

Mapping Jurisprudence of WTO Dispute Settlement Body Using Deep Learning

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Abstract

The world trade organization (WTO) legally regulates the world trade system with its dispute settlement body (DSB). There exists a shared understanding among legal experts about how articles of WTO agreements systematically interact with each other. However, the complexity of the WTO legal framework has constrained many developing countries with limited legal knowledge and resources from fully utilizing the WTO DSB. To address this issue, I propose a new method that summarizes the systematic interactions between articles of WTO agreements. I collected past 20 years of WTO disputes and trained a neural network that mimics the reasoning process of legal experts that determines which articles to cite for given factual description of the dispute. Then I collected all the predictions from the trained neural network and fitted the summarization network using Random Forest. I verified the quality of the fitted network by checking that the network captures the important systematic interactions as explained by the Panel and Appellate Body, two main judicial authorities of the WTO DSB.

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1 Introduction

The Dispute Settlement Body (DSB) of the World Trade Organization (WTO) deals with trade disputes between WTO members. WTO members file a lawsuit in WTO DSB to claim their impaired benefit related to the WTO agreements as a result of another member’s possible illegal trade policy. The judicial body of WTO DSB, *Panel* or *Appellate Body*, then adjudicates the dispute and submits a report in which it expresses its judicial opinion as to whether the challenged trade policy is inconsistent to the rules of the WTO or not (World Trade Organization, 2017).

This process requires enormous legal knowledge and resources because the legal system of WTO is highly complex. This complexity has constrained many developing countries with limited legal knowledge and resources from fully utilizing the WTO DSB (Busch and Shaffer, 2009; Busch and Reinhardt, 2003; SHAFFER, 2006).

To address this issue, I provide a novel method to summarize the network of WTO articles. Currently, understanding of how articles of WTO agreements systematically interact with each other is exclusively shared among legal experts. However, by developing the method that can quantitatively summarize the systematic interaction between articles of WTO, we can lower the cost of understanding the legal system of WTO. This will help resolve the unbalanced legal capacity issue in WTO DSB.

To properly summarize the systematic interactions between articles of WTO agreements, I designed my method based on two following considerations. First, since the legal system of WTO evolves from the way how real-world dispute interacts with the regulatory content of the article of WTO agreement, I considered a way of utilizing two different types of textual data, factual description of the trade dispute and the content of each article of the WTO agreements. Second, since members strategically cite rules of the WTO agreements to encourage the third party participation (Johns and Pelc, 2014) or to reshape the legal precedents (Pelc, 2014; Strezhnev, 2014), I considered a way of generalizing these member-specific strategic citations.

Upon these two considerations, this paper uses deep learning. Deep learning is empirically known as good at extracting information from the textual data. In addition to it, deep learning also generalizes the patterns inside data. Therefore, this paper designs a deep neural network that processes two different types of textual data, description of the dispute and each article content of the WTO agreements. The design mimics the reasoning process of the legal experts, where the experts read the textual description of the dispute and imagine applicable legal articles of the WTO agreements according to its regulatory content.

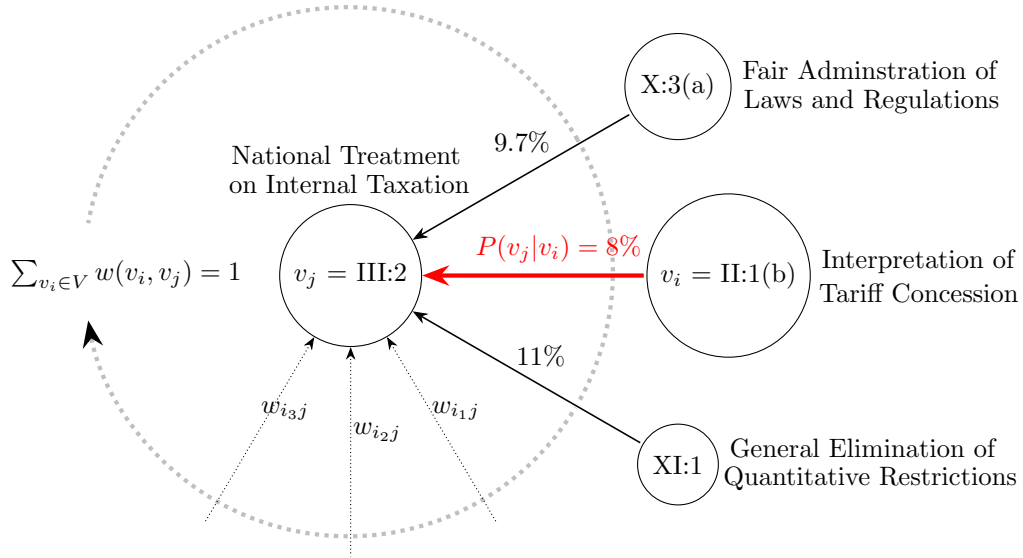
To train this neural network, I collected textual description of trade dispute and articles of the WTO agreement cited for each dispute requested to the WTO DSB from 1995 to 2018. Using this collected data, I trained the neural network by enforcing the neural network to answer correctly whether a given article of the WTO agreements can be cited for the given textual description of trade dispute. After training, I fitted a network that summarizes the systematic interactions between articles of WTO agreements using *Random Forests* (Breiman, 2001; Huynh-Thu et al., 2010). The network is fitted as to best explain the variance of each article’s citabilities. Those citabilities are collected from the predictions of the trained deep neural network.

