	Import supply elasticity China	Import supply elasticity RoW	Elasticity of substitution <sup>2</sup>	Data sources
						(Exhibit CHN-51). Import supply elasticities provided by the parties.
<i>Aluminum Extrusions</i>	-0.375	4.000	10	10	5.000	Midpoint values for the demand elasticity, domestic supply elasticity and elasticity of substitution from USITC Publication 4677 (Exhibit CHN-37). Import supply elasticities provided by the parties.
<i>Steel Cylinders</i>	-0.500	7.500	10	10	4.000	Midpoint values for the demand elasticity, domestic supply elasticity and elasticity of substitution from USITC Publication 4328 (Exhibit CHN-41). Import supply elasticities provided by the parties.
<i>Solar Panels</i>	-0.875	5.500	10	10	4.000	Midpoint values for the demand elasticity, domestic supply elasticity and elasticity of substitution from USITC Publication 4874 (Exhibit CHN-46). Import supply elasticities provided by the parties.

### ANNEX C-3

#### DATA INPUTS FOR THE WTO-INCONSISTENT CVD RATES AND THE WTO-CONSISTENT CVD RATES<sup>1</sup>

Product	Respondents in the relevant CVD investigations	WTO-inconsistent CVD rates	WTO-consistent CVD rates	Data sources
<i>Pressure Pipe</i>	Froch Enterprise Co. Ltd.	299.16	298.8	WTO-inconsistent CVD rates based on records of CVD investigation on Circular Welded Austenitic Stainless Pressure Pipe from the People's Republic of China (Exhibits CHN-1 to 3) and on Implementation of Determinations Pursuant to Section 129 of the Uruguay Round Agreements Act, 81 Fed. Reg. 37180, June 9, 2016 (Exhibit USA-1).  WTO-consistent CVD rates provided jointly by the parties (Exhibits CHN-100 and USA-138).
	Winner Companies: Winner Stainless Tube Co., Ltd., Winner Steel Products (Guangzhou), and Winner Machinery Enterprise Company Ltd.	1.10	0.74	
	All Others	1.10	0.74	
<i>Line Pipe</i>	Huludao Companies: Huludao Seven Star Group, Huludao Steel Pipe Industrial Co. Ltd., and Huludao Bohai Oil Pipe Industrial Co. Ltd.	32.65	1.37	WTO-inconsistent CVD rates based on Implementation of Determinations Pursuant to Section 129 of the Uruguay Round Agreements Act, 81 Fed. Reg. 37180, June 9, 2016 (Exhibit USA-1).  WTO-consistent CVD rates provided by the United States (Exhibit USA-138).
	Liaoning Northern Steel Pipe Co., Ltd.	40.05	6.35	
	All Others	36.35	3.86	
<i>Kitchen Shelving</i>	Asber Enterprises	170.82	159.06	WTO-inconsistent CVD rates based on records of CVD Investigation on Certain Kitchen Appliance Shelving and Rack from the People's Republic of China (Exhibits CHN-16 to 18) and on Implementation of Determinations Pursuant to Section 129 of the Uruguay Round Agreements Act, 81 Fed. Reg. 37180, June 9, 2016 (Exhibit USA-1).
	Guandong Wire King	13.30	1.54	
	Non-cooperative companies: Changzhou Yixiong Metal Products; Foshan Winleader Metal Products;	149.91	138.15	

<sup>1</sup> As explained in para. 3.25 of the Decision of the Arbitrator, these CVD rates correspond to the ones provided by the United States in Exhibit USA-138. For an explanation of the calculation of the WTO-consistent CVD rates see para. 3.11 of the Decision of the Arbitrator.

Product	Respondents in the relevant CVD investigations	WTO-inconsistent CVD rates	WTO-consistent CVD rates	Data sources
	Kingsun Enterprises Group; Yuyao Hanjun Metal; Zhongshan Iwatani Co.			WTO-consistent CVD rates provided jointly by the parties (Exhibits CHN-100 and USA-138).
	All Others	13.30	1.54	
<i>OCTG</i>	Jiangsu Changbao Steel Tube (Changbao)	12.46	0.78	WTO-inconsistent CVD rates based on Implementation of Determinations Pursuant to Section 129 of the Uruguay Round Agreements Act, 81 Fed. Reg. 37180, June 9, 2016 (Exhibit USA-1).  WTO-consistent CVD rates provided by the United States (Exhibit USA-138).
	Tianjin Pipe (TPCO)	7.71	3.23	
	Wuxi Seamless Oil Pipe (Wuxi)	14.95	3.98	
	Zhejiang Jianli (Jianli)	15.78	0.30	
	All Others	12.26	2.07	
<i>Wire Strand</i>	Fasten Group	9.42	2.83	WTO-inconsistent CVD rates based on records of CVD Investigation on Pre-Stressed Concrete Steel Wire Strand from the People's Republic of China (Exhibits CHN-25 to 27) and on Implementation of Determinations Pursuant to Section 129 of the Uruguay Round Agreements Act, 81 Fed. Reg. 37180, June 9, 2016 (Exhibit USA-1).  WTO-consistent CVD rates provided jointly by the parties (Exhibits CHN-100 and USA-138).
	Xinhua Metal Products	45.85	30.54	
	All Others	27.64	16.69	
<i>Seamless Pipe</i>	Hengyang Steel, Hengyang Valin Steel, Hengyang Valin MPM, Xigang Seamless Steel (Hengyang)	49.56	47.05	WTO-inconsistent CVD rates based on Implementation of Determinations Pursuant to Section 129 of the Uruguay Round Agreements Act, 81 Fed. Reg. 37180, June 9, 2016 (Exhibit USA-1).  WTO-consistent CVD rates provided by the United States (Exhibit USA-138).
	Tianjin Pipe (TPCO)	8.24	3.47	
	All Others	28.90	25.26	

