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UNITED STATES – ANTI-DUMPING AND COUNTERVAILING MEASURES ON LARGE RESIDENTIAL WASHERS FROM KOREA

RECOURSE TO ARTICLE 22.6 OF THE DSU BY THE UNITED STATES

DECISION OF THE ARBITRATOR

Addendum

This *addendum* contains Annexes A to D to the Decision of the Arbitrator to be found in document WT/DS464/ARB.

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WORKING PROCEDURES OF THE ARBITRATOR

Adopted on 21 February 2018

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) Nothing in the DSU or 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. Non-confidential summaries shall be submitted no later than ten days after the written submission in question is presented to the Arbitrator, unless a different deadline is established by the Arbitrator upon written request of a party showing good cause.

(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, Korea 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 in the course of 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 prior to 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. Korea 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. In the event that the Arbitrator finds it appropriate to issue a preliminary ruling prior to 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 in the course of 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 the substantive meeting, 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) Where the original language of an exhibit or a portion thereof is not in 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 a detailed 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. For example, exhibits submitted by Korea should be numbered KOR-1, KOR-2, etc. If the last exhibit in connection with a submission was numbered KOR-5, the first exhibit in connection with the next submission thus would be numbered KOR-6.

(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), if applicable (example: USA-1 (USA-21-OP).

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. Prior to the meeting, the Arbitrator may send written questions, or a list of topics it intends to pursue in questioning orally in the course of the meeting. The Arbitrator may ask different or additional questions at the meeting.

b. The Arbitrator may put questions to the parties orally in the course of the meeting, and in writing following the meeting, as provided for in paragraph 16 below.

Substantive meeting

10. The arbitration hearing will be conducted in closed session, unless the Arbitrator decides otherwise after consultations with the parties.

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 preceding the first day of each 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 Korea 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. In the event that 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 length of its opening statement to 75 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, and it should also provide, at the same time, an estimate of the length of its statement. The Arbitrator will accord equal time to both parties for their statements.

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 Korea 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 prior to 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 prior to the end of the meeting, 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 prior to the end of the meeting.

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 where possible, 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 in the course of 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 date 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.

c. Each party shall also send one e-mail 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 Microsoft Word format. All such e-mails to the Arbitrator shall be addressed to DSRegistry@wto.org, and copied to the other WTO Secretariat staff whose e-mail addresses have been provided to the parties in the course of the proceeding. Where it is not possible to attach all the Exhibits to one e-mail, the submitting party shall provide the DS Registry with 4 copies of the Exhibits in CD-ROMs or DVDs.

d. In addition, each party is invited to submit all documents through the Digital Dispute Settlement Registry (DDSR) 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 DDSR, they are invited to consult the DDSR User Guide (electronic copy provided) or 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 in electronic format only, unless the recipient party has previously requested a paper copy. 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 e-mail.

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 23 February 2018

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 anti-dumping and countervailing duty proceedings at issue in this dispute, entitled Large Residential Washers from the Republic of Korea (A-580-868 and C-580-869). However, these procedures do not apply to any information that is available in the public domain. In addition, these procedures do not apply to any BCI if the entity which provided the information in the course of the aforementioned proceedings agrees in writing to make the information publicly available.

2. If a party considers it necessary to submit to the Arbitrator BCI as defined above from an entity that submitted that information in one or both of the proceedings at issue, the party shall, at the earliest possible date, obtain an authorizing letter from the entity and provide such authorizing letter to the Arbitrator, with a copy to the other party. The authorizing letter from the entity shall authorize both Korea and the United States to submit in this arbitration, in accordance with these procedures, any confidential information submitted by that entity in the course of those proceedings.

3. 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 arbitration to a party. 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 at issue in this dispute.

4. Each party shall, at the request of the other party, facilitate the communication to an entity in its territory of any request to provide an authorization letter referred to in paragraph 2. Each party shall encourage any entity in its territory that is requested to grant the authorization referred to in paragraph 2 to grant such authorization. If an entity refuses to grant the authorization referred to in paragraph 2, a party may bring the situation to the attention of the Arbitrator.

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 arbitration. 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 5. 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 B

ARGUMENTS OF THE PARTIES

ANNEX B-1

INTEGRATED 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 Korea has requested is not equivalent to the level of nullification or impairment.

2. Ample evidence demonstrates that, if the WTO-inconsistent aspects of the U.S. antidumping and countervailing duty measures on large residential washers ("LRWs") from Korea had been brought into compliance as of the expiration of the reasonable period of time ("RPT"), there would be no increase in the value of U.S. imports of LRWs from Korea. This is because Samsung and LG, the Korean producers of LRWs, lack both the interest and the capacity to resume production of LRWs in Korea for the U.S. market. Instead, they will continue in the short run to supply LRWs from countries other than Korea while working toward their goal of producing virtually all of the LRWs they sell in the U.S. market at new production facilities located in the United States. Samsung and LG expect to be in a position to realize that goal by the end of this year. Accordingly, the level of nullification or impairment resulting from the maintenance of the WTO-inconsistent aspects of the U.S. antidumping and countervailing duty measures on LRWs from Korea after the expiration of the RPT is zero.

3. Furthermore, Korea's Methodology Paper contains errors sufficient by themselves to establish that the level of suspension of concessions Korea has requested far exceeds the level of nullification or impairment, contrary to the DSU. For instance, Korea proposes an incorrect counterfactual, uses an economic model that is wholly inappropriate in this situation, and makes numerous errors when compiling the data inputs it uses to estimate the level of nullification or impairment. As a result, Korea overestimates the level of nullification or impairment attributable to the U.S. measures about which the Dispute Settlement Body ("DSB") adopted recommendations in this dispute.

4. Korea argues that the level of nullification or impairment is $711 million per year as a result of the maintenance of the WTO-inconsistent aspects of the U.S. antidumping and countervailing duty measures on LRWs from Korea beyond the expiration of the RPT on December 26, 2017. Korea further contends that the Arbitrator should determine that the level of suspension of concessions based on this already excessive level of nullification or impairment should be increased each year by 5.8 percent.

5. Korea bases its request on the assertion that the counterfactual used must be the termination of the antidumping and countervailing duty measures on LRWs from Korea following the expiration of the RPT. In fact, the proper counterfactuals to be applied for the purpose of this proceeding are reduction – not elimination – of the antidumping duty rate, and, separately, reduction of the weighted-average countervailing duty rate from 0.58 percent to zero percent.

6. Additionally, while in theory a partial equilibrium model can be employed to determine the level of nullification or impairment (although not in this proceeding, given that such a model assumes that suppliers will increase their production and, as demonstrated by the evidence before the Arbitrator, this is an incorrect assumption here), Korea uses the wrong type of partial equilibrium model. Korea's economic model assumes that there are only two countries in the world, Korea and the United States, and further assumes that LRWs are perfectly substitutable. Each of these assumptions is incorrect and contradicted by evidence, further demonstrating that Korea's request is contrary to the DSU.

7. In a situation where suppliers would increase their production, the appropriate partial equilibrium model would be one that correctly assumes that the products are imperfect substitutes, such as an Armington-based model, which also would take into account U.S. imports of LRWs from countries other than Korea and factor in the correct substitution elasticity for LRWs. Using such a model, the estimated level of nullification or impairment resulting from the maintenance of the WTO-inconsistent aspects of the U.S. antidumping duty measure on LRWs from Korea after the expiration of the RPT would be in the range of $18 million to $25 million per year, and the level of nullification or impairment resulting from the maintenance of the WTO-inconsistent aspects of the countervailing

duty measure on LRWs from Korea after the expiration of the RPT would be no more than $2.32 million per year. This once again demonstrates that Korea's request of $711 million per year is far in excess of the equivalent level of nullification or impairment, and thus contrary to the DSU.

8. Korea does not propose a particular level of suspension of concessions resulting from the application by the U.S. Department of Commerce ("Commerce") of a differential pricing methodology and the use of zeroing in antidumping proceedings involving products other than LRWs that are initiated after the expiration of the RPT. Instead, Korea requests authorization to apply the same conceptually flawed economic framework and derived formula that it proposes for LRWs, so that Korea can determine for itself the level of suspension related to products other than LRWs. Korea's proposed level of suspension is contrary to the DSU. The formula that Korea proposes is purely speculative and not based on sound economic analysis. The selection of an appropriate economic model or formula is based on a number of critical factors, such as the appropriate estimation technique to apply (simulation or econometrics), substitutability of products, and other variables that could affect demand and supply conditions. Korea addresses none of these issues. Furthermore, Korea's formula suffers from conceptual flaws and data input problems that are just as problematic whether the formula is applied to LRWs or products other than LRWs.

II. APPROPRIATE DETERMINATION OF THE LEVEL OF NULLIFICATION OR IMPAIRMENT FOR THE ANTIDUMPING AND COUNTERVAILING DUTY MEASURES ON LARGE RESIDENTIAL WASHERS FROM KOREA

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 will not authorize the suspension of concessions and related 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 party 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 Member 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 inconsistent [measure] is less than apparent, i.e., where exports are allegedly foregone not because of the [inconsistent measure] but due to other circumstances."

11. Analysis using a counterfactual is appropriate to determine the level of nullification or impairment caused by the WTO-inconsistent U.S. measures. That is, the appropriate analysis requires consistent consideration of the present trading relationship between Korea and the United States (as represented by the 2017 baseline), as well as what that relationship would be if the U.S. measures had been brought into compliance with the DSB recommendations following the expiration of the RPT (the counterfactual). The trade differential will be the level of nullification or impairment attributable to the U.S. measures.

B. The Appropriate Counterfactual in this Proceeding Is Modification, Not Termination, of the WTO-Inconsistent U.S. Antidumping and Countervailing Duty Measures on LRWs from Korea

12. At its most basic level, the determination of the trade effects of the disputed measures requires a comparison between the current value of LRWs exported from Korea to the United States and the value of exports from Korea that could be expected if the United States had complied with the DSB's recommendations following the expiration of the RPT.

13. Termination of the antidumping and countervailing duty measures on LRWs from Korea is not the only option available for compliance with the DSB's recommendations, and a counterfactual that assumes termination of the measures is not plausible or reasonable. The DSB did not recommend termination of the measures. Importantly, Daewoo, a Korean producer of LRWs, was assigned a margin of dumping and a countervailing duty rate based on the application of facts available in the original antidumping and countervailing duty investigations of LRWs from Korea. The margin of dumping and countervailing duty rate assigned to Daewoo are not the subject of any DSB recommendations. For that reason, the U.S. antidumping and countervailing duty measures on LRWs from Korea would not, in any event, simply be terminated to bring them into compliance with the DSB's recommendations in this dispute.

14. Additionally, evidence placed before the original Panel in this dispute demonstrates that the margin of dumping determined for LG in the original antidumping investigation would have been greater than *de minimis*, if it had been determined using the average-to-average comparison methodology (without zeroing). That margin of dumping, if applied to LG following a redetermination of the results of the original investigation, would be in compliance with the DSB's recommendations and U.S. WTO obligations. Accordingly, rather than total elimination of the antidumping duty determined for LG in the original investigation, a more appropriate counterfactual in this proceeding is reduction of that antidumping duty rate.

15. It is appropriate in this proceeding to express separately the level of nullification or impairment resulting from the maintenance of the WTO-inconsistent aspects of the U.S. antidumping and countervailing duty measures on LRWs from Korea after the expiration of the RPT. The antidumping measure and the countervailing duty measure, while challenged by Korea in the same dispute, are not related. For the purposes of the analysis of a counterfactual in this submission, the United States uses a very conservative counterfactual wherein the weighted-average countervailing duty rate is reduced from 0.58 percent to zero percent following the expiration of the RPT on December 26, 2017. This is consistent with the counterfactual approach described by Korea in relation to the WTO-inconsistent aspects of the U.S. countervailing duty measure on LRWs from Korea.

C. Modifying or Terminating the WTO-Inconsistent U.S. Antidumping and Countervailing Duty Measures on LRWs from Korea following the Expiration of the RPT Would Not Result in any Increase in the Value of Exports of LRWs from Korea to the United States; The Level of Nullification or Impairment is Zero

1. The DSU Permits the Arbitrator To Find that a Measure Causes No Nullification or Impairment

16. Article 3.8 of the DSU plainly provides for the possibility that the Member concerned may rebut the presumption of the existence of nullification or impairment by putting forth evidence that a breach of WTO obligations does not have an adverse impact on the complaining Member. Additionally, nothing in Article 3.8 of the DSU, which is one of the "General Provisions" of the DSU, limits the opportunity of the Member concerned to make such a rebuttal only during the original panel phase of a dispute settlement proceeding. The more logical time for a Member concerned to make such a rebuttal would be in the context of an arbitration under Article 22.6 of the DSU, wherein the question of the level of nullification or impairment – and indeed, the question of the existence of any nullification or impairment at all following the expiration of the RPT – is placed squarely before the decision maker that is tasked by the DSU with evaluating that question and the question of the level of suspension – *i.e.*, the DSU Article 22.6 arbitrator. If no trade is foregone due to a WTO-inconsistent measure's continuing existence beyond the expiration of the RPT, *i.e.*, if the estimate of the trade foregone is zero, then the correct conclusion is that the level of nullification or impairment is zero.