To verify the quality of the fitted network, I compared the fitted network with the jurisprudence of WTO DSB appearing in the Panel and Appellate Body reports. Specifically, I found three major principles of WTO DSB, *Market Access*, *Reciprocity*, and *Non-discrimination*, are clustered in the fitted network. The systematic interactions between articles of WTO agreements are formed as how the Panel and Appellate Body explained in their judicial opinions. As Panel and Appellate Body authoritatively constitute the jurisprudence of WTO DSB, one can conclude that the method qualitatively summarizes the systematic interactions of articles of WTO agreements.

2 Modeling and Formal Definitions

2.1 Network of Articles of the WTO agreements

I define the network of articles of WTO agreements as directed weighted graph $G = (V, \vec{E}, W)$ which is comprised of vertex set V , set of directed edges \vec{E} , and edge weight matrix W . I define each legal article of WTO agreement as a vertex, thus $V = \{v \mid v \text{ is a legal article of WTO agreement}\}$. Then I define all ordered pairs of vertices as a set of directed edges \vec{E} , thus $\vec{E} = \{(v_i, v_j) \mid (v_i, v_j) \in V \times V\}$. Finally, I define the edge weight matrix $W = (w(v_i, v_j)) \in [0, 1]^{|V| \times |V|}$ where all incoming edge weights sum up to 1 for all given target vertex v_j , thus $\sum_{v_i \in V} w(v_i, v_j) = 1$. w denotes a map that assigns a weight for each ordered pair of vertices, thus $w : V \times V \rightarrow [0, 1]$. I always assign weight 0 for the directed edge comprised of the same vertex, thus $w(v_i, v_i) = 0 \ \forall v_i \in V$. For convenience, I define $w_{ij} = w(v_i, v_j)$.



(a) Illustration of $P(v_j | v_i)$ where the target article $v_j = \text{Article III:2}$

“The dictionary definition of the noun ‘excess’ is ‘the amount by which one number or quantity exceeds another’. More specifically, ‘in excess of’ means ‘more than’. Thus, as a textual matter, a particular number or quantity is ‘in excess of’ another number or quantity if it is greater, regardless of the extent to which it is greater. **Looking at the context of Article II:1(b), first sentence, we note that Article III:2, first sentence, of the GATT 1994 is cast in very similar terms and in fact uses the phrase ‘in excess of’:**

The products of the territory of any contracting party imported into the territory of any other contracting party shall not be subject ... to internal taxes or other internal charges of any kind in excess of those applied ... to like domestic products ...

(b) **Jurisprudence of Panel in *Russia – Tariff Treatment* case:** Panel explains that the meaning of the term ‘in excess of’ in Article II:1(b) clarifies the meaning of the same phrase in Article III:2.