Product	Respondents in the relevant CVD investigations	WTO-inconsistent CVD rates	WTO-consistent CVD rates	Data sources
<i>Print Graphics</i>	Gold Companies: Gold East Paper (Jiangsu) Co., Ltd, Gold Huasheng Paper Co., Ltd., Gold East Trading (Hong Kong) Company Ltd., Ningbo Zhonghua Paper Co., Ltd., and Ningbo Asia Pulp & Paper Co., Ltd.	19.46	18.66	WTO-inconsistent CVD rates based on records of CVD Investigation on Certain Coated Paper Suitable for High-Quality Print Graphics from the People's Republic of China (Exhibits CHN-47 to 49) and on Implementation of Determinations Pursuant to Section 129 of the Uruguay Round Agreements Act, 81 Fed. Reg. 37180, June 9, 2016 (Exhibit USA-1).
	Sun Paper Companies: Shandong Sun Paper Industry Joint Stock Co., Ltd. and Yanzhou Tianzhang Paper Industry Co., Ltd.	202.84	202.04	
	All Others	19.46	18.66	WTO-consistent CVD rates provided jointly by the parties (Exhibits CHN-100 and USA-138).
<i>Aluminum Extrusions</i>	Dragonlux Limited	374.15	371.6	WTO-inconsistent CVD rates based on records of CVD Investigation on Aluminum Extrusions from the People's Republic of China (Exhibits CHN-33 to 35 and USA-3 and 4) and on Implementation of Determinations Pursuant to Section 129 of the Uruguay Round Agreements Act, 81 Fed. Reg. 37180, June 9, 2016 (Exhibit USA-1).
	Miland Luck Limited	374.15	371.6	
	Liaoyang Zhongwang Group	374.15	371.6	
	Zhongya Companies	4.89	3.27	WTO-consistent CVD rates provided jointly by the parties (Exhibits CHN-100 and USA-138).
	Guang Ya Companies	9.94	3.88	
	All Others	7.37	3.57	
<i>Steel Cylinders</i>	Tianhai Industry (BTIC)	15.81	1.47	WTO-inconsistent CVD rates based on records of CVD Investigation on High Pressure Steel Cylinders from the People's Republic of China (Exhibits CHN-38 to 40) and on Implementation of Determinations Pursuant to Section 129 of the Uruguay Round Agreements Act, 81 Fed. Reg. 37180, June 9, 2016 (Exhibit USA-1).
	All Others	15.81	1.47	

Product	Respondents in the relevant CVD investigations	WTO-inconsistent CVD rates	WTO-consistent CVD rates	Data sources
<i>Solar Panels</i>	Trina Solar	15.97	14.83	WTO-inconsistent CVD rates based on records of CVD Investigation on Crystalline Silicon Photovoltaic Cells from the People's Republic of China (Exhibits CHN-42 to 44) and on Implementation of Determinations Pursuant to Section 129 of the Uruguay Round Agreements Act, 81 Fed. Reg. 37180, June 9, 2016 (Exhibit USA-1).  WTO-consistent CVD rates provided jointly by the parties (Exhibits CHN-100 and USA-138).
	Wuxi Suntech	14.78	14.49	
	All Others	15.24	14.62	

**ANNEX C-4**

DATA INPUTS FOR US MARKET VALUES IN 2017

<b>Product</b>	<b>Total US market (1,000 USD)</b>	<b>US shipments (1,000 USD)</b>	<b>US imports from China (1,000 USD)</b>	<b>US imports from the rest of the world (1,000 USD)</b>	<b>Data sources</b>
<i>Pressure Pipe</i>	[[***]]	89,091	[[***]]	156,207	Value of US shipments estimated by applying the growth rate of the primary 6-digit NAICS industry associated with Pressure Pipe (Annex C-5) between 2015 and 2017 (Annex C-6) to the 2015 value of US shipments reported in USITC publication 4644 (Exhibit CHN-5 and Annex C-8). Data on the value of US imports from China provided by the United States from USCBP data (Exhibit USA-66(BCI)). Data on the value of US imports from the rest of the world provided by the United States based on HTS aggregated data from the US Census Bureau (Exhibit USA-65) scaled using average ratio of subject to total HTSUS imports over years 2007-2009 based on USITC Publication 4064 (Exhibit CHN-4).
<i>Line Pipe</i>	[[***]]	542,483	[[***]]	605,500	Data on value of US shipments provided by the United States estimated by multiplying the average US price by the 2017 total production quantity of welded line pipe multiplied by the share of all line pipe less than 16 inches sales in total line pipe sales, based on data from Preston Pipe (Exhibits USA-60 and USA-136 (BCI)). Data on value of US imports from China provided by the United States from USCBP data (Exhibit USA-64 (BCI)). Data on value of US imports from the rest of the world provided by the United States based on HTSUS aggregated data from US Census (Exhibit USA-59).
<i>Kitchen Shelving</i>	[[***]]	278,363	[[***]]	412,630	Value of US shipments estimated by applying the growth rate of the primary 5-digit NAICS industry associated with Kitchen Shelving (Annex C-5) between 2016 and 2017 (Annex C-6) to 2016 sales estimates for the primary 6-digit NAICS industry associated with Kitchen Shelving (Annex C-5) from the US Census' Annual Survey of Manufactures 2016 and correcting for out-of-scope products on the basis of data from USITC Dataweb (see Exhibit CHN-43 and Annexes C-7 and C-8). Data on the value of US imports from China provided by the United States from USCBP data (Exhibit USA-66(BCI)). Value of US imports from the rest of the world estimated by applying an estimate of the share of

Product	Total US market (1,000 USD)	US shipments (1,000 USD)	US imports from China (1,000 USD)	US imports from the rest of the world (1,000 USD)	Data sources
					subject products within HTSUS basket categories to aggregate HTSUS imports under these categories. The subject product share is estimated using the year-prior midpoint estimate divided by total imports from the rest of the world under the basket categories in the year-prior (Annex C-7, Exhibits CHN-120 and USA-155(BCI)).
<i>OCTG</i>	6,356,019,000	3,248,604	3,107,415		Value of US shipments estimated by adjusting the figure on Table I-11/III-11 in USITC Publication 5090 (Exhibit USA-148) to include the incremental value of heat-treating imported unfinished OCTG. Value of total US imports from USITC Publication 5090 (Exhibit USA-148).
<i>Wire Strand</i>	[[***]]	201,603	[[***]]	91,619	Data on value of US shipments provided by the United States estimated by using data from the World Steel Association on wire rod production, scaled by the average 2007-2009 wire rod to wire strand production ratio based on data from the World Steel Association for wire rod and USITC Publication 4569 (Exhibit USA-25) for wire strand, and the trend in the unit price of imported wire strand varieties taken from USITC DataWeb (Exhibit USA-61). Data on the value of US imports from China provided by the United States from USCBP data (Exhibit USA-66(BCI)). Data on the value of US imports from the rest of the world provided by the United States based on HTS aggregated data from the US Census Bureau (Exhibit USA-65).
<i>Seamless Pipe</i>	[[***]]	294,963	[[***]]	390,161	Value of US shipments estimated by applying the growth rate of the primary 6-digit NAICS industry associated with Seamless Pipe (Annex C-5) between 2009 and 2017 (see Annex C-6) to the 2009 value of US shipments reported in USITC publication 4190 (Exhibit CHN-32) and USITC Publication 4595 (Exhibit USA-16 and Annex C-8). Data on the value of US imports from China provided by the United States from USCBP data (Exhibit USA-64 (BCI)). Data on the value of US imports from the rest of the world provided by the United States based on adjusted HTSUS aggregated data from US Census Bureau (Exhibit USA-59) and USITC Publication 4595 (Exhibit USA-16).