17. Furthermore, the factual circumstances related to a WTO-inconsistent measure's impact on the complaining Member might change over time, including after a panel report is circulated and before a suspension request is made under Article 22.2 of the DSU. In an arbitration under Article 22.6 of the DSU, it is incumbent upon the arbitrator to establish the level of nullification or impairment following the end of the RPT, so as to ensure that the level of suspension authorized by the DSB does not exceed the level of nullification or impairment.

18. Accordingly, it is necessary for the Arbitrator to determine in this proceeding the trade or economic effects on Korea of the maintenance of the WTO-inconsistent aspects of the U.S. antidumping and countervailing duty measures on LRWs from Korea after the expiration of the RPT on December 26, 2017. As Korea suggests in its Methodology Paper, the relevant question in this proceeding is "what the value of Korea's exports of LRWs to the United States would have been had the United States complied with all the DSB recommendations and rulings at the end of the RPT, which was 26 December 2017."

2. Ample Evidence Supports Finding that there Is No Nullification or Impairment in this Situation

19. Ample evidence demonstrates that, if the WTO-inconsistent aspects of the U.S. antidumping and countervailing duty measures on LRWs from Korea had been brought into compliance as of the expiration of the RPT, there would be no increase in the value of U.S. imports of LRWs from Korea. This is because Samsung and LG, the Korean producers of LRWs, lack both the interest and the capacity to resume production of LRWs in Korea for the U.S. market. Instead, they will continue in the short run to supply LRWs from countries other than Korea while working toward their goal of producing virtually all of the LRWs they sell in the U.S. market at new production facilities located in the United States. Samsung and LG expect to be in a position to realize that goal by the end of this year.

20. Extensive evidence, provided by Samsung and LG, establishes definitively that the value of exports of LRWs from Korea to the United States would not increase by the amount of $711 million per year (and increasing at a rate of 5.8 percent per year), as Korea claims, if the WTO-inconsistent aspects of the U.S. antidumping and countervailing duty measures were brought into compliance following the expiration of the RPT. Rather, it is clear from this evidence that there would not be any increase at all in the level of exports of LRWs from Korea to the United States, because Samsung and LG lack both the interest and the ability to resume production of LRWs in Korea for the U.S. market.

21. Accordingly, the level of nullification or impairment resulting from the maintenance of the WTO-inconsistent aspects of the U.S. antidumping and countervailing duty measures on LRWs from Korea beyond the expiration of the RPT is zero.

D. The Errors in Korea's Economic Analysis Further Establish that the Level of Suspension Korea Requests Is Not Equivalent to the Level of Nullification or Impairment

22. An examination of the economic model Korea proposes to use to determine the level of nullification or impairment provides further proof that Korea's requested level of suspension is not equivalent to the level of nullification or impairment.

23. To use a more appropriate economic model, one would need to take the imports of the relevant LRWs from Korea that are subject to the U.S. antidumping and countervailing duty measures for which the DSB has made recommendations, and compare those imports on a prospective basis to the imports that would occur had the WTO-inconsistent aspects of those antidumping and countervailing duty measures been brought into compliance with U.S. WTO obligations following the expiration of the RPT. To make that comparison, one would look at the actual value of imports of LRWs into the United States from Korea during the most recent period, full year 2017 (the actual situation), and then estimate the value of imports of LRWs that would exist during the same period if the WTO-inconsistent aspects of the U.S. antidumping and countervailing duty measures had been brought into conformity and all other factors were held constant (the counterfactual).

24. Thus, in this proceeding, the correct "counterfactual" is the estimated value of relevant U.S. imports of LRWs from Korea that would exist if the antidumping and countervailing duty measures had been brought into compliance with U.S. WTO obligations, holding all other factors constant, and the "level of nullification or impairment" to Korea is the difference between the value of Korea's exports to the United States as reflected in the trade data, and the estimated export value under the counterfactual scenario.

25. Korea appears to agree with this approach generally. Korea proposes to estimate the level of nullification or impairment using a "static partial equilibrium model." However, Korea has used an inappropriate type of partial equilibrium model in its Methodology Paper.

1. The Correct Partial Equilibrium Model for Determining the Level of Nullification or Impairment Would Be an Armington-Based Partial Equilibrium Model (an Imperfect Substitutes Model)

26. The partial equilibrium model Korea uses is not appropriate in this situation. Indeed, Korea's proposed calculation of the level of nullification or impairment cannot seriously be called a partial equilibrium model because it is not based on sound economic theory or analysis. First, Korea is using a hypothetical value for the 2017 value of LRWs imports of Korea that is derived using Korea's 2011 import share, rather than truly modeling the effect of a tariff reduction on the actual 2017 value of LRWs imports from Korea. Second, Korea uses as a "proxy" total import value instead of total consumption and total domestic production. In doing so, Korea simply misapplies partial equilibrium analysis. These flaws rest on top of Korea's incorrect assumptions that the United States and Korea are the only two countries that produce and sell LRWs in the U.S. market, and that there is perfect substitution between LRWs imported from Korea and U.S. LRWs and, implicitly, no substitution at all between imports from Korea and non-subject imports. These assumptions are contrary to the evidence before the Arbitrator. Korea's proposed approach is flawed and has no foundation in economic theory or logic.

27. Under correct economic theory, the effect of the reduction or removal of the WTO-inconsistent U.S. antidumping and countervailing duties applied to LRWs from Korea depends on the substitutability between (1) the domestic like product (LRWs made in the United States), (2) subject imports (LRWs imported from Korea that are subject to the antidumping and countervailing duties), and (3) non-subject imports (LRWs imported from countries other than Korea). To properly measure the effect of the reduction or removal of the antidumping and countervailing duties on LRWs from Korea, one would need to use an economic model that accounts for the substitution effects on all three of these varieties of the product.

28. Though Korea does not use such an economic model itself, Korea has placed before the Arbitrator an example of a partial equilibrium model that would be appropriate to use. That example can be found in the 2017 paper by Hallren and Riker, which Korea submitted as Exhibit KOR-15. The Hallren and Riker paper provides a convenient framework to undertake a partial equilibrium analysis of the trade effects of removing import tariffs where the imported and domestic goods are imperfect substitutes and where the tariff is applied to imports from one country but not applied to imports from other countries. Indeed, the Hallren and Riker paper provides as an "illustrative application" an example of modeling the effects of "a reduction in the import ad-valorem tariff applied to subject imports from 5 to 0 percent," which corresponds to the reduction of duties for purposes of this discussion. The partial equilibrium model in the Hallren and Riker paper is based on the Armington approach to trade, where products are differentiated by source countries and consumers view products from different countries as imperfect substitutes. As explained in *A Practical Guide to Trade Policy Analysis*, also provided to the Arbitrator by Korea, "most simulation models use the 'Armington assumption' whereby varieties of goods are differentiated by country of origin (Armington, 1969)."

29. The model detailed in the Hallren and Riker paper permits the estimation of the "magnitudes of the changes in the prices of the three varieties of products, the industry's overall price index, and the quantities of the products as a result of a reduction in the ad valorem tariff on subject imports…." The goal of the analysis is to quantify these changes given information on the duties and the initial values of trade and market shares in the LRWs industry.

2. Correct Data Inputs that Would Be Used in Applying an Armington-Based Partial Equilibrium Model

30. The United States provided to the Arbitrator correct data on the value of U.S. imports of LRWs from Korea for the period 2011-2017. Like Korea, the United States relies on data queried using the USITC's online trade statistics and tariff data program, DataWeb. Korea, however, appears to have queried data using 6-digit HTS subheadings. That is an error. In querying data using 6-digit HTS subheadings, Korea has overstated the value of U.S. imports of LRWs by including products outside the scope of the U.S. antidumping and countervailing duty measures on LRWs from Korea. The United States has queried import data for LRWs using the appropriate 10-digit HTS subheadings.

31. Korea has used data for Korea's share of U.S. imports as a proxy for market share data in its calculation of the level of nullification or impairment, and Korea also uses 2011 data for Korea's import share (with no adjustment for other factors) rather than 2017 import share data. These are serious errors that contribute to Korea grossly overstating the level of nullification or impairment. If Korea's import share is included as part of the calculation of the level of nullification or impairment at all, then Korea's 2017 import share should be used. Using 2011 data would be inconsistent with the correct counterfactual approach on which the parties agree.

32. In reality, Korea effectively more than double counts the level of nullification or impairment, because Korea starts with the share of imports of LRWs from Korea in 2011 multiplied by 2017 total import value, *i.e.*, an assumption of what the value would be unaffected by the U.S. measures. Korea then applies its incorrect economic model to that figure to estimate how much that figure would increase if the U.S. measures were removed. But again, the 2011 value of imports is already not affected by the U.S. measures. So, in effect, Korea is modeling a tariff reduction on an import value figure that is not subject to the tariffs.

33. The correct data inputs to be used in the calculation of the level of nullification or impairment would be the 2017 market shares of domestic producers, subject imports, and non-subject imports. It is possible to derive the necessary market share information using data that are publicly available. Specifically, one can use data on U.S. imports of LRWs from Korea and from the rest of the world in combination with data on the total value of the U.S. washing machines market compiled by the Association of Home Appliance Manufacturers ("AHAM"), appropriately adjusted to reflect the value of the U.S. LRWs market.

34. Following Korea's approach concerning the source of elasticities to use in the economic model, the United States has used elasticities of supply published by the USITC. To be consistent with Korea's representations about its intention to use "recent", "confirmed" information, the elasticities of supply used should be 6.

35. The United States also follows Korea's approach to use the median of the range of U.S. demand elasticity reported by the USITC. The USITC estimated the range to be -0.3 to -0.8. Accordingly, the -0.55 would be used for the price elasticity of total demand in the United States, which is the same value used by Korea.

36. Still following Korea's approach concerning the source of elasticities to use in the economic model, the United States has used the elasticity of substitution within the industry published by the USITC, again in the report issued at the conclusion of the 2017 global safeguard investigation of LRWs. Using the median of this range, the substitution elasticity in a calculation using an Armington-based partial equilibrium model would be 4.

37. The elasticity of substitution that the United States proposes the Arbitrator use, like the elasticities of supply and demand that Korea proposes be used, are estimates made by the USITC after analyzing responses from purchasers, producers, and importers to questionnaires concerning the LRWs market, as well as arguments made by interested parties. These estimated elasticities were published very recently and they are for the specific product at issue, LRWs. That makes them particularly well suited for use in a model to estimate the level of nullification or impairment in this dispute.

38. The United States uses Korea's calculation of the weighted-average antidumping and countervailing duty rates to be used to model the reduction of the antidumping duties and the

termination of the countervailing duties that are subject to DSB recommendations following the expiration of the RPT, *i.e.* 11.86 percent for the antidumping duty rate and 0.58 percent for the countervailing duty rate. The appropriate counterfactuals in this proceeding are reduction of the weighted-average antidumping duty rate from 11.86 percent to [[***]] and reduction of the weighted-average countervailing duty rate from 0.58 percent to zero percent.

39. Korea proposes that the level of nullification or impairment resulting from the maintenance of the WTO-inconsistent aspects of the U.S. antidumping and countervailing duty measures on LRWs from Korea after the expiration of the RPT should be increased each year using a growth rate factor that assumes an annual rate of growth of the U.S. washing machines market of 5.8 percent. Contrary to Korea's argument, a proper determination of the level of nullification or impairment resulting from the maintenance of WTO-inconsistent aspects of the U.S. antidumping and countervailing duty measures on LRWs from Korea after the expiration of the RPT should not include any growth rate factor at all.

40. Ample evidence in the form of public statements made by Samsung and LG demonstrates that the Korean producers of LRWs lack both the interest and the ability to resume production of LRWs in Korea for the U.S. market. Thus, if the U.S. measures on LRWs were brought into compliance with U.S. WTO obligations, the value of U.S. imports of LRWs from Korea would not increase at all, and it certainly would not increase each year in parallel with the projected growth of the market for washing machines in the United States, as Korea proposes. Given that, as of the end of 2018, "more than 95 percent of LG and Samsung LRWs will be supplied from the LG and Samsung U.S. LRW production factories," it is expected that the value of U.S. imports of LRWs from Korea will decline, not grow.

41. The numerous methodological and data problems with Korea's estimation of the level of nullification or impairment discussed above confirm that the level of suspension requested by Korea is far in excess of the level of nullification or impairment. In summary, if Korea's economic model were applied at all, which it should not be, the following errors in Korea's estimation of the level of nullification or impairment would need to be corrected:

DO NOT USE	**USE INSTEAD**
2011 data for Korea's imports share: 42.9%	2017 data for Korea's imports share: **15.5%**
Elasticity of Supply from January 2017: 7	Elasticity of Supply from December 2017: **6**
Projected 2017 Import Value Based on 6-Digit HTS Subheading: $1,764,569,000	Actual 2017 Import Value Based on 10-Digit HTS Subheadings: **$1,573 million**
Growth Rate Factor Based on Average Growth of the U.S. Washing Machines Market in Prior Years: 5.8%	**No Growth Rate Factor**

42. When the above errors in Korea's calculation are corrected, the annual level of nullification or impairment, using Korea's methodologically flawed approach, declines from $711 million per year to $198.7 million per year. That figure would be even lower if Korea's approach were further corrected to reflect that the WTO-inconsistent weighted-average antidumping duty rate should be reduced but not eliminated.