Figure 1: Modeling of the Network of Articles of WTO agreements

2.2 Modeling Interaction between Articles of WTO agreements as Conditional Probability

I interpret every directed edge weight $w(v_i, v_j)$ as the conditional probability $P(v_j | v_i) \in [0, 1]$, where the probability represents how probably the source node v_i clarifies the interpretation of the target node v_j compared to all other source nodes $v \in V \setminus \{v_i, v_j\}$. The articles of WTO agreements interdependently constitute the legal context to clarify the interpretation of other articles as shown in the the Panel report of *Russia-Tariff Treatment* case, as excerpted in Figure 1(b). In *Russia-*

Name of WTO Agreement	Cited Articles
Agreement on Anti-dumping	1, 5.4, 8, 18.1, 18.4
General Agreement on Tariffs and Trade 1994	VI:3, X:3, XXIII:1, VI:2
Agreement on Subsidies and Countervailing Measures	4.10, 7.9, 10, 11.4, 18, 32.1, 32.5
Agreement Establishing the World Trade Organization	XVI:4

Table 1: **Cited articles in *US - Offset (Byrd Amendment)* by complainants**

Tariff Treatment case, the Panel explained that Article II:1(b) clarifies the meaning of the same phrase ‘*in excess of*’ in Article III:2. By modeling this clarification relationship as the directed edge weight w_{ij} , I let the edge weight w_{ij} represent the relative importance of a source article v_i clarifying the interpretation of the target article v_j . I illustrated this relationship in Figure 1(a).

2.3 Methodological Objective: Finding G^*

I aim to find $G^* = (V, \vec{E}, W^*)$ where the W^* closely reflect the clarification relationship between articles of WTO agreements as explained by the authoritative judicial bodies of the WTO DSB, Panel and Appellate Body. To find W^* , this paper collected the past 20 years of legal dispute data in WTO DSB. The types and composition of the data collected will be explained in Section 3. Then I design a deep neural network to encode the pattern of interactions of the articles of WTO agreements found in the data. Justification of using deep learning, design and training of deep neural network, and fitting process of W^* using *Random Forest* will be explained in Section 4. Finally in Section 5, I will verify the quality of the fitted G^* by comparing the systematic interaction between articles of WTO agreements found in G^* with the corresponding jurisprudence of the Panel and Appellate Body.

3 Data: Types, Composition and Collection Process

3.1 Overview: How Members Raise Claims in WTO DSB

Members who raise the claim (preferably called *complainant* in WTO DSB) usually cite multiple articles of the WTO agreements. This is to cover the complex characteristics of a trade policy that led to the dispute. For example, in the *US - Offset* case, a group of complainants¹ cited articles as shown in Table 1 from the WTO agreements to claim inconsistencies of *Continued Dumping*

¹Australia, Brazil, Chile, European Communities, India, Indonesia, Japan, Korea and Thailand

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Figure 2: **Table of Contents of Panel Report:** Panel provides factual aspect in the panel report with its page location.

and *Subsidy Act of 2000* (CDSOA) of the United States to those cited articles².

Upon this understanding of multiple citation, I collected two different types of data. One is textual description of the dispute³ and the other one is set of articles of the WTO agreements that are cited for each dispute⁴. I will explain each type of data in the following subsections in detail.

3.2 Factual Aspect: Textual Description of the Dispute

Textual description of the dispute is preferably called as *Factual Aspect* in WTO DSB. Since Panel always provide a factual aspect⁵ that describes the circumstances of the dispute in each report, I wrote a program that automatically search and collect the panel reports from the WTO official document website⁶. Then I located the factual aspect using the page information from the table of contents in each panel report as shown in Figure 2. I collected the total 143 numbers of different factual aspects . The collected case numbers are listed in Figure 3.

²It is worth noting that the WTO agreements comprises many different agreements covering each specific topic in trade such as *Agreement on Anti-dumping*, *Agreement on Subsidies and Countervailing Measures*, *Agreement on Agriculture* and so on.

³Check the CDSOA example at Appendix A.1

⁴See Appendix A.3

⁵It's worth noting that Appellate Body doesn't provide any factual aspect because they always use the factual aspect provided by the Panel.

⁶<http://docs.wto.org>

DS 2, 18, 22, 31, 34, 46, 56, 58, 60, 62, 67, 68, 69, 75, 76, 87, 90, 98, 103, 108, 121, 122, 135, 136, 139, 141, 146, 152, 155, 161, 162, 165, 166, 174, 175, 177, 184, 202, 207, 212, 217, 219, 221, 231, 234, 238, 244, 245, 246, 248, 257, 264, 265, 266, 267, 268, 269, 276, 282, 283, 286, 290, 294, 295, 296, 301, 302, 308, 312, 315, 316, 320, 321, 322, 332, 336, 339, 343, 344, 345, 350, 353, 360, 363, 366, 371, 379, 381, 384, 392, 394, 396, 397, 399, 400, 406, 412, 414, 415, 422, 425, 427, 429, 430, 431, 435, 436, 437, 440, 442, 447, 449, 453, 454, 456, 457, 461, 464, 468, 471, 472, 473, 475, 476, 477, 479, 480, 482, 483, 484, 485, 486, 488, 490, 492, 493, 495, 499, 504, 505, 513, 518, 523