Product	Total US market (1,000 USD)	US shipments (1,000 USD)	US imports from China (1,000 USD)	US imports from the rest of the world (1,000 USD)	Data sources
<i>Print Graphics</i>	[[***]]	1,100,263	[[***]]	961,770	Value of US shipments estimated by applying the growth rate of the primary 6-digit NAICS industry associated with Print Graphics (Annex C-5 ) between 2015 and 2017 (Annex C-6) to the the 2015 value of US shipments reported in USITC Publication 4656 (Exhibit CHN-51 and Annex C-8). Data on the value of US imports from China provided by the United States from USCBP data (Exhibit USA-64 (BCI)). Value of US imports from the rest of the world estimated by using adjusted HTSUS aggregated data from US Census (Exhibit USA-59), scaled using the average ratio over the years 2011-2015 of subject to total HTSUS imports based on USITC Publication 4656 (Exhibit CHN-51 and Annexes C-7 and C-8).
<i>Aluminum Extrusions</i>	[[***]]	5,514,091	[[***]]	1,077,900	Value of US shipments estimated by applying annual real growth rates provided by the United States (Exhibit USA-149 (BCI)) and a PPI-based inflation index provided by China (Exhibit CHN-103) to the 2015 value of US shipments reported in USITC Publication 4677 (Exhibit CHN-37). Data on the value of US imports from China provided by the United States from USCBP data (Exhibit USA-62 (BCI)). Data on the value of US imports from the rest of the world provided by the United States based on HTSUS aggregated data from US Census (Exhibit USA-63).
<i>Steel Cylinders</i>	[[***]]	[[***]]	[[***]]	5,200	Value of US shipments based on data from Norris Cylinders (Exhibit USA-116(BCI)) provided by the United States. Data on the value of US imports from China provided by the United States from USCBP data (Exhibit USA-64(BCI)). Data on the value of US imports from the rest of the world provided by the United States based on HTS aggregated data from the US Census Bureau (Exhibit USA-59).
<i>Solar Panels</i>	4,055,230,000	259,535	441,381	3,354,314	Value of US shipments estimated by calculating a 6.4% share of the total market relying on 2017 import varieties figures from USITC Publication 4874 (Exhibit CHN-46). Value of US imports from China from USITC Publication 4874 (Exhibit CHN-46). Value of US imports from the rest of the world from USITC Publication 4874 (Exhibit CHN-46).

## ANNEX C-5

### PRIMARY NAICS CODES FOR PRESSURE PIPE, KITCHEN SHELVING, SEAMLESS PIPE, AND PRINT GRAPHICS

Product	HTSUS codes	Corresponding NAICS code	Primary NAICS code	Data sources
Pressure Pipe	7306405005	331110	331110	<p>HTSUS codes as reported in section "Tariff treatment" (p. I-8) of <i>U.S. International Trade Commission, Welded Stainless Steel Pressure Pipe from India, USITC Publication No. 4644, November 2016</i> (Exhibit CHN-5).</p> <p>HTSUS-NAICS concordance by <i>Justin R. Pierce and Peter K. Schott (2012), A Concordance Between Ten-Digit U.S. Harmonized System Codes and SIC/NAICS Product Classes and Industries, Journal of Economic and Social Measurement 37(1-2):61-96</i> available at <a href="https://sompks4.github.io/sub_data.html">https://sompks4.github.io/sub_data.html</a>.</p>
	7306405040	331110		
	7306405062	331110		
	7306405064	331110		
	7306405085	331110		
	7306401010	331110		
	7306401015	331110		
	7306405042	331110		
	7306405044	331110		
	7306405080	331110		
	7306405090	331110		
Kitchen Shelving	N/A	N/A	335221	Primary NAICS code as reported by China in Exhibit CHN-53.

Product	HTSUS codes	Corresponding NAICS code	Primary NAICS code	Data sources
Seamless Pipe	7304191020	331110	331110	<p>HTSUS codes as reported in section "Tariff treatment" (p. I-9 and I-10) of <i>U.S. International Trade Commission, Certain Seamless Carbon and Alloy Steel Standard, Line, and Pressure Pipe from China, USITC Publication No. 4190, November 2010</i> (Exhibit CHN-32).</p> <p>HTSUS-NAICS concordance by <i>Justin R. Pierce and Peter K. Schott (2012), A Concordance Between Ten-Digit U.S. Harmonized System Codes and SIC/NAICS Product Classes and Industries, Journal of Economic and Social Measurement 37(1-2):61-96</i> available at <a href="https://sompks4.github.io/sub_data.html">https://sompks4.github.io/sub_data.html</a>.</p>
	7304191030	331110		
	7304191045	331110		
	7304191060	331110		
	7304195020	331110		
	7304195050	331110		
	7304313000	331110		
	7304316050	331110		
	7304390016	331110		
	7304390020	331110		
	7304390024	331110		
	7304390028	331110		
	7304390032	331110		
	7304390036	331110		

Product	HTSUS codes	Corresponding NAICS code	Primary NAICS code	Data sources
	7304390040	331110		
	7304390044	331110		
	7304390048	331110		
	7304390052	331110		
	7304390056	331110		
	7304390062	331110		
	7304390068	331110		
	7304390072	331110		
	7304515005	331110		
	7304515060	331110		
	7304596000	331110		
	7304598010	331110		
	7304598015	331110		
	7304598020	331110		