3. The Level of Nullification or Impairment that Would Result from the Application of an Appropriate Armington-Based Partial Equilibrium Model

43. Simultaneously solving the Armington system of equations using the given data inputs for each of the three estimates of the total value of the U.S. LRWs market, *i.e.*, using 60 percent of the total market value reported by AHAM, using 70 percent of the total market value reported by AHAM, and using 80 percent of the total market value reported by AHAM, yields the following calculations of the level of nullification or impairment, but with respect to the antidumping measure and the countervailing duty measure.

44. The level of nullification or impairment resulting from the maintenance of the WTO-inconsistent aspects of the U.S. antidumping measure on LRWs from Korea after the expiration of

the RPT would range between $18 million and $25 million annually, depending on assumptions made about the size of the LRWs market.

45. The level of nullification or impairment resulting from the maintenance of the WTO-inconsistent aspects of the U.S. countervailing duty measure on LRWs from Korea after the expiration of the RPT would be between $2.28 million and $2.39 million annually, depending on assumptions made about the size of the LRWs market.

46. The United States considers that the most reasonable estimate of the size of the U.S. LRWs market, which would ensure that the level of nullification is not overstated by the economic model, is 70 percent of the total value of the U.S. washing machines market as reported by AHAM. Accordingly, for purposes of this discussion, the level of nullification or impairment resulting from the maintenance of the WTO-inconsistent aspects of the U.S. antidumping duty measure on LRWs from Korea after the expiration of the RPT would be no more than $18 million to $25 million per year, and the level of nullification or impairment resulting from the maintenance of the WTO-inconsistent aspects of the countervailing duty measure on LRWs from Korea after the expiration of the RPT would be no more than $2.32 million per year.

III. KOREA'S REQUEST TO SUSPEND CONCESSIONS FOR PRODUCTS OTHER THAN LRWS ON THE BASIS OF A FORMULA IS CONCEPTUALLY FLAWED AND CONTRARY TO THE DSU

47. Korea also requests to suspend concessions with respect to products other than LRWs. Rather than proposing a particular level of suspension, however, Korea requests authorization to apply a formula. Korea explains that the same "formula used for calculating the level of nullification and impairment [for] LRW imports will also be used to estimate the level of nullification and impairment" resulting from Commerce's application of a differential pricing methodology and its use of zeroing in antidumping proceedings involving Korean imports other than LRWs that are initiated after the expiration of the RPT.

48. Korea's proposed suspension is contrary to the DSU. The formula that Korea proposes is purely speculative and not based on sound economic analysis. The selection of an appropriate economic model or formula is based on a number of critical factors, such as the appropriate estimation technique to apply (simulation or econometrics), substitutability of products, and other variables that could affect market demand and supply conditions. The use of a single formula for a number of different products is not feasible without first examining the different industries that produce those products, and the different markets in which those products are traded, to determine whether it would be appropriate to use the same economic model or formula to analyze the different products. Korea has not even attempted to establish the basis for determining that the same formula – premised on the same economic assumptions, which are flawed in the case of LRWs – could be used to analyze all of the non-LRW products at issue in this dispute. Furthermore, the formula that Korea proposes to use suffers from the same conceptual flaws and data input problems, whether it is applied to LRWs or imports other than LRWs.

A. The Formula Korea Proposes To Use To Determine the Level of Nullification or Impairment for Products Other than LRWs Suffers from the Same Conceptual Flaws and Data Input Problems as the Formula Korea Proposes To Use for the Determination for LRWs

49. The "static partial equilibrium model" that Korea proposes to use is inappropriate for use in determining the level of nullification or impairment resulting from the maintenance of U.S. antidumping and countervailing duty measures on LRWs from Korea after the expiration of the RPT. Korea's economic model rests on a number of incorrect assumptions, which renders it also unsuitable for determining the level of nullification or impairment for Korean imports other than LRWs.

50. First, the particular type of partial equilibrium model that Korea proposes to use "assume[s] that the world is composed of … two countries only" and that "export supply and import demand are entirely determined by the domestic conditions in the respondent's and the complainant's markets." That is an incorrect assumption to make for all the products identified in Appendix B of Korea's Methodology Paper. Korea and the United States are not the only two countries that produce and

sell in the U.S. market the products other than LRWs that are identified in Appendix B of Korea's Methodology Paper.

51. Second, the economic model on which Korea's formula is based assumes that there is perfect substitution between the Korean products and U.S. products and, implicitly, no substitution at all between imports from Korea and non-subject imports. However, all of the USITC reports identified in Appendix B of Korea's Methodology Paper recommend substitution elasticities for each of the products examined. Korea's assumption of perfect substitution is incorrect.

52. For these reasons, just as Korea's static partial equilibrium model is inappropriate for use in determining the level of nullification or impairment with respect to LRWs, it is equally inappropriate for use in determining the level of nullification or impairment with respect to all the Korean imports other than LRWs that are identified in Appendix B of Korea's Methodology Paper.

53. Nor would it be appropriate to determine the level of nullification or impairment using the Armington-based partial equilibrium model that is described above. The data input issues that the United States has discussed would be compounded in the application of such an economic model to so many different products. For example, just as there has been difficulty identifying appropriate market share data for the specific LRWs market at issue in this dispute (as opposed to the broader washing machines market), likely there would be similar challenges collecting up-to-date market share data specific to the precise products other than LRWs that are identified in Appendix B of Korea's Methodology Paper. Nothing in Article 22 of the DSU would permit Korea to make determinations for itself about the proper market share data and other data inputs to be used.

54. Similarly, when calculating the level of nullification or impairment with respect to LRWs, Korea erred in compiling U.S. import data by using incorrect HTS subheadings in its data query, which resulted in Korea misstating of the value of U.S. imports of LRWs. Korea proposes to gather import data for products other than LRWs the same way. This suggests the strong likelihood that Korea would make the same errors with respect to those other products. It would be contrary to the DSU for Korea to suspend concessions with respect to the United States on the basis of an inappropriate formula applied using erroneous data inputs that results in an overstatement of the level of nullification or impairment.

55. Finally, the formula Korea has proposed includes a growth rate factor. Korea, however, gives no evidence to support an assumption of growth, let alone any indication of how that growth rate factor would be applied to products other than LRWs or from where data would come to determine the growth rate factor. This is another conceptual and data input failing of Korea's proposed formula approach.

56. Given these methodological and data problems, Korea's request for authorization to suspend concessions by applying a formula to determine the level of nullification or impairment for products other than LRWs should be denied.

B. Korea's Request for Authorization to Suspend Concessions on the Basis of a Formula in this Dispute Is Contrary to the DSU

57. Despite Korea's assurance that data are "publicly available and can be readily employed by both Korea and the United States," the issues discussed in the preceding section demonstrate that the formula approach Korea proposes is inappropriate, impractical, and would result in a level of suspension of concessions and related obligations that is not equivalent to the level of nullification or impairment. That renders Korea's request for suspension contrary to the DSU, and requires its rejection.

58. As a general matter, neither the DSU nor subsequent arbitrator decisions preclude the possibility that the Arbitrator might base the level of suspension of concessions on a formula. That being said, however, a Member's right to request and be authorized to suspend obligations on the basis of a formula is not without any limitation. The arbitrator in *US – Offset Act (Brazil) (Article 22.6 – US)* reasoned that, as long as the approved level of suspension is equivalent to the level of nullification or impairment, there is no "reason why these levels may not be adjusted from time to time, provided such adjustments are justified and unpredictability is not increased as a result." Under Article 22.4 of the DSU, the level of suspension of concessions "is" to be equivalent to the level of

nullification or impairment. The use of the present tense "is" indicates that the level of suspension of concessions may need to be determined in a manner that allows it to continue to be equivalent to the level of nullification or impairment, but, at the same time, the level of suspension of concessions must never be permitted to exceed the level of nullification or impairment.

59. As explained above, the formula Korea proposes to apply grossly overstates the level of nullification or impairment resulting from the maintenance of the WTO-inconsistent aspects of the U.S. antidumping and countervailing duty measures on LRWs from Korea after the expiration of the RPT. The same would be true if that formula were applied for products other than LRWs. Because they would greatly exceed the actual level of nullification or impairment, the adjustments to Korea's level of suspension of concessions that Korea proposes to make using its formula would not be "equivalent" and thus would not be "justified."

60. Additionally, given the data input problems discussed in the preceding section – including the difficulty of identifying correct market share information for the particular products subject to antidumping measures; the errors that Korea has already made querying U.S. import data; and the entirely unknowable volume and value of imports in future years – the adjustments to Korea's level of suspension of concessions made using Korea's proposed formula would increase "unpredictability" substantially. Indeed, the level of suspension under Korea's proposed approach simply could not be predicted at all.

61. For these reasons, Korea's request for authorization to suspend concessions on the basis of a formula in this dispute is contrary to the DSU.

IV. CONCLUSION

62. For the reasons set forth in the U.S. written submission, oral statements during the substantive meeting of the Arbitrator with the parties, and the U.S. written responses to questions from the Arbitrator, the United States respectfully requests that the Arbitrator find that the level of suspension of concessions requested by Korea is in excess of the appropriate level of nullification or impairment, and further find that the level of nullification or impairment is **zero**. Furthermore, the United States respectfully requests that the Arbitrator distinguish in its decision the level of any nullification or impairment resulting from the maintenance of the WTO-inconsistent aspects of the U.S. antidumping duty measure on LRWs from Korea and the level of any nullification or impairment resulting from the maintenance of the WTO-inconsistent aspects of the U.S. countervailing duty measure on LRWs from Korea.

ANNEX B-2

INTEGRATED EXECUTIVE SUMMARY OF THE ARGUMENTS OF KOREA

I. INTRODUCTION

1. Korea requested authorization to suspend concessions and other related obligations under the *General Agreement on Tariffs and Trade 1994* ("GATT 1994") at the meeting of the Dispute Settlement Body ("DSB") on 22 January 2018, pursuant to Article 22.2 of the *Understanding on Rules and Procedures Governing the Settlement of Disputes* ("DSU").[1] Korea's request, in the amount of USD 711 million, was based on the United States' failure to implement the DSB's recommendations and rulings as contained in the Panel Report and the Appellate Body Report in the dispute *US – Washing Machines* (DS464).

2. The United States was granted the longest reasonable period of time ("RPT") to bring its measures into compliance contemplated under the DSU absent any particular circumstances.[2] However, the United States has not even started implementing the DSB's recommendations and rulings with respect to the anti-dumping measures of the U.S. Department of Commerce ("USDOC"), and only initiated implementation proceedings relating to the countervailing duty measures immediately before the expiration of the RPT. Accordingly, as prescribed by Article 22 of the DSU, Korea is entitled to suspend certain concessions and related obligations at the level equivalent to the level of the nullification or impairment.

II. PROCEDURAL BACKGROUND

3. On 29 August 2013, Korea requested consultations with the United States concerning the USDOC's anti-dumping and countervailing duty investigations on large residential washers ("LRWs") from Korea, and the comparison methodologies used by the USDOC in its anti-dumping investigations and administrative reviews.[3] In its reports, the Panel and the Appellate Body made several findings in favor of Korea.[4] Pursuant to the DSB's recommendations and rulings, adopted on 26 September 2016, the U.S. measures that must be brought into conformity can generally be grouped as follows:

a. The differential pricing methodology ("DPM"), which was found to be "as such" inconsistent with the second sentence of Article 2.4.2 of the Anti-Dumping Agreement;

b. The USDOC's use of zeroing when applying the W-T comparison methodology, which was found to be "as such" inconsistent with Article 2.4.2 and Article 2.4 of the Anti-Dumping Agreement, and inconsistent "as such" with Article 9.3 of the Anti-Dumping Agreement and Article VI:2 of the GATT 1994 when used in administrative reviews;

c. The USDOC's dumping determination in the *Washers* anti-dumping investigation, because the USDOC's calculation of dumping margins was inconsistent with Articles 2.4.2 and 2.4 of the Anti-Dumping Agreement; and

d. The USDOC's countervailing duty determination in the *Washers* countervailing duty investigation and remand determination because the USDOC's determinations were inconsistent with Articles 2.1(c) and 19.4 of the SCM Agreement and Article VI:3 of the GATT 1994.

4. After the parties to the dispute failed to agree on a period of time for the United States to implement the DSB's recommendations and rulings, the Arbitrator determined the RPT to be 15 months pursuant to Article 21.3(c) of the DSU,[5] and accordingly, the United States was required to

[1] WT/DS464/18.
[2] DSU, Article 21.3(c).
[3] WT/DS464/1.
[4] Panel Report, *US – Washing Machines*, para. 8.1.b.i and Appellate Body Report, *US – Washing Machines*, paras. 6.14 and 6.16.
[5] Decision of the Arbitrator, *US – Washing Machines (Article 21.3(c))*, para. 4.1.

bring its measures into compliance by 26 December 2017. Despite having over a year to implement the DSB's recommendations and rulings, the United States did not amend even a single measure. Instead, on 15 December 2017, just eleven days before the expiration of the RPT, the United States Trade Representative ("USTR") sent a letter to the U.S. Secretary of Commerce requesting that the USDOC issue a revised determination in light of the DSB's recommendations and rulings.[6] Notably, while the letter references the Panel and Appellate Body reports, it limits its instructions to the countervailing duty determination only, and makes no mention of the Panel and Appellate Body's recommendations on the anti-dumping investigation or "as such" findings. In accordance with USTR's instructions, the USDOC subsequently initiated proceedings under Section 129 of the Uruguay Round Agreements Act ("URAA") only with respect to the countervailing duty proceedings.[7] As of the end of the RPT, the USDOC had done nothing more than issue questionnaires to Samsung and the Government of Korea.[8] The United States has yet to take a single step to implement the DSB's recommendations with respect to its anti-dumping determination.