Figure 3: **List of the Collected Case numbers:** “DS + number” uniquely identifies each dispute. For example, DS 523 refers to *US — Pipe and Tube Products (Turkey)* where the United States was challenged by Turkey for its possibly inconsistent anti-dumping measure.

3.2.1 Joint Adjudication & Early Settlement

The number 143 may seem small compared to the total 596⁷ number of cases that are requested to WTO DSB. This is due to the following two reasons. First, panel jointly adjudicates different cases together if the cases raise the claim toward the same trade policy of the same member state. For example, in *US - Offset (Byrd Amendment)*, panel merged DS217⁸ and DS234 together because they were asking the judicial opinion for the same government measure of the United States as shown in Figure 4. This paper selects the smallest case number as a representative number for this case of joint adjudication. For example, DS217 and DS234 share the same panel report then this paper chooses DS217 as a representative number as shown in Figure 3 where the list includes DS217 but not DS234. Second, members sometimes find *mutually agreeable solution* before the panel expresses its judicial opinion by publishing its panel report. Then Panel stops there and no factual aspect is provided. I omitted this kind of *early settled* cases as well.

3.3 Cited Articles: Set of Articles Cited for the Same Dispute

Every legal claim in WTO DSB cites multiple set of articles as shown in Table 1. To collect this set of articles claimed for each dispute, I wrote a program that collects this set of articles cited from the WTO official webpage⁹. The webpage chronologically lists up all dispute cases requested to WTO DSB and the program visits each page and collects the cited articles. Among all the agreements included in the WTO agreements¹⁰, this paper collected articles from the *General*

⁷As of November 1st, 2020.

⁸DS refers to *Dispute Settlement*. DS is the official prefix that indicates the case in WTO DSB.

⁹https://www.wto.org/english/tratop_e/dispu_e/dispu_status_e.htm

¹⁰WTO agreements is comprised of multiple agreements, such as General Agreement on Tariffs and Trade 1994, Agreement on Agriculture, Agreement on the Application of Sanitary and Phytosanitary Measures, Agreement

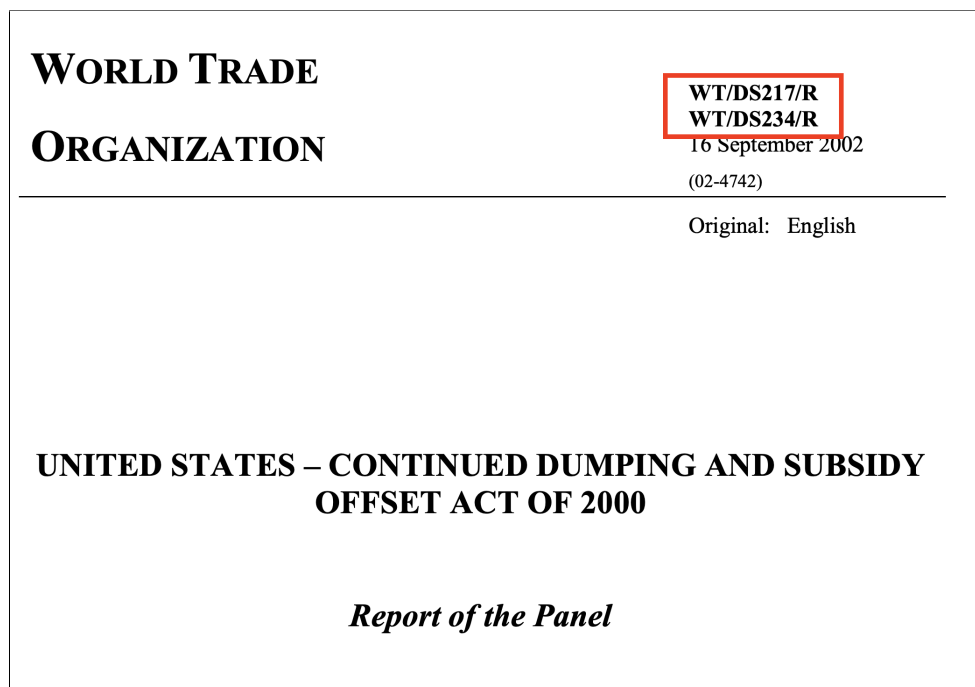


Figure 4: **Cover of a Panel Report Includes Information about Joint Adjudication:** Panel explicitly marks which different cases are adjudicated together in the cover of the panel report. DS217 and DS234 are handled together in this example.