Product	HTSUS codes	Corresponding NAICS code	Primary NAICS code	Data sources
	7304598025	331110		
	7304598030	331110		
	7304598035	331110		
	7304598040	331110		
	7304598045	331110		
	7304598050	331110		
	7304598055	331110		
	7304598060	331110		
	7304598065	331110		
	7304598070	331110		
Print Graphics	4810141900	322121	322121	<p>HTSUS codes as reported in section "Tariff treatment" (p. I-20) of <i>U.S. International Trade Commission, Certain Coated Paper Suitable for High-Quality Print Graphics Using Sheet-Fed Presses from China and Indonesia, USITC Publication No. 4656, December 2016</i> (Exhibit CHN-51).</p> <p>HTSUS-NAICS concordance by <i>Justin R. Pierce and Peter K. Schott (2012), A Concordance Between Ten-Digit U.S. Harmonized System Codes and SIC/NAICS Product Classes and Industries, Journal</i></p>
	4810142010	322130		
	4810142010	322121		
	4810142090	322130		

Product	HTSUS codes	Corresponding NAICS code	Primary NAICS code	Data sources
	4810142090	322121		<p>of Economic and Social Measurement 37(1-2):61-96 available at <a href="https://sompks4.github.io/sub_data.html">https://sompks4.github.io/sub_data.html</a>. No concordance available for five HTSUS codes.</p> <p>Primary NAICS codes identified based on most common concordance.</p>
	4810145000	322299		
	4810146000	322121		
	4810191100	322121		
	4810191900	322121		
	4810192010	322121		
	4810192010	322130		
	4810192090	322121		
	4810192090	322130		
	4810221000	322121		
	4810226000	322121		
	4810291000	322121		
	4810295000	322299		
	4810296000	322121		

Product	HTSUS codes	Corresponding NAICS code	Primary NAICS code	Data sources
	4810921200	322121		
	4810921200	322130		
	4810921400	322121		
	4810921400	322130		

## ANNEX C-6

### SCALING INDEX FOR DOMESTIC VARIETIES OF PRESSURE PIPE, KITCHEN SHELVING, SEAMLESS PIPE, AND PRINT GRAPHICS

Product	Primary NAICS code	Latest year with product-level data availability	Sales in latest year (in '000 USD) (A)	Exports in latest year (in '000 USD) (B)	Domestic shipments in latest year (in '000 USD) (C=A-B)	Sales 2017 (in '000 USD) (D)	Exports 2017 (in '000 USD) (E)	Domestic shipments 2017 (in '000 USD) (F=D-E)	Scaling Index <sup>1</sup> (G=F/C)	Data sources
<i>Pressure Pipe</i>	331110	2015	84,342,031	12,806,457	71,535,573	87,557,262	13,052,125	74,505,137	1.04	<p>Primary NAICS code based on Annex C-5.</p> <p>NAICS-level sales estimates from US Census' Annual Survey of Manufactures 2016 and Economic Census 2017 available at <a href="https://www.census.gov/data/tables/time-series/econ/asm/2013-2016-asm.html">https://www.census.gov/data/tables/time-series/econ/asm/2013-2016-asm.html</a> ("2016 Value of Product Shipments") and <a href="https://www.census.gov/data/tables/2017/econ/economic-census/naics-sector-31-33.html">https://www.census.gov/data/tables/2017/econ/economic-census/naics-sector-31-33.html</a> ("EC1700BASIC").</p> <p>Export data from USITC Dataweb for Domestic exports, FAS Value available at <a href="https://dataweb.usitc.gov/">https://dataweb.usitc.gov/</a>.</p>
<i>Kitchen Shelving</i>	33522 <sup>2</sup>	2016	18,014,705 <sup>3</sup>	2,817,671	15,197,034	18,936,670	2,826,241	16,110,429	1.06	<p>Primary NAICS code based on Annex C-5.</p> <p>NAICS-level sales estimates from US Census' Annual Survey of Manufactures 2016 and Economic Census 2017 available at <a href="https://www.census.gov/data/tables/time-series/econ/asm/2013-2016-asm.html">https://www.census.gov/data/tables/time-series/econ/asm/2013-2016-asm.html</a> ("2016 Value of Product Shipments") and <a href="https://www.census.gov/data/tables/2017/econ/economic-census/naics-sector-31-33.html">https://www.census.gov/data/tables/2017/econ/economic-census/naics-sector-31-33.html</a> ("EC1700BASIC").</p>

<sup>1</sup> Figures rounded to the second decimal for representation only.

<sup>2</sup> Data for Kitchen Shelving only available at 5-digit NAICS level in Economic Census 2017.

<sup>3</sup> 5-digit NAICS level sales generated by summing across 6-digit NAICS level codes pertaining to 5-digit NAICS code 33522 (335221, 335222, 335224, 335228).

											Export data from USITC Dataweb for Domestic exports, FAS Value available at <a href="https://dataweb.usitc.gov/">https://dataweb.usitc.gov/</a> .
<i>Seamless Pipe</i>	331110 <sup>4</sup>	2009	60,984,598	10,628,749	50,355,849	87,557,262	13,052,125	74,505,137	1.48	<p>Primary NAICS code based on Annex C-5.</p> <p>NAICS-level sales estimates from US Census' Annual Survey of Manufactures 2010 and Economic Census 2017 available at <a href="https://www.census.gov/data/tables/time-series/econ/asm/2008-2011-asm.html">https://www.census.gov/data/tables/time-series/econ/asm/2008-2011-asm.html</a> ("2010 Value of Product Shipments") and <a href="https://www.census.gov/data/tables/2017/econ/economic-census/naics-sector-31-33.html">https://www.census.gov/data/tables/2017/econ/economic-census/naics-sector-31-33.html</a> ("EC1700BASIC").</p> <p>Export data from USITC Dataweb for Domestic exports, FAS Value available at <a href="https://dataweb.usitc.gov/">https://dataweb.usitc.gov/</a>.</p>	
<i>Print Graphics</i>	322121	2015	40,359,975	2,456,397	37,903,578	36,968,156	2,326,820	34,641,336	0.91	<p>Primary NAICS code based on Annex C-5.</p> <p>NAICS-level sales estimates from US Census' Annual Survey of Manufactures 2016 and Economic Census 2017 available at <a href="https://www.census.gov/data/tables/time-series/econ/asm/2013-2016-asm.html">https://www.census.gov/data/tables/time-series/econ/asm/2013-2016-asm.html</a> ("2016 Value of Product Shipments") and <a href="https://www.census.gov/data/tables/2017/econ/economic-census/naics-sector-31-33.html">https://www.census.gov/data/tables/2017/econ/economic-census/naics-sector-31-33.html</a> ("EC1700BASIC").</p> <p>Export data from USITC Dataweb for Domestic exports, FAS Value available at <a href="https://dataweb.usitc.gov/">https://dataweb.usitc.gov/</a>.</p>	

<sup>4</sup> Under the 2007 version of NAICS which was effective in 2009, code 331110 corresponds to code 331111 (see 2007 NAICS to 2012 NAICS concordance available at <https://www.census.gov/naics/?68967>). In the US Census' Annual Survey of Manufactures 2010 the relevant data is thus listed under the code 331111.