5. In short, the United States has not modified or terminated the anti-dumping and countervailing duty orders that were improperly applied, and has made no modifications to the DPM method or W-T price comparison method. As such, the United States failed to comply with the recommendations and rulings of the DSB within the RPT. After the failure to reach an agreement on compensation, Korea had no choice but to request authorization to suspend concessions and related obligations.[9] On 19 January 2018, pursuant to Article 22.6 of the DSU, the United States objected to the level of suspension of concessions and related obligations.[10]

III. ARBITRATOR'S ROLE AND BURDEN OF PROOF

6. An arbitrator's mandate in Article 22.6 arbitration is to determine whether the level of suspension of concessions or other obligation sought by the complaining party is equivalent to the level of nullification or impairment.[11] The arbitrator's determination of the level of nullification or impairment should not use an approach that is too remote, too speculative, or not meaningfully qualified.[12] In order for an arbitrator to find that the level of nullification or impairment at a certain point in time is "zero," the arbitrator should find that there is "*no* `credible, factual, or verifiable information' available to quantify the level of nullification or impairment."[13] Thus, if there is credible, factual, or verifiable information that permits the arbitrator to quantify a level of nullification and impairment, the arbitrator should not find that the level of nullification or impairment is zero.

7. When counterfactual scenarios have been used to examine the level of suspension of concessions or other obligations, past arbitrators have determined whether the underlying counterfactual is "plausible" or "reasonable."[14] Arbitrators have recognized that it is not an arbitrator's mandate to speculate on what "the most likely," or the exact way, of implementing DSB ruling would have been "as counterfactuals always involve an inherent degree of uncertainty because they represent a hypothetical scenario."[15] Past arbitrators have examined the calculation of the level of nullification or impairment on the basis of the "plausible" or "reasonable" counterfactual, depending on the circumstances of the case.[16] If the counterfactual proposed by the requesting party is "plausible" or "reasonable," the arbitrator is obliged to accept this counterfactual.[17] Therefore, in determining the proper level of suspension of concessions in this case, the Arbitrator should analyze whether the

[6] Letter from USTR to USDOC (Exhibit KOR-01).

[7] Notice of Initiation (Exhibit KOR-02). On 4 June 2018, the USDOC issued its final determination in the Section 129 countervailing duty proceedings, which did not result in a change in the outcome of the USDOC's original countervailing duty determination.

[8] Questionnaire to Samsung (Exhibit KOR-03); Questionnaire to GOK (Exhibit KOR-04).

[9] WT/DS464/18.

[10] WT/DS464/19.

[11] DSU Article 22.7.

[12] Decision of the Arbitrator, *US – 1916 Act (EC) (Article 22.6 – US)*, para. 5.57.

[13] Panel Report, *EC – Bananas III (Article 21.5 – US)*, para. 5.250. (emphasis added)

[14] Decisions of the Arbitrator, *US – Gambling (Article 22.6 – US)*, paras. 3.26-3.27*; EC – Bananas III (US) (Article 22.6 – EC)*, para. 7.7; *US – Tuna II (Mexico) (Article 22.6 – US)*, para. 4.5; *US – Section 110(5) Copyright Act (Article 25)*, paras. 4.7-4.14.

[15] Decision of the Arbitrator, *US – Gambling (Article 22.6 – US)*, paras. 3.26 and 3.37; see also Decision of the Arbitrator, *US – Tuna II (Mexico) (Article 22.6 – US)*, para. 4.5.

[16] Decision of the Arbitrator, *US – Gambling (Article 22.6 – US)*, paras. 3.27 and 3.30-3.31.

[17] See Korea's Responses to the Arbitrator's Advance Questions, para. 10.

counterfactual proposed by Korea is "plausible" or "reasonable," in light of the circumstances of the dispute.

8. In an arbitration proceeding under Article 22.6, the burden of proof rests on the party challenging the proposed level of suspension of concessions.[18] In this proceeding, the United States bears the burden of establishing a *prima facie* case that Korea's proposed level of suspension of concessions is not equivalent to the level of nullification or impairment caused by the United States' WTO-inconsistent measures. Past arbitrators have confirmed that the objecting party must engage in the economic model proposed by the requesting party,[19] and must also show that the counterfactual proposed by the requesting party does not reflect the level of nullification or impairment.[20] Failure by the United States to make a *prima facie* case would result in a decision in favor of Korea.

9. Moreover, even if the United States meets its *prima facie* obligation, it must then successfully rebut the arguments and evidence presented by Korea. In the event there is equipoise in the arguments and evidence, the arbitrator must find against the party bearing the burden of proof – the United States.[21]

IV. KOREA'S METHODOLOGY

A. Termination of the WTO-inconsistent Measures is a Plausible and Reasonable Counterfactual Scenario under the Circumstances

10. Article 22.4 of the DSU requires the level of suspension of concessions authorized by the DSB to be equivalent to the level of nullification or impairment. To calculate this amount, arbitrators have relied on counterfactual scenarios.[22] A counterfactual scenario is used to illustrate the level of exports that would have been achieved had the responding party complied with the recommendations and rulings of the DSB at the end of the RPT. Arbitrators have found that an appropriate counterfactual is one where the WTO-inconsistent measure is removed as of the expiration date of the RPT.[23]

11. In order to calculate the level of nullification and impairment caused by the United States' failure to comply with the DSB's recommendations and rulings by the end of the RPT, Korea applied a counterfactual scenario in which the WTO-inconsistent anti-dumping and countervailing duties are terminated as a result of the U.S. compliance with the recommendations and rulings of the DSB. Under this counterfactual scenario, Korea calculated the additional value of Korea's exports of large residential washers ("LRWs") to the United States that could have been achieved had the United States terminated the anti-dumping and countervailing duty orders on LRWs by 26 December 2017.

12. Not only is Korea's counterfactual both plausible and reasonable, but it is also the only counterfactual before the Arbitrator that does not require the Arbitrator to make speculations beyond its mandate. An appropriate counterfactual scenario is one in which the WTO-inconsistent measure has been brought fully into compliance with the DSB's recommendations and rulings.[24] There is no doubt that termination of the anti-dumping and countervailing duty measures at issue would bring the WTO-inconsistent measure into compliance. Moreover, Korea's counterfactual scenario is consistent with Article 3.7 of the DSU, which states that the preferred outcome under the dispute settlement mechanism is to secure withdrawal of the WTO-inconsistent measure, as well as prior Article 22.6 proceedings, where arbitrators have found that an appropriate counterfactual is one

[18] See Decision of the Arbitrator, *EC – Hormones (US) (Article 22.6 – EC)*, para. 9.
[19] Decision of the Arbitrator, *US – COOL (Article 22.6 – US)*, para. 4.14.
[20] Decision of the Arbitrator, *US – Gambling (Article 22.6 – US)*, para. 3.23.
[21] Decision of the Arbitrator, *EC – Hormones (US) (Article 22.6 – EC)*, para. 9.
[22] See e.g., Decisions of the Arbitrator, *EC – Bananas III (US) (Article 22.6 – EC),* para. 7.1*; EC – Hormones (Canada) (Article 22.6 – EC)*, para. 38; *Canada – Aircraft Credits and Guarantees (Article 22.6 – Canada)*, para. 3.21; *US – COOL (Article 22.6 – US),* para. 6.32; *US – Tuna II (Mexico) (Article 22.6 – US),* para. 4.10.
[23] See e.g., Decisions of the Arbitrator, *EC – Hormones (Canada) (Article 22.6 – EC),* para. 37*; EC – Hormones (US) (Article 22.6 – EC)*, para. 38; *US – COOL (Article 22.6 – US)*, para. 6.32.
[24] U.S. Written Submission, paras. 24-25.

where the WTO-inconsistent measure is removed as of the expiration date of the RPT.[25] Accordingly, Korea's counterfactual scenario is both plausible and reasonable.

13. The United States has failed to demonstrate that Korea's counterfactual is implausible or unreasonable. The United States relies on the fact that Daewoo's anti-dumping and countervailing duty margins were not subject to the underlying Panel and Appellate Body proceedings to argue that Daewoo's margin would have enabled the USDOC to maintain the anti-dumping and countervailing duty orders independent of Samsung and LG.[26] However, as Daewoo was not subject to the Panel and Appellate Body proceedings, it cannot be a basis for determining the correct counterfactual to be used in this case.

14. Moreover, the United States conflates "implementation" with the "counterfactual," at most arguing that there could be other ways that the United States implements the DSB's recommendations or rulings. The counterfactual need not represent how a Member would have actually implemented its obligations, and need not even reflect the "most likely" scenario.[27] As the United States has recognized in a prior case, even if there could be other options for implementing the DSB's recommendations and rulings, this does not mean that the withdrawal of the WTO-inconsistent measure is not an appropriate counterfactual for the purposes of an Article 22.6 arbitration.[28] What other actions the United States could have taken to implement the DSB's recommendations and rulings is simply irrelevant in the context of selecting a counterfactual for the purposes of calculating the level of nullification or impairment.

15. In addition, the counterfactual proposed by the United States is not "plausible" or "reasonable." First, the United States is proposing a counterfactual that does not hypothesize full implementation of a recommendation to bring a measure into conformity with the covered agreements.[29] As the United States concedes, its alternative counterfactual only addresses the DSB's "as applied" findings, and it does not take into account how the "as such" findings would impact the implementation of the "as applied" findings.[30] However, according to the United States' own statements in the proceedings under Article 21.3(c), it would not be possible to implement the "as applied" findings without first implementing the "as such" findings, because the revised approaches and methodologies that will be developed in implementing the "as such" findings would potentially be applied or adapted to the "as applied" implementation measure.[31]

16. Even in addressing only the "as applied" findings, the United States explains that it would take the measures described in its counterfactual only after following the procedures it described in the Article 21.3(c) proceedings, which include requesting comments from interested parties concerning the appropriate calculation methodology, which the USDOC would then take into account in re-determining LG's margin of dumping.[32] Therefore, the U.S. counterfactual, which applies a pre-determined dumping margin for LG that was already on the record of the proceedings, cannot be plausible or reasonable as it ignores steps within the implementation process that could lead to a further revision of the dumping margin.

17. Furthermore, the U.S. counterfactual would require the Arbitrator to examine the WTO-consistency of the hypothetical measure, which falls outside of the scope of this arbitration. The requirement for a counterfactual to be WTO-consistent does not mean that the United States enjoys a presumption of conformity in which its counterfactual will be interpreted in a manner that is deemed to be WTO-consistent. This is particularly true given the speculative nature of the U.S. counterfactual, under which the USDOC "might" take certain steps and "might" reach a decision to use the W-W methodology instead of the WTO-inconsistent W-T methodology.[33] That the USDOC "might" make these determinations can equally be understood to mean that the United States could also continue to apply the WTO-inconsistent measures if the USDOC does not change its original

[25] Korea's Methodology Paper, para. 22; see also Decisions of the Arbitrator, *EC – Hormones (Canada) (Article 22.6 – EC)*, para. 37; *EC – Hormones (US) (Article 22.6 – EC)*, para. 38; *US – COOL (Article 22.6 – US)*, para. 6.32; *US – Tuna II (Mexico) (Article 22.6 – US)*, paras. 4.4 and 4.9.

[26] U.S. Written Submission, para. 26; U.S. Opening Statement, para. 22.

[27] Decision of the Arbitrator, *US – Gambling (Article 22.6 – US)*, para. 3.26.

[28] Decision of the Arbitrator, *US – COOL (Article 22.6 – US)*, para. 3.11.

[29] U.S. Replies to the Arbitrator's Advance Questions, para. 12.

[30] U.S. Opening Statement, para. 19.

[31] Korea's Replies to the Arbitrator's Post-Hearing Questions, paras. 6-8.

[32] U.S. Replies to the Arbitrator's Post-Hearing Questions, para. 24.

[33] U.S. Replies to the Arbitrator's Post-Hearing Questions, para. 25.

determinations. In fact, even if the Arbitrator were to accept that the USDOC would take these steps and use the W-W comparison method under the first sentence of Article 2.4.2 rather than the W-T comparison method under the second sentence, there is no way to ensure that the United States would apply the W-W methodology in a manner that is WTO-consistent. The Arbitrator cannot presume that the use of the W-W method would automatically result in WTO-consistent results. Thus, there is no way for the Arbitrator to ensure that the U.S. counterfactual is WTO-consistent.

18. In short, Korea's counterfactual premised on the termination of import duties is plausible and reasonable, and in fact, the only indisputably WTO-consistent counterfactual scenario available for the Arbitrator's consideration. On the other hand, the U.S. counterfactual is irreconcilable with the United States' own description of its domestic procedures. It is also speculative, requiring the Arbitrator to either presume WTO-consistency of the measure, which has no legal basis, or to examine the WTO-consistency of the hypothetical measure, which falls outside of the scope of this arbitration. Thus, Korea respectfully requests that the Arbitrator find that termination of the WTO-inconsistent measures is the appropriate counterfactual scenario in this proceeding.