Agreement on Tariffs and Trade 1994 (GATT 1994) only. This is because articles in GATT 1994 constitutes basic set of trade rules of WTO and other agreements elaborates the articles of GATT 1994 more in detail (World Trade Organization, 1999). For example, the official name of *Agreement on Anti-dumping* is *Agreement on Implementation of **Article VI of the GATT 1994*** where the name self-explains that it elaborates on the article VI of GATT 1994. The collected result is listed in the Appendix A.2. Figure 5 lists up 80 different articles of GATT 1994 cited in 143 cases without duplication.

3.3.1 Various Levels of Scope in Cited Articles

As shown in Figure 5, members sometimes cite articles in different levels of scope. For example, For the Article II, member sometimes cites Article II as a whole but sometimes cites Article II:1 or Article II:1(a). This is because two main judicial bodies of WTO DSB, *Panel and Appellate Body*, both constitute its legal precedents citing articles of the WTO agreements in various levels of scope. The various levels of scopes include, *Title, Article, Paragraph, Sentence or Term*

on Textiles and Clothing, Agreement on Technical Barriers to Trade, Agreement on Trade-Related Investment Measures, Agreement on Implementation of Article VI of the General Agreement on Tariffs and Trade 1994 (anti-dumping), Agreement on Subsidies and Countervailing Measures, Agreement on Rules of Origin, Agreement on Safeguards and so on.

I, I:1, II, II:1, II:1(a), II:1(b), II:2, II:3, III, III:1, III:2, III:4, III:5, III:7, IV, IX, IX:2, V, V:1, V:2, V:3, V:3(a), V:4, V:5, V:6, V:7, VI, VI:1, VI:1(a), VI:1(b), VI:2, VI:3, VI:5(a), VI:6, VII, VII:1, VII:2, VII:5, VIII, VIII:1, VIII:3, VIII:4, X, X:1, X:2, X:3, X:3(a), XI, XI:1, XIII, XIII:1, XIII:2, XIII:3(b), XIX, XIX:1, XIX:2, XIX:3, XV, XVI, XVI:1, XVI:4, XVII, XVII:1, XVII:1(c), XVIII, XVIII:10, XVIII:11, XX, XXI, XXII, XXII:1, XXIII, XXIII:1, XXIII:1(a), XXIII:1(b), XXIV, XXIV:12, XXIV:5(b), XXIV:6, XXVIII

Figure 5: **Set of articles of GATT 1994 collected and used in this paper:** These articles comprises the node set V and their ordered pairs comprise the edge set \vec{E} as formally defined in Section 2.1

as shown in Appendix A.3. Following this practice, members also cite articles in different levels of scope to make their legal claim fit and valid according to the general jurisprudence of WTO DSB.

4 Methodology: Considerations and Development

This section introduces two main considerations that are taken to design the method used in this paper. Those considerations justify the use of the deep neural network. Then I explain the detailed structure of the deep neural network and its training schemes. After finishing training of the neural network, I explain the process that I conducted to fit the network of articles using Random Forest.

5 Empirical Findings

This section verifies how well the fitted network $G^* = (V, E, W^*)$ aligns with the jurisprudences of the *Panel* or *Appellate Body* of WTO DSB. Since these two judicial bodies of WTO DSB authoritatively opionate how the regulatory system of WTO DSB systematically organized, this section will validate the quality of the fitted network G^* by introducing three different sub-networks of the fitted network G^* where each sub-network shows how articles of WTO agreements cooperatively achieves important principles of WTO and regulates specific trade issues.

References

Breiman, Leo. 2001. *Random Forests*.