ANNEX C-7

SCOPE ADJUSTMENTS FOR SELECTED VARIETIES OF KITCHEN SHELVING AND PRINT GRAPHICS

Product	Variety	Primary NAICS code	HTSUS codes linked to primary NAICS code <sup>1</sup>	Imports under all HTSUS codes linked to primary NAICS code in 2017 (A)	Subject Imports linked to primary NAICS code in 2017 (B)	Scope adjustment <sup>2</sup> (C=B/A)	Data sources
Kitchen Shelving	Domestic	335221	7321111030, 7321111060, 7321113010, 7321113020, 7321113050, 7321116000, 7321120000, 7321190020, 7321190040, 7321190060, 7321190080, 7321901000, 7321902000, 7321904000, <b>7321905000, 7321906040, 7321906060</b> , 7418100021, 7418100051, 8516500030, 8516500060, 8516500090, 8516604060, 8516604070, 8516604074, 8516604078, 8516604082, 8516604086, 8516903500, 8516905000, 8516905500, 8516906500, 8516907500, <b>8516908010, 8516908050</b>	USD 5,216,804,617	USD 328,243,066	0.06	<p>Primary NAICS code based on Annex C-5.</p> <p>Subject codes based on Exhibits CHN-53 and USA-61 defining the statistical reporting numbers under which Kitchen Shelving is classifiable.</p> <p>HTS codes linked to primary codes based on HTSUS-NAICS concordance by <i>Justin R. Pierce and Peter K. Schott (2012), A Concordance Between Ten-Digit U.S. Harmonized System Codes and SIC/NAICS Product Classes and Industries, Journal of Economic and Social Measurement 37(1-2):61-96</i> available at <a href="https://sompks4.github.io/sub_data.html">https://sompks4.github.io/sub_data.html</a>.</p> <p>Import data from USITC Dataweb for General Imports available at <a href="https://dataweb.usitc.gov/">https://dataweb.usitc.gov/</a>.</p>

<sup>1</sup> Subject imports, i.e. codes referenced in Exhibit CHN-53, in bold. Codes with zero trade flows removed.

<sup>2</sup> Figures rounded to the second decimal for representation only.

Product	Variety	Mid-point between parties' estimates for imports from the RoW in the year-prior (A)	Imports under HTSUS codes under which the product is classifiable in the year-prior (B)	Scope adjustment (Share of subject imports in HTSUS codes) <sup>3</sup> (C=A/B)	Data sources
<i>Kitchen Shelving</i>	Imports from the RoW	USD 276,170,928	USD 547,341,857	0.50	HTSUS codes under which Kitchen Shelving is classifiable based on Exhibits CHN-53 and USA-61.  Import data from USITC Dataweb for General Imports available at <a href="https://dataweb.usitc.gov/">https://dataweb.usitc.gov/</a> .

Product	Variety	Imports under HTSUS codes under which the product is classifiable (in USD '000) <sup>4</sup> (A)					Subject imports (in USD '000) <sup>5</sup> (B)					Scope adjustment <sup>6</sup> (C) <sup>7</sup>	Data sources
		2011	2012	2013	2014	2015	2011	2012	2013	2014	2015		
<i>Print Graphics</i>	Imports from the RoW	1,690,265	1,154,087	1,139,722	1,100,101	1,180,584	1,196,763	1,136,151	1,139,356	1,094,453	1,066,559	0.92	HTSUS codes under which Print Graphics is classifiable as reported in section "Tariff treatment" (p. I-20) of U.S. <i>International Trade Commission, Certain Coated Paper Suitable for High-Quality Print Graphics Using Sheet-Fed Presses from China and Indonesia</i> , USITC Publication No. 4656, December 2016 (Exhibit CHN-51).  Subject imports as reported in Table I-9

<sup>3</sup> Figures rounded to the second decimal for representation only.

<sup>4</sup> Figures rounded for representation only.

<sup>5</sup> Figures rounded for representation only.

<sup>6</sup> Figures rounded to the second decimal for representation only.

<sup>7</sup> The scope adjustment is obtained by taking the 2011-2015 average across the share of subject imports in total imports under the HTSUS codes under which Print Graphics is classifiable (C=(B2011/A2011+B2012/A2012+B2013/A2013+B2014/A2014+B2015/A2015)/5).

Product	Variety	Imports under HTSUS codes under which the product is classifiable (in USD '000) <sup>4</sup>					Subject imports (in USD '000) <sup>5</sup>					Scope adjustment <sup>6</sup> (c) <sup>7</sup>	Data sources
		(A)					(B)						
		2011	2012	2013	2014	2015	2011	2012	2013	2014	2015		
													<p>(p. I-36) of U.S. International Trade Commission, <i>Certain Coated Paper Suitable for High-Quality Print Graphics Using Sheet-Fed Presses from China and Indonesia</i>, USITC Publication No. 4656, December 2016 (Exhibit CHN-51).</p> <p>HTSUS Import data from USITC Dataweb for General Imports available at <a href="https://dataweb.usitc.gov/">https://dataweb.usitc.gov/</a>.</p>

## ANNEX C-8

### REMEDY YEAR FIGURES FOR SELECTED VARIETIES OF PRESSURE PIPE, KITCHEN SHELVING, SEAMLESS PIPE, AND PRINT GRAPHICS

Product	Variety	Latest year with product-level data availability <sup>1</sup>	Latest available estimate (A)	Scaling index <sup>2</sup> (B)	Scope adjustment <sup>3</sup> (C)	Remedy year figure <sup>4</sup> (D=A*B*C)	Data sources
<i>Pressure Pipe</i>	Domestic	2015	USD 85,540,000	1.04	N/A	USD 89,090,911	<p>Latest available estimate from Table IV-3 (p. IV-8) in U.S. International Trade Commission, <i>Welded Stainless Steel Pressure Pipe from India</i>, USITC Publication No. 4644, November 2016 (Exhibit CHN-5).</p> <p>Scaling index based on Annex C-6.</p>
<i>Kitchen Shelving</i>	Domestic	2016	USD 4,173,231,241	1.06	0.06	USD 278,363,000	<p>Latest available estimate from US Census' Annual Survey of Manufactures 2016 available at <a href="https://www.census.gov/data/tables/time-series/econ/asm/2013-2016-asm.html">https://www.census.gov/data/tables/time-series/econ/asm/2013-2016-asm.html</a> ("2016 Value of Product Shipments") for Primary NAICS code 335221 (see Annex C-5).</p> <p>Scaling index based on Annex C-6.</p> <p>Scope Adjustment based on Annex C-7.</p>

<sup>1</sup> In the case of the domestic variety of Kitchen Shelving, we rely on industry-level data since no product-level data is available.