B. Korea's Economic Analysis Demonstrates that Korea's Proposed Level of Suspension is Equivalent to the Level of Nullification and Impairment

1. The Bown & Ruta Partial Equilibrium Model is the Most Appropriate Model to Calculate the Level of Nullification and Impairment

19. Korea calculated the level of suspension of concessions or other obligations by using a partial equilibrium model based on research conducted by Chad Bown and Michele Ruta to estimate the trade effects of the United States' failure to comply with the DSB's recommendations and rulings as of the expiration of the RPT ("Bown & Ruta model"). The Bown & Ruta model is a widely recognized economic model that explains trade effects under simple yet effective economic frameworks. Indeed, the United States itself proposed essentially the same methodology in its methodology paper in the Article 22.6 arbitration of *India – Agricultural Products (Article 22.6 – India)*.[34]

20. The Bown & Ruta model directly calculates the total amount of the trade effect resulting from the WTO-inconsistent trade measure. In other words, instead of calculating the level of imports that would have been achieved if the WTO-inconsistent measure had been withdrawn and subtracting the actual amount of imports at the end of the RPT, Korea's model achieves the same effect by directly calculating the amount of additional imports that would have been achieved if the WTO-inconsistent measure was removed. The reason that Korea used this method is because it directly calculates the impact of the trade measure in a manner that excludes external factors that can distort the impact of the WTO-inconsistent measure. For example, exporters often take action to overcome unfair anti-dumping and countervailing duty measures at great cost, resulting in an increase in the actual import value that belies the trade impact of the WTO-inconsistent measure. The Bown & Ruta isolates the trade impact of the trade measure itself so that these external factors are not taken into consideration.

21. The formula used by Korea to calculate the level of nullification or impairment for LRWs in the amount of USD 711 million is as follows:

Trade loss due to the United States' measures: USD 711 million =

(price drop of 11.86% by terminating the application of the second sentence of Article 2.4.2 + price drop of 0.58% by terminating the application of countervailing duties) x

(The share of imports from Korea of 42.9% as of 2011) x

(Price elasticity of demand 0.55 + price elasticity of supply 7) x

(The entire U.S. import value of USD 1,764,569,000 projected as of 2017)

[34] *India – Agricultural Products*, U.S. Methodology Paper, para. 6 (Exhibit KOR-29) ("Lost U.S. CLQ exports due to India's import ban are calculated using a static partial equilibrium model, which is described in detail in sections IV through VI. This analytical framework is grounded in academic literature and has been used to quantify the trade effects of similar measures. Past Article 22.6 arbitrators have also relied on a partial equilibrium model.").

22. To calculate the level of nullification and impairment for LRWs for subsequent years, Korea applied a growth rate that is based on the projected average growth rate for the U.S. LRW market, under the reasonable assumption that Korea's imports would increase proportionately with the growth of the U.S. LRW market.[35]

23. In this formula, the change in price is calculated based on the price drop of washing machines from Korea induced by the removal of the WTO-inconsistent measures. As the measures at issue are the imposition of tariffs, the level of price drop resulting from the removal of such tariffs is equivalent to the level of tariffs imposed on LRWs from Korea. This is represented by the weighted average anti-dumping duty rate of 11.86 percent, and the weighted average countervailing duty rate of 0.58 percent. Korea further made adjustment to the price drop by multiplying the import share of washing machines from Korea, in order to correctly reflect the real impact on the price of the entire U.S. market caused by the price drop of washing machines from Korea.

24. Through the partial equilibrium model, Korea is able to show that imposition of the anti-dumping and countervailing duties resulted in artificially higher prices in the U.S. market, and accordingly, a decreased volume of exports of Korean LRWs in the United States. Removing the WTO-inconsistent anti-dumping and countervailing duties lowers the price of washing machines in the U.S. market, which increases the demand for Korean washing machines, causing a reduction in domestic supply. This change in the demand and supply in the U.S. market creates excess demand which, multiplied by prices in the U.S. market, is equivalent to the value of additional exports from Korea. This value, calculated as USD 711 million at the expiry of the RPT, represents the trade loss caused by the United States' non-compliance.

25. The United States claims that the model is not appropriate because it assumes perfect substitutability.[36] However, perfect substitutability is not an absolute requirement for using the Bown & Ruta model, as demonstrated by the United States' own proposal of essentially the same model to calculate the level of nullification or impairment in the *India – Agricultural Products* case.[37] In particular, Korea does not consider the substitutability of LRWs to be lower than the substitutability of the chicken products that were at issue in the *India – Agricultural Products* case. The fierce price competition among LRWs in the U.S. market approximates "perfect substitution,"[38] while the level of substitutability between food products that are perceived to be contaminated, and those that are not, would likely be much lower than the level of substitutability between brands of washing machines.[39]

26. In addition, the Bown & Ruta model does not assume that the existence of products only from two countries. Rather, it isolates the trade effects to these two countries, making it unnecessary to separately take into account third countries.

27. Finally, the use of import share in Korea's model as opposed to the total market share in the *India – Agricultural Products* model is not a meaningful difference that renders the Bown & Ruta model inaccurate.

28. Furthermore, the alternative economic model based on Armington specifications proposed by the United States is not an appropriate model to calculate the level of nullification or impairment. The Armington model is designed specifically to understate trade effects of WTO-inconsistent measures, as it assumes that consumers are locked into one of three product varieties, which cannot be substituted with any other product variety. Because of the presumed lack of substitutability among LRWs under the Armington model, the model is largely immune to changes in import volumes, as these imported products cannot substitute domestic products or non-subject imports.[40]

29. Moreover, the Armington model is highly sensitive to model parameters, and in particular, Armington elasticities. In this case, a change in just one digit of the elasticity results in double-digit

[35] Korea's Methodology Paper, para. 46; see also Korea's Written Submission, paras. 82-83.
[36] U.S. Written Submission, para. 60.
[37] Korea's Opening Statement, paras. 57-62.
[38] Korea's Replies to the Arbitrator's Advance Questions, para. 82; Korea's Opening Statement, para. 60.
[39] Korea's Opening Statement, para. 61.
[40] Korea's Opening Statement, para. 66.

increases in the level of nullification or impairment.[41] Because of this sensitivity to elasticities, it is not possible to obtain an accurate calculation using the Armington model based on the elasticity information on the record – the elasticity information provided in the U.S. International Trade Commission ("USITC") report. In order to accurately calculate the level of nullification or impairment using the Armington model, it would be necessary to collect elasticity information that aims to calculate trade volumes for a very narrowly defined product scope, such as LRWs. To avoid distortions caused by the Armington model's sensitivity to elasticities, the elasticity information must be precisely calculated by accurately estimating the specific level of substitution among products from different origins, and based on market prices and quantity changes for a specific year.[42]

30. Considering the various theoretical and practical limitations of the Armington model, it is more appropriate to employ the Bown & Ruta model in this case, as it provides accurate results using reasonably available data.

2. Korea's Use of Data Inputs is Reasonable and Accurate

31. Korea's formula for calculating the level of nullification and impairment for LRW products is based on accurate and reasonably available data. In particular, the use of 2011 import share data using the Bown & Ruta model is appropriate and necessary to obtain an accurate calculation of the level of nullification and impairment, based on what Korea's import value would have been had the WTO-inconsistent measure been removed at the end of the RPT.

32. Korea's approach is consistent with the arbitrator's findings in *EC – Hormones (US) (Article 22.6 – EC).* The arbitrator in that dispute considered the "pre-ban figures" to be a representative starting-point for the calculations of total exports under the counterfactual, i.e., assuming the ban would have been lifted at the end of the RPT.[43] Following this reasoning, Korea uses the 2011 import share data in order to calculate what the value of Korea's imports would have been had the WTO-inconsistent measure been brought into conformity at the end of the RPT, under the reasonable assumption that Korea would regain the import share that it had prior to the imposition of the WTO-inconsistent measures.

33. The incorporation of 2011 import data does not mean that the level of nullification or impairment calculated using Korea's formula is punitive or seeks to reverse the trade effects of the WTO-inconsistent measures.[44] As an Article 22.6 arbitration is predicated on the responding party not having brought its measure into compliance by the end of the RPT, it is impossible to know what the actual effect of removing those measures would be. A reasonable consideration in estimating how the market would react if the measures were removed is the state of the market before the measures were imposed. Examination of pre-measure data thus provides a reasonable proxy of the market situation in the absence of the WTO-inconsistent measure.

34. In fact, Korea applied the 2011 import share data to 2017 total import value data in order to estimate what the import value would have been for Korean LRW imports based on 2017 data. The 2011 import share was only incorporated to estimate the proportion of imports that would have been attributable to Korea without the WTO-inconsistent measure.

35. In addition, the United States challenges the incorporation of a growth rate in Korea's formula for nullification and impairment in 2018 and beyond.[45] It is reasonable to take into account the anticipated growth rate of the relevant industry when calculating the level of nullification and impairment. Indeed, the growth rate factor has been used in past 22.6 arbitrations. The concept of nullification and impairment recognizes that benefits would otherwise continue to accrue absent a WTO-inconsistent measure. If the benefits increase or decrease in the future, it is reasonable that the level of nullification and impairment would also change depending on the level of benefits that Korea would have otherwise accrued at that time. Therefore, a level of suspension that incorporates market growth rate would be more accurate and equivalent to the level of nullification and impairment. It is reasonable to assume that imports of Korean washing machines will increase at least in proportion to the size of the market. Furthermore, Korea's projected growth rate is more

[41] Korea's Opening Statement, para. 68.
[42] Korea's Replies to the Arbitrator's Post-Hearing Questions, para. 74.
[43] Decision of the Arbitrator, *EC – Hormones (US) (Article 22.6 – EC)*, para. 67.
[44] U.S. Replies to the Arbitrator's Post-Hearing Questions, para. 38.
[45] U.S. Written Submission, paras. 116-121.

conservative than the actual expected growth rate for both the washing machines industry and for LG and Samsung products.

36. The United States has pointed to no precedent or authority to support its claim that that growth rates should not be taken into account. In fact, the United States itself has incorporated the growth rate factor in its formula in a previous dispute.[46] Rather, the only basis of the United States' challenge to the incorporation of a growth rate is its argument that the business decision of exporters LG and Samsung to move production facilities out of Korea means that imports from Korea would not increase in proportion to growth in the U.S. LRW market. However, as discussed further below, the business decisions of individual companies are not relevant to determining the level of nullification and impairment suffered by Korea.

C. The United States' Claim that Failure to Bring its Measure into Compliance Would Not Result in Any Nullification or Impairment is Baseless

37. The United States' argument that the appropriate level of nullification or impairment in this arbitration is zero, because LG and Samsung have no interest or ability to produce LRWs in Korea for the U.S. market, is groundless.[47] The U.S. assertion has no basis in the WTO agreements or past arbitrations under Article 22.6 of the DSU. It is undisputed that the United States violated its obligations under the Anti-Dumping Agreement, the SCM Agreement, and the GATT 1994, and that such violations "have nullified or impaired benefits accruing to Korea under those agreements."[48] Where a Member's measure has found to nullify and impair benefits accruing to another Member, "the level must be something greater than 'zero,' and it is a contradiction in terms to suggest otherwise."[49]

38. Furthermore, the premise that the United States' failure to bring its measure into compliance would result in zero nullification and impairment is simply untrue. Korean producers continue to export LRWs from Korea into the United States, and the United States has not established that Korea's export volumes would not recover with the removal of the WTO-inconsistent measures. Rather, the United States relies on statements made by Samsung and LG officials in the context of a separate investigation conducted under separate domestic laws to argue that the companies do not intend to resume LRW production in Korea for the U.S. market, and that the business decision is not the result of the WTO-inconsistent anti-dumping and countervailing duty measures.[50]

39. The United States' claims are baseless for several reasons. First, the DSU makes clear that it is the *Member* that is subject to the nullification or impairment of benefits – not individual companies within the territory of the Member.[51] Thus, the business decisions of individual companies have no bearing on determining the level of nullification and impairment caused to Korea. In fact, as a practical matter, it would be impossible to estimate trade effects if the business considerations of individual companies had to be taken into account in calculating the level of nullification or impairment. Trade actions will inevitably cause reactions in companies, and each company may take a different course of action that effects their individual trade volumes in different ways. This does not mean that these companies' abilities or decisions should dictate the determination of the level of nullification or impairment. Consideration of such factors would be speculative and unverifiable, and outside the mandate of the Article 22.6 arbitrator.

40. Second, contrary to the United States' claim that the exporters' decisions to move production facilities out of Korea were unrelated to the WTO-inconsistent anti-dumping and countervailing duty measures, evidence on the record shows that the USITC itself recognized the temporal correlation between the imposition of anti-dumping and countervailing duties and the movement of LG's and Samsung's production facilities.[52] It is clear that the United States considered LG's and Samsung's decision to move production facilities out of Korea, and ultimately into the United States, a direct result of the anti-dumping and countervailing duties imposed by the United States. To the extent that there was a decline in Korean exports of LRWs into the United States, this decline is attributable

[46] *India – Agricultural Products*, U.S. Methodology Paper, para. 7 (Exhibit KOR-29).
[47] U.S. Written Submission, paras. 19 and 51.
[48] Panel Report, *US – Washing Machines*, para. 8.4.
[49] Decision of the Arbitrator, *US – 1916 Act (EC) (Article 22.6 – US)*, para. 5.50.
[50] U.S. Replies to the Arbitrator's Advance Questions, para. 41.
[51] Korea's Opening Statement, para. 41.
[52] USITC Pub. 4745, fn. 349 (Exhibit KOR-25).

to the United States' imposition of anti-dumping and countervailing duty orders, and it is reasonable to assume that this downward trend would reverse with the removal of the WTO-inconsistent measures.