- Busch, Marc and Eric Reinhardt. 2003. “Developing Countries and General Agreement on Tariffs and Trade/World Trade Organization Dispute Settlement.” *Journal of World Trade* 37:719–735.
- Busch, Reinhardt, Eric and Gregory Shaffer. 2009. “Does legal capacity matter? A survey of WTO Members.” *World Trade Review* 8(4):559–577.
- Huynh-Thu, Vân Anh, Alexandre Irrthum, Louis Wehenkel and Pierre Geurts. 2010. “Inferring Regulatory Networks from Expression Data Using Tree-Based Methods.” *PLOS ONE* 5(9):1–10.
- Johns, Leslie and Krzysztof J. Pelc. 2014. “Who Gets to Be In the Room? Manipulating Participation in WTO Disputes.” *International Organization* 68(3):663–699.
- Pelc, Krzysztof J. 2014. “The Politics of Precedent in International Law: A Social Network Application.” *The American Political Science Review* 108(3):547–564.
- SHAFFER, GREGORY. 2006. “The challenges of WTO law: strategies for developing country adaptation.” *World Trade Review* 5(2):177–198.
- Strezhnev, BuenoAnton. 2014. “Using Latent Space Models to Study International Legal Precedent: An Application to the WTO Dispute Settlement Body.” *American Political Science Association 2014 Annual Meeting*.
- World Trade Organization. 1999. *WTO Agreements Series*. Number no. 2 in “WTO Agreements Series” World Trade Organization.
- World Trade Organization. 2017. *A Handbook on the WTO Dispute Settlement System*. A WTO Secretariat publication Cambridge University Press.

Appendix A

A.1 Factual Aspect Example

Excerpt below is from the panel report for the *US - Offset Act (Byrd Amendment)*¹¹ case.

¹¹Panel Report, United States — Continued Dumping and Subsidy Offset Act of 2000, WTO Doc. WT/DS217/R (adopted Jan. 27, 2003).

II. FACTUAL ASPECTS

2.1 This dispute concerns the Continued Dumping and Subsidy Offset Act of 2000 (the “CDSOA” or the “Offset Act”), which was enacted on 28 October 2000 as part of the Agriculture, Rural Development, Food and Drug Administration and Related Agencies Appropriations Act, 2001.¹ The CDSOA amends Title VII of the Tariff Act of 1930 by adding a new section 754 entitled Continued Dumping and Subsidy Offset. Regulations prescribing administrative procedures under the Act were brought into effect on September 21, 2001.

2.2 The CDSOA provides that :

“ Duties assessed pursuant to a countervailing duty order, an anti-dumping duty order, or a finding under the Antidumping Act of 1921 shall be distributed on an annual basis under this section to the affected domestic producers for qualifying expenditures. Such distribution shall be known as “the continued dumping and subsidy offset”. ”

2.3 The term “affected domestic producers” means :

“ a manufacturer, producer, farmer, rancher, or worker representative (including associations of such persons) that –

(A) was a petitioner or interested party in support of the petition with respect to which an anti-dumping duty order, a finding under the Antidumping Act of 1921, or a countervailing duty order has been entered, and

(B) remains in operation.

Companies, business, or persons that have ceased the production of the product covered by the order or finding or who have been acquired by a company or business that is related to a company that opposed the investigation shall not be an affected domestic producer. ”

2.4 In turn, the term “qualifying expenditure” is defined by the CDSOA as “expenditure[s] incurred after the issuance of the anti-dumping duty finding or order or

countervailing duty order in any of the following categories: “

- (A) Manufacturing facilities.
- (B) Equipment.
- (C) Research and development.
- (D) Personnel training.
- (E) Acquisition of technology.
- (F) Health care benefits to employees paid for by the employer.
- (G) Pension benefits to employees paid for by the employer.
- (H) Environmental equipment, training or technology.
- (I) Acquisition of raw materials and other inputs.
- (J) Working capital or other funds needed to maintain production.” ”

2.5 The CDSOA provides that the Commissioner of Customs shall establish in the Treasury of the United States a special account with respect to each order or finding⁸ and deposit into such account all the duties assessed under that Order.⁹ The Commissioner of Customs shall distribute all funds (including all interest earned on the funds) from the assessed duties received in the preceding fiscal year to affected domestic producers based on a certification by the affected domestic producer that he is eligible to receive the distribution and desires to receive a distribution for qualifying expenditures incurred since the issuance of the order or finding.¹⁰ Funds deposited in each special account during each fiscal year are to be distributed no later than 60 days after the beginning of the following fiscal year.¹¹ The CDSOA and regulations prescribe that (1) if the total amount of the certified net claims filed by affected domestic producers does not exceed the amount of the offset available, the certified net claim for each affected domestic producer will be paid in full, and (2) if the certified net claims exceed the amount available, the offset will be made on a pro rata basis based on each affected domestic producer's total certified claim.