<sup>2</sup> Figures rounded to the second decimal for representation only.

<sup>3</sup> Figures rounded to the second decimal for representation only.

<sup>4</sup> Figures rounded to closest USD '000 for reasons of consistency across products.

Product	Variety	Latest year with product-level data availability <sup>1</sup>	Latest available estimate (A)	Scaling index <sup>2</sup> (B)	Scope adjustment <sup>3</sup> (C)	Remedy year figure <sup>4</sup> (D=A*B*C)	Data sources
<i>Kitchen Shelving</i>	Imports from RoW	2017	USD 817,790,284	N/A	0.50	USD 412,630,000	Latest available estimate based on HTSUS import data from USITC Dataweb for General Imports available at <a href="https://dataweb.usitc.gov/">https://dataweb.usitc.gov/</a> for HTSUS codes under which Kitchen Shelving is classifiable based on Exhibits CHN-53 and USA-61.  Scope Adjustment based on Annex C-7.
<i>Seamless Pipe</i>	Domestic	2009	USD 199,357,000	1.48	N/A	USD 294,963,000	Latest available estimate from Table C-4 (p. C-6) in U.S. International Trade Commission, <i>Certain Seamless Carbon and Alloy Steel Standard, Line, and Pressure Pipe from China</i> , USITC Publication No. 4190, November 2010 (Exhibit CHN-32).  Scaling index based on Annex C-6.
<i>Print Graphics</i>	Domestic	2015	USD 1,203,877,000	0.91	N/A	USD 1,100,263,085	Latest available estimate from Table I-9 (p. I-36) in U.S. International Trade Commission, <i>Certain Coated Paper Suitable for High-Quality Print Graphics Using Sheet-Fed Presses from China and Indonesia</i> , USITC Publication No. 4656, December 2016 (Exhibit CHN-51).  Scaling index based on Annex C-6.

Product	Variety	Latest year with product-level data availability <sup>1</sup>	Latest available estimate (A)	Scaling index <sup>2</sup> (B)	Scope adjustment <sup>3</sup> (C)	Remedy year figure <sup>4</sup> (D=A*B*C)	Data sources
Print Graphics	Imports from RoW	2017	USD 1,047,576,114	N/A	0.92	USD 961,770,000	<p>Latest available estimate based on HTSUS import data from USITC Dataweb for General Imports available at <a href="https://dataweb.usitc.gov/">https://dataweb.usitc.gov/</a> for HTSUS codes under which Print Graphics is classifiable as reported in section "Tariff treatment" (p. I-20) of <i>U.S. International Trade Commission, Certain Coated Paper Suitable for High-Quality Print Graphics Using Sheet-Fed Presses from China and Indonesia, USITC Publication No. 4656, December 2016</i> (Exhibit CHN-51).</p> <p>Scope Adjustment based on Annex C-7.</p>

## ANNEX C-9

### GAMS CODE OF THE TWO-STEP ARMINGTON MODEL<sup>1</sup>

\$Title partial equilibrium Armington trade model for DS437

\*Specify the default case (i.e. product subject to CVD order)  
\$if not set case \$set case 931

Set case cases /

931 "C-570-931 Pressure Pipe",  
936 "C-570-936 Line Pipe",  
942 "C-570-942 Kitchen Shelving",  
944 "C-570-944 OCTG",  
946 "C-570-946 Wire Strand",  
957 "C-570-957 Seamless Pipe",  
959 "C-570-959 Print Graphics",  
968 "C-570-968 Aluminum Extrusions",  
978 "C-570-978 Steel Cylinders",  
980 "C-570-980 Solar Panels"  
/,

item data items /

USA "USA shipments year prior",  
CHN "CHN shipments year prior",  
ROW "ROW shipments year prior",  
IMP "Total imports year prior",  
MKT "Total market year prior",  
theta\_lo "Demand elasticity lower bound",  
theta\_up "Demand elasticity upper bound",  
eps\_usa\_lo "Supply elasticity USA lower bound",  
eps\_usa\_up "Supply elasticity USA upper bound",  
sig\_lo "Substitution elasticity lower bound",  
sig\_up "Substitution elasticity upper bound",  
eps\_sub "Supply elasticity subject imports",  
eps\_chn "Supply elasticity Chinese imports",  
eps\_row "Supply elasticity Other imports",  
MKT2017 "Total market size remedy year",  
tau\_ocvd "Original CVD rate",  
tau\_LTAR "LTAR rate",  
tau\_cons "WTO Consistent CVD rate"  
/;

Parameter raw(case,item);  
\$gdxin data<sup>2</sup>  
\$loaddc raw

Scalar scale "Rescale the value data from \$ to \$M" /1e-6/;

Set r(\*) supply regions /USA,CHN,ROW/  
usa(r) usa region /usa/;

Parameter

psi(r) supply quantity for calibration  
phi total quantity demanded for calibration  
theta demand elasticity  
epsilon(r) supply elasticity for region r  
sigma\_1 elasticity of substitution dm  
sigma\_2 elasticity of substitution mm (import nest)  
/;

\* Initial calibration is to the year-prior data. Quantity units  
\* are chosen such that year-prior prices are one.

psi("USA")= raw("%case%","USA") \*scale;  
psi("CHN")= raw("%case%","CHN") \*scale;  
psi("ROW")= raw("%case%","ROW") \*scale;

---

<sup>1</sup> The code is based on Exhibit CHN-54

<sup>2</sup> See Annex C-10 for the data inputs to the model.

phi = raw("%case%", "MKT") \*scale;

display psi,phi;

\* Elasticities: Ranges converted to averages by default

theta = -(raw("%case%", "theta\_lo")+raw("%case%", "theta\_up"))/2;

\*theta = -1;

\* [NB] minus sign in front of theta added since theta is positive in data file

sigma\_1 = (raw("%case%", "sig\_lo")+raw("%case%", "sig\_up"))/2;

\* Elasticity of substitution among imports (sigma\_2) set to  $\sqrt{2}$ \*sigma\_1 (see section 3.3.1)

sigma\_2 =  $\sqrt{2}$  \* sigma\_1;

epsilon("USA") = (raw("%case%", "eps\_usa\_lo")+raw("%case%", "eps\_usa\_up"))/2;

epsilon("CHN") = raw("%case%", "eps\_chn");

epsilon("ROW") = raw("%case%", "eps\_row");

\*NB: The data include a supply elasticity for subject imports, "eps\_sub", but

\* these are Chinese imports for our purposes. Regardless, the values of

\* these elasticities are all the same -- 10.