41. In addition, the United States fails to consider the business reality facing the Korean producers. The statements referred to by the United States indicate that there were significant cost savings in moving production to the United States to serve the U.S. market. Part of the efficiencies and cost savings is inevitably the avoidance of anti-dumping and countervailing duties. In this respect, the need to move production operations into the United States is in itself a form of nullification and impairment of Korea's benefits, as the U.S. measures unfairly altered the competitive relationship between Korean and U.S. domestic producers.

42. In sum, the United States provides no credible basis to argue that Korea's level of nullification and impairment is zero, and its claim should be dismissed. If the Arbitrator were to agree with the United States, such an outcome would not only be contrary to the fundamental purpose of the WTO dispute settlement system, but it would also set a dangerous precedent. It would incentivize other WTO Members to impose prohibitively high anti-dumping and countervailing duties while prolonging the WTO dispute settlement process until foreign producers have no choice but to abandon production in their home countries, and move facilities to the imposing Member's territories.[53] Therefore, Korea respectfully requests that the Arbitrator apply the level of nullification and impairment proposed by Korea.

D. Korea's Calculation of the Level of Nullification and Impairment for Non-LRW Products as a Result of the United States' "As Such" Violation Is Appropriate

43. In the underlying proceedings, the Panel and Appellate Body ruled that both DPM and the use of zeroing under the W-T comparison methodology are "as such" inconsistent with the Anti-Dumping Agreement.[54] These findings were not limited to LRWs but impact all other products against which the USDOC applies the WTO-inconsistent comparison methodologies.

44. The United States' failure to bring its measures into compliance affects not only Korean imports of LRWs, but all Korean imports that are subject to U.S. anti-dumping proceedings in which these comparison methods continue to be used. To take a conservative approach, Korea has not included the trade effects of the WTO-inconsistent measures on non-LRW imports as of the end of the RPT. In other words, if the investigation or review was initiated prior to the RPT, Korea will not suspend concessions based on the nullification and impairment to these imports even if the final determination or results is issued after the RPT. However, Korea proposes to use the same formula used to calculate the level of nullification and impairment to LRW imports as of the end of the RPT to imports of non-LRW products that are subject to new investigations or administrative reviews initiated after the end of the RPT, for which the WTO-inconsistent methods continue to be used.

45. In this respect, Korea will use individual data for each product at issue.[55] These data will be derived from, but not limited to, the USITC data for the elasticities of demand and supply of the products at issue, import statistics of each HS code included in the scope of the proceeding, the change in price represented by the anti-dumping duty rate determined on the basis of the WTO-inconsistent DPM and the use of zeroing.[56] Korea will also ensure that it includes in its calculation of the level of nullification and impairment margins that were calculated based on the WTO-inconsistent methodologies, and exclude margins and import data for exporters for whom the USDOC did not apply DPM or zeroing when applying the W-T methodology (for example, margins calculated based on the application of total "adverse facts available"). In calculating the level of nullification and impairment, Korea is relying only on credible, verifiable information, and not on speculation.[57] The "as such" formula would use the objective data that is used in the "as applied" formula for each individual product.

46. Past arbitrators found that a formula is an appropriate method to quantify the level of suspension in such situation where the nullification or impairment has not been calculated yet at the expiration

[53] Korea's Opening Statement, para. 8.
[54] Appellate Body Report, *US – Washing Machines*, para. 6.3-6.11.
[55] See Korea's Methodology Paper, para. 50.
[56] See Korea's Methodology Paper, paras. 50-51.
[57] Decision of the Arbitrator, *US – 1916 Act (EC) (Article 22.6 – US)*, paras. 5.54, 5.63, and 7.7.

of the RPT, but the implementing Member would violate an "as such" decision in the future. The reason of including an "as such" formula in Korea's request for suspension of concession follows the same logic of the arbitrator in *US – 1916 Act* which considered that, in a case where it was found to be WTO-inconsistent "as such" and the responding party had not complied with the DSB recommendations and rulings, the existence and maintenance of the WTO-inconsistent measure "as such" violates the rights of the complaining party, and each application of such measure increases the level of nullification or impairment sustained by the complaining party.[58] The situation is also comparable to that in *US – Offset Act (Byrd Amendment)* where the arbitrator found that there is no limitation in the DSU to the possibility of providing for a variable level of suspension as long as the level of suspension is equivalent to the level of nullification or impairment, provided such adjustments are justified, and unpredictability is not increased as a result.[59]

47. The United States recognizes that a formula can be used to calculate future level of nullification or impairment, but argues that the use of a formula is not appropriate in this case. However, the United States has failed to establish a basis for its claims. Korea has fully demonstrated that all aspects of its proposed formula are reasonable. Korea has demonstrated that it is reasonable to assume that a dumping margin that has been calculated based on a WTO-inconsistent method would be withdrawn, resulting in a margin of zero. In particular, Members are only permitted to maintain anti-dumping measures if these measures were imposed in accordance with the Anti-Dumping Agreement. As the Panel and Appellate Body have confirmed, use of the DPM and zeroing when applying the W-T method is inconsistent with the Anti-Dumping Agreement. Therefore, the United States does not maintain the right to impose a dumping margin that has been calculated in contravention to the Anti-Dumping agreement. Korea has also demonstrated that the formula for non-LRW products, which is identical to the formula for LRW products, is reasonable and based on sound economic principles. Korea has demonstrated through its explanations and through samples that it would be able to obtain the data necessary to conduct the calculations, mostly through public sources such as U.S. government agencies or trade associations, and if necessary, through private entities.[60]

48. In sum, Korea's proposed formula for calculating the level of nullification and impairment for non-LRW products is reasonable and relies on available data. The United States has not established that applying the non-LRW formula would result in suspension of concessions in excess of the level of nullification or impairment. Accordingly, Korea respectfully requests that the Arbitrator authorize suspension of concessions for future nullification and impairment in the amount to be calculated using the non-LRW formula proposed by Korea.

V. CONCLUSION

49. For these reasons, Korea respectfully requests that the Arbitrator determine that the level of suspension of concessions for LRWs from Korea is USD 711 million, to be adjusted each year consistent with the formula outlined in Korea's Methodology Paper, and that the level of suspension of concessions for non-LRW products from Korea is to be calculated based on the formula outlined in Korea's Methodology Paper.

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[58] Decision of the Arbitrator, *US – 1916 Act (EC) (Article 22.6 – US)*, paras. 6.14-6.15 and 7.8.

[59] Decision of the Arbitrator, *US – Offset Act (Byrd Amendment) (Brazil)* (*Article 22.6 – US),* para. 4.20.

[60] Korea's Replies to the Arbitrator's Advance Questions, paras. 123-125; Korea's Replies to the Arbitrator's Post-Hearing Questions, paras. 107-114.

ANNEX C

CALCULATIONS OF THE ARBITRATOR

ANNEX C-1

LEVEL OF NULLIFICATION OR IMPAIRMENT FOR LRWS: CALCULATIONS

Table 1: Anti-dumping duty

ITEM	VALUES
Initial anti-dumping duty on Korean LRWs in 2011	0.0%
Anti-dumping duty on Korean LRWs in 2012	11.86%
Projected United States imports of LRWs from Korea in 2012 after application of anti-dumping duty (millions)	USD [[***]]
Projected Korean market share in United States after duty	[[***]]
United States market for LRWs in 2017 (millions)	USD 3,718.4
Projected United States LRW imports from Korea in 2017 (millions)	USD [[***]]
Counterfactual anti-dumping duty	[[***]]
Counterfactual United States LRW imports from Korea (millions)	USD [[***]]
Nullification or impairment (millions)	**USD 74.40**

Table 2: Countervailing duty

ITEM	VALUES
Initial countervailing duty on Korean LRWs in 2011	0.0%
Countervailing duty on Korean LRWs in 2012	0.58%
Projected United States imports of LRWs from Korea in 2012 after application of countervailing duty (millions)	USD [[***]]
Projected Korean market share in United States after duty	[[***]]
United States market for LRWs in 2017 (millions)	USD 3,718.4
Projected United States LRW imports from Korea in 2017 (millions)	USD [[***]]
Counterfactual countervailing duty	0.0%
Counterfactual United States LRW imports from Korea (millions)	USD [[***]]
Nullification or impairment (millions)	**USD 10.41**

Table 3: General CIF imports value by HTS number for Korea

U.S. General Imports

Quarterly data for 2010-2017

HTS Number	Year	Q1	Q2	Q3	Q4
8450110040	2010	455,900	1,005,798	233,194	321,100
8450110080	2010	2,411,181	3,127,637	2,352,108	856,464
8450200090	2010	142,437,357	200,352,678	191,620,967	122,882,409
8450902000	2010	3,165	7,254	12,407	6,403
8450906000	2010	17,221,417	18,859,599	10,099,736	10,200,203
8450110040	2011	5,297,409	2,658,820	508,274	3,645,284
8450110080	2011	2,742,125	3,474,175	3,178,022	4,316,686
8450200090	2011	152,543,185	130,775,593	100,973,206	164,089,821
8450902000	2011	11,483	0	5,835	9,161
8450906000	2011	15,176,653	10,232,980	6,657,471	13,044,517
8450110040	2012	944,025	1,842,228	1,223,156	769,642
8450110080	2012	4,477,326	4,579,619	3,278,981	1,338,362
8450200090	2012	83,202,038	191,090,515	143,698,714	107,883,370
8450902000	2012	134,718	47,418	37,410	7,772
8450906000	2012	6,931,041	13,772,378	15,866,941	11,968,395
8450110040	2013	0	0	0	0
8450110080	2013	2,160,471	2,756,001	3,538,996	3,899,584
8450200090	2013	80,714,166	93,928,512	49,391,822	68,432,414
8450902000	2013	130,369	231,103	110,762	207,085
8450906000	2013	12,843,113	2,474,776	1,564,143	2,580,268
8450110040	2014	0	267,412	55,634	0
8450110080	2014	3,285,580	3,058,525	4,964,255	4,181,821
8450200090	2014	54,756,381	51,941,406	26,031,374	14,575,763
8450902000	2014	288,991	185,152	284,129	103,190
8450906000	2014	2,172,278	1,922,635	1,740,304	1,719,880
8450110040	2015	33,210	0	632,369	3,999,882
8450110080	2015	4,250,557	4,828,466	3,059,896	4,159,627
8450200040	2015	2,381,816	5,470,562	3,364,544	4,305,302
8450200080	2015	13,154,573	15,357,655	10,717,448	19,848,967
8450902000	2015	260,828	322,957	235,073	407,602
8450906000	2015	2,125,548	2,380,446	2,314,134	2,261,598
8450110040	2016	8,295,821	5,943,180	1,975,084	6,665,517
8450110080	2016	5,510,528	3,565,435	3,162,474	3,966,431
8450200040	2016	6,859,967	2,417,464	7,766,322	16,438,224
8450200080	2016	19,848,219	15,905,949	19,066,124	33,735,203
8450902000	2016	172,603	307,169	81,878	240,018
8450906000	2016	1,713,055	1,271,572	1,237,362	2,118,122
8450110040	2017	5,787,934	7,518,135	4,444,110	23,594,408
8450110080	2017	3,544,395	4,924,709	4,573,523	3,803,447
8450200040	2017	24,158,923	28,883,403	19,928,506	68,482,685
8450200080	2017	16,047,488	31,419,135	22,651,803	46,452,573
8450902000	2017	140,111	275,920	192,018	449,749
8450906000	2017	665,364	878,310	848,603	1,394,077

Source: USITC Dataweb.

Table 4: LRW share of CIF value of general imports

[[

HTS Code	FY11	FY12	FY13	FY14	FY15	FY16	FY17
***	***	***	***	***	***	***	***
***	***	***	***	***	***	***	***
***	***	***	***	***	***	***	***
***	***	***	***	***	***	***	***
***	***	***	***	***	***	***	***
***	***	***	***	***	***	***	***
***	***	***	***	***	***	***	***
Total	***	***	***	***	***	***	***

]]

Note: The share for any fiscal year is computed as the value of LG and Samsung imports on which WTO-inconsistent duties were collected by United States' Authorities (information provided by the United States in Exhibit USA-21 (BCI)) divided by the CIF value of imports extracted from USITC Dataweb (see Table 3) for the four quarters corresponding to the fiscal year.

Table 5: Estimated LRW imports in 2011

[[

HTS Subheading	Q1-Q3 of 2011	Q4 of 2011	Full year 2011
***	***	***	***
***	***	***	***
***	***	***	***
***	***	***	***
***	***	***	***
***	***	***	***
***	***	***	***
Total	***	***	***

]]

Notes:

(1) For the first three quarters of 2011, the share corresponding to fiscal year 2011 in Table 4 is used. For the fourth quarter of 2011, the share corresponding to fiscal year 2012 is used.