2.6 Special accounts are to be terminated after “(A) the order or finding with respect to which the account was established has terminated; (B) all entries relating to the order or finding are liquidated and duties assessed collected; (C) the Commissioner has provided notice and a final opportunity to obtain distribution pursuant to subsection (c); and (D) 90 days has elapsed from the date of the notice described in subparagraph (C).” All amounts

that remain unclaimed in the Account are to be permanently deposited into the general fund in the US Treasury.¹²

2.7 The CDSOA applies with respect to all anti-dumping and countervailing duty assessments made on or after 1 October 2000¹³ pursuant to an anti-dumping order or a countervailing order or a finding under the Antidumping Act of 1921 in effect on 1 January 1999 or issued thereafter. [END]

A.2 Collected Cited Articles for 143 WTO DSB Cases

DS refers to *Dispute Settlement* and this notation is officially adopted by WTO DSB.

WTO DSB identifies each dispute with a unique number for each case such as DS2 and DS18.

Case Number	Cited Articles (GATT 1994)
DS 2	I, III, XXII:1
DS 18	XI, XIII
DS 22	VI:3, VI:6
DS 31	III, XI
DS 34	XI, XIII, XXIV
DS 46	XVI
DS 56	II, VII, VIII, X
DS 58	I, XI, XIII, XX
DS 60	VI
DS 62	II
DS 67	II, XXIII, XXIII:1
DS 68	II, XXII:1, XXIII:1
DS 69	II, III, X, XIII, XXVIII
DS 75	III:2
DS 76	XI
DS 87	III:2
DS 90	XI:1, XIII, XVIII:11
DS 98	XIX

DS 103	X, XI, XIII
DS 108	III:4, XVI
DS 121	XIX
DS 122	VI
DS 135	III, XI, XXIII, XXIII:1(b)
DS 136	III:4, VI
DS 139	I:1, III:4, XXIV
DS 141	I, VI
DS 146	III, XI
DS 152	I, II, III, VIII, XI
DS 155	III:2, X:3(a), XI:1
DS 161	II, III, X, XI, XVII
DS 162	III, III:4, VI, XI
DS 165	I, II, VIII, XI
DS 166	I, XIX
DS 174	I, III:4
DS 175	III, III:4, XI, XI:1
DS 177	I, II, XIX
DS 184	VI, X
DS 202	I, XIII, XIX
DS 207	II, XIX:1
DS 212	VI:3
DS 217	VI:2, VI:3, X:3, XXIII:1
DS 219	I, VI
DS 221	VI, VI:2, VI:3, VI:6
DS 231	I, III, XI:1
DS 234	VI, VI:2, VI:3, X, X:3, XXIII:1
DS 238	XIX:1
DS 244	VI, X
DS 245	XI

DS 246	I:1
DS 248	I:1, XIII, XIX:1
DS 257	VI, VI:3, X:3
DS 264	VI, X:3
DS 265	III:4, XVI
DS 266	III:4, XVI
DS 267	III:4, XVI
DS 268	VI, X
DS 269	II, II:1, XXIII, XXIII:1, XXVIII
DS 276	III, III:4, XVII, XVII:1
DS 282	VI, X
DS 283	III:4
DS 286	II, XXII
DS 290	I, I:1, III, III:4
DS 294	VI
DS 295	VI, VI:2
DS 296	VI:3, X:3
DS 301	I:1, III:4, XXIII:1
DS 302	II:1, III:2, III:4, X:1, X:3, X:3(a), XI:1, XV
DS 308	III
DS 312	VI:1, VI:2(a), VI:2(b), VI:6
DS 315	X:1, X:3
DS 316	III:4, XVI:1, XXIII:1
DS 320	I, II
DS 321	I, II
DS 322	VI, VI:1, VI:2(a)
DS 332	I:1, III:4, XI:1, XIII:1
DS 336	VI:3, X:3
DS 339	II:1, III:1, III:2, III:4, III:5, XI, XIII:1
DS 343	I:1, II, II:1, III, VI, VI:2, X:3(a), XI:1, XIII:1, XX