\* These are data used to setup the counterfactuals

Parameter

a1 total quantity demanded in 2017

t\_ocvd Original CVD rate,

t\_LTAR LTAR rate (WTO inconsistent duty),

t\_cons WTO Consistent CVD rate;

a1 = raw("%case%", "MKT2017") \*scale;

t\_ocvd = raw("%case%", "tau\_ocvd")/100;

t\_LTAR = raw("%case%", "tau\_LTAR")/100;

t\_cons = raw("%case%", "tau\_cons")/100;

Parameter

tau(r) duty rate on goods from region r

alpha(\*) calibrated share of region r variety

beta(r) share of region r variety in imports;

tau(r) = 0;

alpha(r)=psi(r)/phi;

alpha("M")=(1-alpha("USA"));

beta(r) $\$(not\ usa(r)) = (\alpha(r)/\sum(r.local\$(not\ usa(r)),\alpha(r)))$ ;

\*Perform some data checks

Abort\$(round(sum(r,alpha(r)),7) ne 1) "Market shares do not sum to one";

Abort\$(round(sum(r,beta(r)),7) ne 1) "Import market shares do not sum to one";

Abort\$(round(sum(r,psi(r))-phi,7) ne 0) "Total value of supply not equal to demand";

Abort\$(round(sum(r,psi(r))-psi("USA")-raw("%case%", "IMP")\*scale,7) ne 0) "Component supplies inconsistent with imports";

\* Setup the model (see China's Methodology Paper, Section III.C.1, for the model in text form)

Positive Variables

A Armington activity index

P Price index

PX(r) Net-of-tariff price of variety from region r

X(r) Index on supply quantity;

Equations

Eq\_1 Aggregate demand

Eq\_2 Armington technology (dual representation)

Eq\_3(r) Market clearance for regional varieties

Eq\_4(r) Supply functions;

\*Clean up the equations by using a macro for the import price index.

\$macro PMM ((sum(r.local\$(not usa(r)),beta(r)\*((1+tau(r))\*PX(r))\*((1-sigma\_2))))\*(1/(1-sigma\_2)))

\* Equation (1)

Eq\_1.. A - phi\*P\*\*theta =g= 0 ;

\* Equation (2) (oriented properly for MCP: MargCost-MargBenefit ge 0)

Eq\_2.. (alpha("usa")\*PX("usa"))\*(1-sigma\_1) + alpha("M")\*PMM\*(1-sigma\_1)\*\*(1/(1-sigma\_1)) - P =g= 0;

\* Equations (3), (4), and (5)

Eq\_3(r).. X(r)

- (alpha("M")\*beta(r) \* A \* (P/PMM)\*\*sigma\_1 \*(PMM/((1+tau(r))\*PX(r))\*\*sigma\_2)\$ (not usa(r))  
- (alpha(r)\* A \* ( P/((1+tau(r))\*PX(r))\*\*sigma\_1 )\$(usa(r))  
=g= 0;

\* Equations (6), (7), and (8) (oriented properly for MCP: Supply-Demand ge 0)

Eq\_4(r).. psi(r)\*PX(r)\*\*epsilon(r) - X(r) =g= 0;

Model PEARM /Eq\_1.P,Eq\_2.A,Eq\_3.PX,Eq\_4.X/;

\* Set the initial level values and check the benchmark:

A.l =phi;

X.l(r) =psi(r);

P.l =1;

PX.l(r) =1;

PEARM.iterlim=0;

Solve PEARM using mcp;

Abort\$(PEARM.objval gt 1e-6) "Initial year-prior calibration failed";

\* Generate intermediate reports

\* Domain sets for report indexing

Set equ equilibrium /

pybmk "year prior benchmark",

pyscn "year prior scenario (duties imposed)",

rybmk "remedy year benchmark",

ryscn "remedy year scenario (duties removed)"/

acct Account /

revenue "revenue by market",

duty\_pmt "duty payments",

share "gross of duty share",

totalmkt "total market size (value gross of duties)"

"NI\_\$M" "Nullification or Impairment"/

;

Parameter report(case,\*,equ,acct,\*) summary report

vchk value check;

\* Write the actual reporting assignments out to a file that can be

\* recalled for different solutions

\$onechov > rpt.gms

report("%case%", "no", "%1", "revenue", r) = X.l(r)\*PX.l(r);

report("%case%", "no", "%1", "duty\_pmt", r) = tau(r)\*X.l(r)\*PX.l(r);

report("%case%", "no", "%1", "revenue", "Total\_gross\_of\_duty") = sum(r, (1+tau(r))\*X.l(r)\*PX.l(r));

report("%case%", "no", "%1", "share", r) = (1+tau(r))\*X.l(r)\*PX.l(r)/(P.l\*A.l);

vchk = P.l\*A.l - report("%case%", "no", "%1", "revenue", "Total\_gross\_of\_duty");

Abort\$(round(vchk,5)) "Value check failed: equilibrium=%1";

Abort\$(round(sum(r, report("%case%", "no", "%1", "share", r)),5) ne 1) "Report shares do not sum to one";

\$offecho

\* Report the year-prior benchmark (in parameter report)