(2) Shares exceeding 100% are capped at 100%.

TABLE 6: General Algebraic Modeling System (GAMS) code for calculating nullification or impairment from anti-dumping duty

```
*===================================
*Instructions
*===================================

*To run the code, press F9 or select "File/Run". This will calculate the level of
*nullification or impairment in two steps. First, the counterfactual Korean import
*share in 2012 is calculated. This share is combined with the market size in 2017 to
*calculate the initial value of imports in 2017. The level of nullification or impairment
*is then calculated as the change in the value of imports (in world prices, net of duties) in 2017

*This value can be written in the output file as NoI and is also written to excel (NoI_AD.xls).

*===================================
*A. Set and parameter declaration
*===================================

SETS

I countries /KOR,USA/

PARAMETERS

*1.Parameters
sigma substitution elasticity
epsilon demand elasticity
eta supply elasticity

*2. Market data
demand2012  total demand 2012
demand2017  total demand 2017
demand  total demand
supply(I) supply country
kappa demand shifter I

*3. Duty changes
tarinitial(I) initial ad valorem tariff
tarfinal(I) final ad valorem tariff

*4. Calibration
omega(I) import demand shifter
lambda(I) supply shifter
tar(I) ad valorem tariff

*5. Outcome variables
PE_PRE(I)
VEXP_PRE(I)
VEXP_POST(I)
VEXP_CHANGE(I)
ms_pre(I)
ms_post(I)
NoI;


*===================================
*B. Model parameters
*===================================

sigma=4;
```

```
epsilon=-0.55;
eta=6;


*===================================
*C. Variables and model
*===================================

VARIABLES

OBJ   objective function

POSITIVE VARIABLES

EXP   domestic expenditures
P     domestic price index
PE(I)  export price
M(I)   import demand
X(I)   export supply;


EQUATIONS

OBJ_EQ  objective equation
EXP_EQ  domestic expenditures equation
P_EQ   domestic price index equation
M_EQ(I) import demand equation
X_EQ(I) export supply equation
EQ_EQ(I) equilibrium equation;

OBJ_EQ..  OBJ-2=E=0;
EXP_EQ..  EXP-kappa*(P**(1+epsilon))=E=0;
P_EQ..   P**(1-sigma)-SUM(I,(omega(I)**sigma)*((1+tar(I))*PE(I))**(1-sigma))=E=0;
M_EQ(I).. M(I)-(omega(I)**(sigma))*((1+tar(I))*PE(I))**(-sigma)*EXP*(P**(sigma-1))=E=0;
X_EQ(I).. X(I)-lambda(I)*(PE(I)**eta)=E=0;
EQ_EQ(I).. X(I)-M(I)=E=0;


MODEL Armington Armington model /all/;


*===================================
*D. Calculating 2012 market share
*===================================

*1. Initial values
*Base data
demand2012=2653.6;
supply("KOR")=[[***]];

*Duty levels
tarinitial("KOR")=0;
tarinitial("USA")=0;
tarfinal("KOR")=0.1186;
tarfinal("USA")=0;

*2. Calibration
*Parameters and shifters
tar(I)=tarinitial(I);
demand=demand2012;
supply("USA")=demand-supply("KOR")*(1+tar("KOR"));
```

```
kappa=demand;
omega(I)=(1+tar(I))*(supply(I)/demand)**(1/sigma);
lambda(I)=supply(I);

*Initial values
EXP.L=demand;
P.L=1;
PE.L(I)=1;
X.L(I)=supply(I);
M.L(I)=X.L(I)*(1+tar(I));

*3. Solve model

*Solve baseline
SOLVE Armington using NLP minimizing OBJ;
PE_PRE(I)=PE.L(I);
VEXP_PRE(I)=PE_PRE(I)*M.L(I);
DISPLAY P.L,PE.L,M.L,X.L;
*(Shows that initial prices are normalized at 1)

*Solve 2012 counterfactual with anti-dumping duty
tar(I)=tarfinal(I);
SOLVE Armington using NLP minimizing OBJ;

*4. Calculate counterfactual value of exports in 2012

VEXP_POST(I)=PE.L(I)*M.L(I);
VEXP_CHANGE(I)=VEXP_POST(I)-VEXP_PRE(I);
ms_pre(I)=VEXP_PRE(I)/demand;
ms_post(I)=VEXP_POST(I)/EXP.L;
DISPLAY VEXP_PRE,VEXP_POST,VEXP_CHANGE,demand,EXP.L,ms_pre,ms_post;

*VEXP_POST gives the counterfactual value of trade in 2012 used to construct the
*import share for 2017.
*VEXP_CHANGE gives the change in the value of exports


*=====================================
*E. Calculating 2017 NoI
*=====================================

*The 2017 NoI is based on 2012 import shares and 2017 market size

*1. Initial values

* Base data
demand2017=3718.4;
supply("KOR")=(VEXP_POST("KOR")/EXP.L)*demand2017;

* Duty levels
tarinitial("KOR")=0.1186;
tarfinal("KOR")=[[***]];

*2. Calibration

* Parameters and shifters
tar(I)=tarinitial(I);
demand=demand2017;
supply("USA")=demand-supply("KOR")*(1+tar("KOR"));
kappa=demand;
omega(I)=(1+tar(I))*(supply(I)/demand)**(1/sigma);
lambda(I)=supply(I);
```

```
*Initial values
EXP.L=demand;
P.L=1;
PE.L(I)=1;
X.L(I)=supply(I);
M.L(I)=X.L(I)*(1+tar(I));

*3. Solve model

*Solve baseline
SOLVE Armington using NLP minimizing OBJ;
PE_PRE(I)=PE.L(I);
VEXP_PRE(I)=PE_PRE(I)*M.L(I);
DISPLAY P.L,PE.L,M.L,X.L;
*(Shows that initial prices are normalized at 1)

*Solve 2017 counterfactual reducing the anti-dumping duty
tar(I)=tarfinal(I);
SOLVE Armington using NLP minimizing OBJ;

*4. Calculate change value of exports

VEXP_POST(I)=PE.L(I)*M.L(I);
VEXP_CHANGE(I)=VEXP_POST(I)-VEXP_PRE(I);
NoI=VEXP_CHANGE("KOR")
DISPLAY VEXP_PRE,VEXP_POST,VEXP_CHANGE,NoI;

*VEXP_CHANGE for Korea gives the change in the value of trade for Korea in 2017,
*thus providing the NoI

*Write to excel
execute_unload 'NoI.gdx',NoI
execute 'gdxxrw.exe NoI.gdx O=NoI_AD.xls par=NoI'
```

TABLE 7: General Algebraic Modeling System (GAMS) code for calculating nullification or impairment from countervailing duty

```
*===================================
*Instructions
*===================================

*To run the code, press F9 or select "File/Run". This will calculate the level of
*nullification or impairment in two steps. First, the counterfactual Korean import
*share in 2012 is calculated. This share is combined with the market size in 2017 to
*calculate the initial value of imports in 2017. The level of nullification or impairment
*is then calculated as the change in the value of imports (in world prices, net of duties) in 2017

*This value can be written in the output file as NoI and is also written to excel (NoI_CVD.xls).


*===================================
*A. Set and parameter declaration
*===================================

SETS

I countries /KOR,USA/

PARAMETERS

*1.Parameters
sigma substitution elasticity
epsilon demand elasticity
eta supply elasticity

*2. Market data
demand2012  total demand 2012
demand2017  total demand 2017
demand  total demand
supply(I) supply country
kappa demand shifter I

*3. Duty changes
tarinitial(I) initial ad valorem tariff
tarfinal(I) final ad valorem tariff

*4. Calibration
omega(I) import demand shifter
lambda(I) supply shifter
tar(I) ad valorem tariff

*5. Outcome variables
PE_PRE(I)
VEXP_PRE(I)
VEXP_POST(I)
VEXP_CHANGE(I)
ms_pre(I)
ms_post(I)
NoI;


*===================================
*B. Model parameters
*===================================

sigma=4;
```

```
epsilon=-0.55;
eta=6;


*===================================
*C. Variables and model
*===================================

VARIABLES

OBJ   objective function

POSITIVE VARIABLES

EXP   domestic expenditures
P     domestic price index
PE(I)  export price
M(I)   import demand
X(I)   export supply;


EQUATIONS

OBJ_EQ  objective equation
EXP_EQ  domestic expenditures equation
P_EQ   domestic price index equation
M_EQ(I) import demand equation
X_EQ(I) export supply equation
EQ_EQ(I) equilibrium equation;

OBJ_EQ..  OBJ-2=E=0;
EXP_EQ..  EXP-kappa*(P**(1+epsilon))=E=0;
P_EQ..   P**(1-sigma)-SUM(I,(omega(I)**sigma)*((1+tar(I))*PE(I))**(1-sigma))=E=0;
M_EQ(I).. M(I)-(omega(I)**(sigma))*((1+tar(I))*PE(I))**(-sigma)*EXP*(P**(sigma-1))=E=0;
X_EQ(I).. X(I)-lambda(I)*(PE(I)**eta)=E=0;
EQ_EQ(I).. X(I)-M(I)=E=0;


MODEL Armington Armington model /all/;


*===================================
*D. Calculating 2012 market share
*===================================

*1. Initial values
*Base data
demand2012=2653.6;
supply("KOR")=[[***]];


*Duty levels
tarinitial("KOR")=0;
tarinitial("USA")=0;
tarfinal("KOR")=0.0058;
tarfinal("USA")=0;

*2. Calibration
*Parameters and shifters
tar(I)=tarinitial(I);
demand=demand2012;
supply("USA")=demand-supply("KOR")*(1+tar("KOR"));
```

```
kappa=demand;
omega(I)=(1+tar(I))*(supply(I)/demand)**(1/sigma);
lambda(I)=supply(I);

*Initial values
EXP.L=demand;
P.L=1;
PE.L(I)=1;
X.L(I)=supply(I);
M.L(I)=X.L(I)*(1+tar(I));

*3. Solve model

*Solve baseline
SOLVE Armington using NLP minimizing OBJ;
PE_PRE(I)=PE.L(I);
VEXP_PRE(I)=PE_PRE(I)*M.L(I);
DISPLAY P.L,PE.L,M.L,X.L;
*(Shows that initial prices are normalized at 1)

*Solve 2012 counterfactual with countervailing duty
tar(I)=tarfinal(I);
SOLVE Armington using NLP minimizing OBJ;

*4. Calculate counterfactual value of exports in 2012

VEXP_POST(I)=PE.L(I)*M.L(I);
VEXP_CHANGE(I)=VEXP_POST(I)-VEXP_PRE(I);
ms_pre(I)=VEXP_PRE(I)/demand;
ms_post(I)=VEXP_POST(I)/EXP.L;
DISPLAY VEXP_PRE,VEXP_POST,VEXP_CHANGE,demand,EXP.L,ms_pre,ms_post;

*VEXP_POST gives the counterfactual value of trade in 2012 used to construct the
*import share for 2017.
*VEXP_CHANGE gives the change in the value of exports


*=================================
*E. Calculating 2017 NoI
*=================================

*The 2017 NoI is based on 2012 import shares and 2017 market size

*1. Initial values

* Base data
demand2017=3718.4;
supply("KOR")=(VEXP_POST("KOR")/EXP.L)*demand2017;

* Duty levels
tarinitial("KOR")=0.0058;
tarfinal("KOR")=0;

*2. Calibration

* Parameters and shifters
tar(I)=tarinitial(I);
demand=demand2017;
supply("USA")=demand-supply("KOR")*(1+tar("KOR"));
kappa=demand;
omega(I)=(1+tar(I))*(supply(I)/demand)**(1/sigma);
```

```
lambda(I)=supply(I);

*Initial values
EXP.L=demand;
P.L=1;
PE.L(I)=1;
X.L(I)=supply(I);
M.L(I)=X.L(I)*(1+tar(I));

*3. Solve model

*Solve baseline
SOLVE Armington using NLP minimizing OBJ;
PE_PRE(I)=PE.L(I);
VEXP_PRE(I)=PE_PRE(I)*M.L(I);
DISPLAY P.L,PE.L,M.L,X.L;
*(Shows that initial prices are normalized at 1)

*Solve 2017 counterfactual reducing the countervailing duty
tar(I)=tarfinal(I);
SOLVE Armington using NLP minimizing OBJ;

*4. Calculate change value of exports

VEXP_POST(I)=PE.L(I)*M.L(I);
VEXP_CHANGE(I)=VEXP_POST(I)-VEXP_PRE(I);
NoI=VEXP_CHANGE("KOR")
DISPLAY VEXP_PRE,VEXP_POST,VEXP_CHANGE,NoI;

*VEXP_CHANGE for Korea gives the change in the value of trade for Korea in 2017,
*thus providing the NoI

*Write to excel
execute_unload 'NoI.gdx',NoI
execute 'gdxxrw.exe NoI.gdx O=NoI_CVD.xls par=NoI'
```

ANNEX C-2

LEVEL OF NULLIFICATION OR IMPAIRMENT FOR NON-LRWS: DERIVATION OF FORMULA

1.1. The following set of equilibrium equations defines the Armington model:

$$E = \kappa P^{1+\varepsilon} \quad (1)$$

$$P = \left(\sum_{i=1}^{J} \omega_i^{-\sigma} \left(p_i (1+t) \right)^{1-\sigma} \right)^{\frac{1}{1-\sigma}} \quad (2)$$

$$m_i = \omega_i^{-\sigma} \left(p_i (1+t) \right)^{-\sigma} P^{\sigma-1} E \quad (3)$$

$$x_i = \lambda_i p_i^{\eta} \quad (4)$$

$$m_i = x_i \quad (5)$$

1.2. Equation (1) represents total demand in the importing country with *E* expenditures and *P* the price index. *P* is defined in equation (2) as a weighted sum over the prices from the different sources. Equation (3) is the import demand equation with m_i the quantity imported, p_i the export price and *t* the ad-valorem duty rate. Equation (4) is the export supply equation and equation (5) is market equilibrium with export supply equal to import demand. ε is the demand elasticity in the domestic market, η is the export supply elasticity, and σ the substitution elasticity between goods from different sources.