DS 344	VI, VI:1, VI:2
DS 345	I, II, II:1, VI, VI:2, VI:3, X, X:1, X:2, XI, XIII
DS 350	VI:1, VI:2
DS 353	III:4
DS 360	II:1, III:2, III:4
DS 363	III:4, XI:1
DS 366	I:1, II:1, III:2, V:6, VII, VII:1, X:3, X:3(a), XI, XIII:1
DS 371	II:1(b), II:3, III:2, III:4, VII:1, VII:2, VII:5, X:1, X:3, X:3(a)
DS 379	I, VI
DS 381	I, III
DS 384	III:4, IX, IX:2, X:3, X:3(a), XXIII:1(b)
DS 392	I:1, XI:1
DS 394	VIII, VIII:1, VIII:4, X, X:1, X:3, XI, XI:1
DS 396	III:1, III:2
DS 397	I, I:1, VI:1, X:3(a)
DS 399	I:1, II, XIX
DS 400	I:1, III:4, XI:1, XXIII:1(b)
DS 406	III:4, XX, XXIII:1(a)
DS 412	III:4, III:5, XXIII:1
DS 414	VI
DS 415	I:1, II:1, XIX:1, XIX:2
DS 422	VI:1, VI:2(a), VI:2(b)
DS 425	VI:1, VI:6
DS 427	VI, VI:3
DS 429	VI:1, VI:2, VI:2(a), X
DS 430	I, XI
DS 431	VII, VIII, X, X:3(a), XI, XI:1
DS 435	III:4
DS 436	I, VI
DS 437	VI, XXIII

DS 440	VI
DS 442	VI, X:3(a)
DS 447	I:1, III:4, XI:1
DS 449	VI, X
DS 453	I:1, III:2, III:4, XI:1
DS 454	VI
DS 456	III:4
DS 457	II:1(a), II:1(b), X:1, X:3(a), XI, XI:1
DS 461	II:1, II:1(b), VIII:1, X:3(a)
DS 464	VI, VI:1, VI:2, VI:3
DS 468	II:1(b), XIX:1
DS 471	VI:2
DS 472	I:1, II:1(b), III:2, III:4, III:5
DS 473	VI:2
DS 475	I:1, III:4, XI:1
DS 476	I, III, X, XI
DS 477	III:4, X:1, XI:1
DS 479	VI
DS 480	VI, VI:1, VI:2
DS 482	VI
DS 483	VI
DS 484	III:4, X:1, X:3, XI:1
DS 485	II:1(a), II:1(b), VII
DS 486	VI
DS 488	I, X:3
DS 490	I:1, XIX:1, XIX:2
DS 492	I, I:1, II, II:1, II:2, XIII, XIII:1, XIII:2, XXVIII
DS 493	VI
DS 495	XXIII:1
DS 499	I:1, III:4, X:3(a), XI:1, XIII:1

DS 504	VI
DS 505	VI:3
DS 513	I:1, X:1, X:2, X:3(a), XI:1
DS 518	I:1, II:1(b), XI:1, XIX:1
DS 523	VI:3

A.3 Various Levels of Scope Adopted by Panel and Appellate Body

Scope	Quote	Source
Title	“As the title of Article 21 makes clear , the task of panels forms part of the process of the ‘Surveillance of Implementation of ...’”	Appellate Body Report, <i>US – Shrimp (Malaysia)</i> , paras. 86-87.
Article	“The sequence of steps indicated above in the analysis of a claim of justification under Article XX reflects, not inadvertence or random choice, ...”	Appellate Body Report, <i>US – Shrimp (Malaysia)</i> , paras. 119-120.
Paragraph	“The verb ‘may’ in Article VI:2 of the GATT 1994 is, in our opinion, properly understood as giving Members a choice ...”	Appellate Body Report, <i>US – 1916 Act</i> , paras. 116.
Sentence	“The customary rules of interpretation of public international law as required by the first sentence of Article 17.6(ii) of the Anti-Dumping Agreement , do not admit of another interpretation ...”	Appellate Body Report, <i>US – Zeroing (EC)</i> , paras. 132-133.
Term	“... The term ‘commerce’ is defined as referring broadly to the exchange of goods, ...”	Appellate Body Report, <i>Colombia – Textiles</i> , para. 5.34.