\$batinclude rpt pybmk

```
*-----
* Equilibrium = pycsn
* Impose the duties to generate the year-prior counterfactual

tau("chn") = t_ocvd;

PEARM.iterlim=1000;
Solve PEARM using mcp;

* Report the year-prior counterfactual (in parameter report)
$batinclude rpt pycsn

*-----
*-----

* Equilibrium = rybmk (remedy year hypothetical benchmark)
* Now recalibrate the model to this solution applied to the 2017 market size

alpha(r)=(1+tau(r))*PX.l(r)*X.l(r)/(P.l*A.l);
alpha("M")=1-alpha("usa");
beta(r)$not usa(r) = (1+tau(r))* (sigma_2 - 1) * alpha(r)/sum(r.local$(not usa(r)),alpha(r));
psi(r)=alpha(r)*a1/(1+tau(r));
phi = a1;

Abort$(round(sum(r,alpha(r)),7) ne 1) "Hypothetical 2017 market shares do not sum to one";

* Set the level values and check the Hypothetical 2017 benchmark 222
A.l =phi;
X.l(r) =psi(r);
P.l =1;
PX.l(r) =1;

PEARM.iterlim=0;
Solve PEARM using mcp;
Abort$(PEARM.objval gt 1e-6) "Hypothetical 2017 benchmark replication fails";

* Report the remedy year benchmark
$batinclude rpt rybmk
*-----
*-----

* Equilibrium = rycsn
* Remove the WTO inconsistent duties

tau("chn") = t_cons;

PEARM.iterlim=1000;
Solve PEARM using mcp;

* Report the remedy year counterfactual
$batinclude rpt rycsn

* Calculation of NI:
report("%case%", "no", "ryscn", "NI_$M", "CHN")=
report("%case%", "no", "ryscn", "revenue", "CHN")
-report("%case%", "no", "rybmk", "revenue", "CHN");

*-----
display report;
```

**ANNEX C-10**

DATA INPUTS USED TO IMPLEMENT THE ARMINGTON MODEL UNDER THE TWO STEPS<sup>1,2</sup>

Product	931	936	942	944	946	957
USA	201,460,000	757,701,000	84,256,000	6,184,818,000	333,721,000	199,357,000
CHN	154,833,000	153,881,000	150,477,000	2,805,206,000	194,276,000	135,240,000
ROW	158,535,000	315,411,000	276,171,000	2,572,888,000	21,771,000	348,609,000
IMP	313,368,000	469,292,000	426,648,000	5,378,094,000	216,047,000	483,849,000
MKT	514,828,000	1,226,993,000	510,904,000	11,562,912,000	549,768,000	683,206,000
theta_lo	0.3	0.25	0.1	0.75	0.5	0.5
theta_up	0.7	0.5	0.5	1	1	1
eps_usa_	5	3	5	4	3	5
eps_usa_	10	5	10	6	5	10
sig_lo	3	2	4	3	2	2
sig_up	6	4	6	5	4	4
eps_sub	10	10	10	10	10	10
eps_chn	10	10	10	10	10	10
eps_row	10	10	10	10	10	10
MKT2017	[[***]]	[[***]]	[[***]]	6,356,019,000	[[***]]	[[***]]
tau_ocvd	1.1	36.35	13.3	12.26	27.64	28.9
tau_LTAR	0.36	32.49	11.76	10.19	10.95	3.64
tau_cons	0.74	3.86	1.54	2.07	16.69	25.26

<sup>1</sup> The code of the software GAMS in Annex C-9 refers to this input table.

<sup>2</sup> The names used in the table refer to the following; 931: Pressure Pipe; 936: Line Pipe; 942: Kitchen Shelving; 944: OCTG; 946: Wire Strand; 957: Seamless Pipe, 959: Print Graphics; 968: Aluminum Extrusions; 978: Steel Cylinders; 980: Solar Panels; USA: year-prior sales US domestic variety; CHN: year-prior sales of imports from China; ROW: year-prior sales of imports from the RoW; theta: demand elasticity; up: maximum value of range; lo: minimum value of range; eps\_usa: domestic supply elasticity; eps\_sub: import supply elasticity; eps\_chn: supply elasticity of imports from China; eps\_row: supply elasticity of imports from RoW; sig: elasticity of substitution; MKT2017: total US market value in USD in 2017; tau\_ocvd: WTO-inconsistent CVD rate; tau\_LTAR: LTAR rate; tau\_cons: WTO-consistent CVD rate.

	980	978	968	959	Product
	804,853,000	[[***]]	2,888,945,000	1,023,688,000	USA
	1,905,220,000	23,009,000	547,968,000	297,527,000	CHN
	824,588,000	2,821,000	359,382,000	420,989,000	ROW
	2,729,808,000	25,830,000	907,350,000	718,516,000	IMP
	3,534,661,000	41,967,000	3,796,295,000	1,742,204,000	MKT
	0.75	0.25	0.25	0.75	theta_lo
	1	0.75	0.5	1.25	theta_up
	4	5	3	3	eps_usa_lo
	7	10	5	5	eps_usa_up
	3	3	4	2	sig_lo
	5	5	6	4	sig_up
	10	10	10	10	eps_sub
	10	10	10	10	eps_chn
	10	10	10	10	eps_row
	4,055,230,000	[[***]]	[[***]]	[[***]]	MKT2017
	15.24	15.81	7.37	19.46	tau_ocvd
	0.715	14.34	3.8	0.8	tau_LTAR
	14.62	1.47	3.57	18.66	tau_cons

**ANNEX C-11**

RESULTS OF IMPLEMENTING THE FIRST STEP OF THE TWO-STEP ARMINGTON MODEL<sup>1</sup>

Product	Simulated market share of US domestic producers		Simulated market share of Chinese exporters		Simulated market share of exporters from the rest of the world	
	WTO-inconsistent CVD rate	WTO-consistent CVD rate	WTO-inconsistent CVD rate	WTO-consistent CVD rate	WTO-inconsistent CVD rate	WTO-consistent CVD rate
Pressure Pipe	0.394	0.393	0.294	0.296	0.312	0.311
Line Pipe	0.643	0.621	0.069	0.117	0.287	0.261
Kitchen Shelving	0.178	0.167	0.213	0.284	0.609	0.550
OCTG	0.562	0.540	0.191	0.233	0.247	0.227
Wire Strand	0.677	0.652	0.271	0.300	0.053	0.048
Seamless Pipe	0.310	0.308	0.123	0.130	0.567	0.561
Print Graphics	0.610	0.609	0.125	0.126	0.265	0.264
Aluminum Extrusions	0.779	0.770	0.120	0.132	0.101	0.098
Steel Cylinders	[[***]]	[[***]]	[[***]]	[[***]]	[[***]]	[[***]]
Solar Panels	0.260	0.259	0.446	0.449	0.294	0.292

<sup>1</sup> Figures rounded to third decimal for representation only.