1.3. The system of equations (1)-(5) can be combined and written in relative changes in order to obtain an expression for the change in the value of imports (exclusive of the duties paid) as a function of a change in the duty rate. Technically, this requires log differentiating the system of equations and combining and reorganizing the resulting equations to solve for the change in the value of imports. Following this procedure, the level of nullification or impairment for a non-LRW product *i* can be written as the product of a coefficient *c* (which depends on the elasticities and the market share of the product), the value of imports, $vimp_i$, the change in the duty rate and a scaling factor given by the reciprocal of one plus the duty rate:

1.4. $$NI_i = c * \frac{vimp_i}{1+t} * \Delta t \quad (6)$$

1.5. The coefficient *c* is a function of the import share *sh* and the different elasticities[1]:

$$c = \frac{(\eta+1)\sigma\frac{\eta-\varepsilon}{\eta+\sigma}}{\varepsilon-\eta} - \frac{(\sigma+\varepsilon)(\eta+1)\frac{\eta}{\eta+\sigma}}{\varepsilon-\eta} sh_i \quad (7)$$

[1] Taking the limit of σ going to infinity, gives the expression for the coefficient *c* in the perfect substitutes model. Separate derivation of the coefficient c starting from the partial equilibrium perfect substitutes model would lead to the same result. As such the formula for the perfect substitutes model is a nested case of the more general formula for the Armington model.

1.6. The next paragraphs provide a detailed derivation of equations (6) and (7).

1.7. Combining equations (1)-(5) leads to the following two equilibrium equations:

$$\omega_i^{-\sigma}\left(p_i(1+t)\right)^{-\sigma}P^{\sigma+\varepsilon}\kappa=\lambda p_i^{\eta} \tag{8}$$

$$P=\left[\sum_{i=1}^{J}\omega_i^{-\sigma}\left(p_i(1+t)\right)^{1-\sigma}\right]^{\frac{1}{1-\sigma}} \tag{9}$$

1.8. Hat (log) differentiating equations (8)-(9) gives:

$$-\sigma\left(\hat{p}_i+\frac{t}{1+t}\hat{t}\right)+(\sigma+\varepsilon)\hat{P}=\eta\hat{p}_i \tag{10}$$

$$\hat{P}=\sum_{k=1}^{J}sh_k\left(\hat{p}_k+\frac{t}{1+t}\hat{t}\right) \tag{11}$$

1.9. Rearranging equation (10) for countries whose duty rate *t* is not changing gives:

$$\hat{p}_k=\frac{\sigma+\varepsilon}{\eta+\sigma}\hat{P} \tag{12}$$

1.10. Combining equations (11)-(12) then gives:

$$\hat{P}=\left(\hat{p}_i+\frac{t}{1+t}\hat{t}\right)+\frac{\sigma+\varepsilon}{\eta+\sigma}\sum_{k\neq i}sh_k\hat{P} \tag{13}$$

1.11. Rearranging equation (13) and using that $\sum_{k\neq i}sh_k=1-sh_i$ leads to:

$$\hat{P}=\frac{sh_i}{1-\frac{\sigma+\varepsilon}{\eta+\sigma}(1-sh_i)}\left(\hat{p}_i+\frac{t}{1+t}\hat{t}\right) \tag{14}$$

1.12. Substituting equation (14) into equation (10) generates an expression for p_i:

$$\hat{p}_i = \frac{\left(\sigma - \frac{(\sigma+\varepsilon)sh_i}{1-\frac{\sigma+\varepsilon}{\eta+\sigma}(1-sh_i)}\right)}{\frac{(\sigma+\varepsilon)sh_i}{1-\frac{\sigma+\varepsilon}{\eta+\sigma}(1-sh_i)} - \sigma - \eta}\frac{t}{1+t}\hat{t} \qquad (15)$$

1.13. To determine the change in the value of imports of the country whose duty rate will change, equation (8) is hat differentiated:

$$\frac{dvimp}{vimp} = \hat{p}_i + \hat{m}_i = (1-\sigma)\hat{p}_i - \sigma\frac{t}{1+t}\hat{t} + (\sigma+\varepsilon)\hat{P} \qquad (16)$$

1.14. Substituting equations (14)-(15) into equation (16) and rearranging gives (after a couple of steps of tedious but straightforward algebra) for the percentage change in the value of imports:

$$\frac{dvimp_i}{vimp_i} = \left(\frac{(\eta+1)\sigma\frac{\eta-\varepsilon}{\eta+\sigma}}{\varepsilon-\eta} - \frac{(\sigma+\varepsilon)(\eta+1)\frac{\eta}{\eta+\sigma}sh_i}{\varepsilon-\eta}\right)\frac{t}{1+t}\hat{t} \qquad (17)$$

Equation (6) then follows from the definition of a variable with a hat, i.e. $\hat{x} = \frac{\Delta x}{x}$

Table 1: Values of coefficients of formula, by harmonized system chapter[2]

HS Line	Coefficient	HS Line	Coefficient
1	-1.348	50	-4.360
2	-3.074	51	-5.216
3	-3.282	52	-3.157
4	-3.790	53	-2.202
5	-1.783	54	-4.675
6	-2.026	55	-2.665
7	-3.777	56	-2.620
8	-2.888	57	-2.757
9	-2.401	58	-3.008
10	-2.632	59	-2.338
11	-4.341	60	-3.202
12	-3.078	61	-3.761
13	-1.626	62	-4.168
14	-1.337	63	-3.342
15	-2.362	64	-2.377
16	-3.895	65	-1.881
17	-1.790	66	-1.877
18	-2.470	67	-1.969
19	-3.630	68	-2.620
20	-3.840	69	-3.424
21	-2.394	70	-2.600
22	-4.709	71	-2.378
23	-5.666	72	-3.869
24	-2.597	73	-2.336
25	-1.987	74	-1.817
26	-4.558	75	-1.832
27	-4.994	76	-7.150
28	-3.137	78	-5.300
29	-2.091	79	-1.886
30	-3.147	80	-2.967
31	-3.124	81	-3.266
32	-2.075	82	-1.606
33	-3.928	83	-1.691
34	-1.925	84	-3.568
35	-1.965	85	-2.038
36	-2.015	86	-1.672
37	-2.037	87	-2.294
38	-2.601	88	-4.265
39	-3.034	89	-4.151
40	-5.667	90	-3.147
41	-2.011	91	-3.266
42	-5.290	92	-1.737
43	-3.435	93	-3.274
44	-2.625	94	-1.638
45	-2.916	95	-2.291
46	-1.642	96	-3.187
47	-2.711	97	-1.631
48	-2.786	98	-3.526
49	-2.041	99	-3.524

[2] As Chapter 77 is currently empty and reserved for possible future use in the Harmonized System, no coefficient can be calculated for that Chapter. See World Customs Organization, HS Nomenclature 2017 edition, <http://www.wcoomd.org/en/topics/nomenclature/instrument-and-tools/hs-nomenclature-2017-edition/hs-nomenclature-2017-edition.aspx>, accessed 17 October 2018.

Table 2: Summary statistics of the coefficients and the inputs to calculate the coefficients

	Mean	Standard deviation	Minimum	Maximum
Elasticities				
Substitution elasticity	4.73	4.26	1.40	35.83
Supply elasticity	7.70	0.00	7.70	7.70
Demand elasticity	-0.80	0.19	-0.88	-0.00
Market shares				
Share of Korean imports in total imports	2.45%	3.87%	0.00%	20.46%
Share total imports in total demand	23.00%	15.39%	1.67%	74.98%
Share Korean imports in total demand	0.51%	0.84%	0.00%	5.92%
Coefficient	**-2.96**	**1.12**	**-7.15**	**-1.34**

Table 3: Read me file

The following two steps should be taken to calculate the coefficients for the 98 HS-chapters, which serve as input into the formula to calculate the level of nullification or impairment for non-LRWs:

1. Calculate the price elasticity of demand and the aggregate import share from the GTAP10 database.

Description: *This program uses the GTAP10P2 database aggregated to 2 regions (USA and ROW) and calling the tab-file "GTAPv7_ep_imsh.tab". This is the tab-file of the standard GTAP model version 7, supplemented with additional lines of code, calculating the share of imports in total sales and writing it together with the price elasticity to the summary file, "gtapsum_num.har". The cmf calls GTAP data from version GTAP102, containing 2014 data on import shares. The own price elasticity of demand is calculated based on the constant difference elasticity (CDE) utility function calibrated to estimated income and price elasticities for 10 more aggregated categories in Reimer and Hertel.*

   a. Open "Wingem", a utility part of Gempack. In Wingem select "Simulation/Run TG program". This opens a new window.
      - Select for TG Executable "GTAPv7_ep_imsh.exe", which is in the subfolder "code"
      - Select for Command file "calculate_ey_ep_impsh_2_57.cmf", which is in the subfolder "cmf".
      - Then choose "Run", which will run a numeraire shock and write the results to "gtapsum_num.har".

   b. Write the results to csv-files using the Command Prompt. To do this:
      - Double-click on the file "gtapsum_num.har"
      - The file opens in Viewhar
      - Click on the tab Programs and then on DOS Prompt, this opens the Command Prompt in the folder "Results"
      - Write
        har2csv gtapsum_num.har ep.csv ep
        and then
        har2csv gtapsum_num.har imsh.csv imsh
        in the command.

   c. Put the newly created files "ep.csv" and "imsh.csv" in the folder "raw_data".

2. Calculate the coefficients for the 98 HS chapters.

Description: *This program (do-file) calls the data in folder "raw_data". Except for ep.csv and imsh.csv discussed in the previous step, this folder contains data collected directly from websites:*
a. "elast_LIMLhybrid_hs10.dta". The substitution elasticities calculated by Soderbery
b. conc_hs_comb_gtap.csv. A concordance table from GTAP to hs6_combined, downloaded from wits.org
c. imports_korea.xlsx and imports_world.xlsx containing value of imports in 2016 and 2017 at various hs-levels downloaded from US Census
d. imports_hts2_dataweb.xlsx. Imports at hs2 level from usitc Dataweb for 2016 and 2017. Serve as comparison data
The do-file aggregates the substitution elasticities to trade-weighted average elasticities; calculates aggregate import shares and demand elasticities based on the hs6-GTAP concordance and hs6 to section concordance; calculates shares of Korean imports in total imports based on US Census data; sets the supply elasticity at -7.7; and finally calculates the 98 coefficients. The 98 coefficients are written to the excel file "coefficient_and_inputs.xls" in the folder "results."

   a. Open Stata. Select File/Change Working Directory. Select the folder "non_lrws".
   b. Open the do-file "calculate inputs for c_section_averages" located in the folder "code". Execute the do-file.
   c. The results are written into two excel files, "coefficient_and_inputs.xls" and "summstats.csv", in the folder "results".

Table 4: Command file

```
!=============================================================================
! CMF file for running the GTAPv7 model outside of RunGTAP
!=============================================================================

auxiliary files = ..\code\GTAPv7_ep_imsh;
Solution file = ..\results\numeraire_shock ;
Method = Gragg;
Steps = 2 4 6;
subintervals = 1;
automatic accuracy = no;
accuracy figures = 5;
accuracy percent = 95;
minimum subinterval length = 1.0E-0006;
minimum subinterval fails = stop;
accuracy criterion = Data;
verbal description = numeraire shock to calculate ey and ep;

! -----------
! Input files
! -----------
File GTAPSETS = ..\data\sets.har ; ! constant input
File GTAPDATA = ..\data\basedata.har ; ! updated input
File GTAPPARM = ..\data\default.prm ; ! constant input

! ------------
! Output files
! ------------
File GTAPSUM = ..\results\gtapsum_num.har ; ! output
File WELVIEW = ..\results\welview_num.har ; ! output
File GTAPVOL = ..\results\gtapvol_num.har ; ! output
updated file GTAPDATA = ..\updated\updated_num.har;

Exogenous ! Standard GE closure: psave varies by region, pfactwld is
numeraire
  afall afcom afeall afecom afereg afesec
  afreg afsec
  aintall aintreg aintsec
  ams
  aoall aoreg aosec
  atd atf atm ats
  au
  avareg avasec
  cgdslack
  dpgov dppriv dpsave
  endwslack incomeslack
```

```
  pfactwld
  pop profitslack psaveslack
  qe qesf
  tinc
  tm tms to tp
  tradslack tx txs
  ;

Rest endogenous;
! End Common Closure file "BASE.CLS"


shock pfactwld = 1;
```

Table 5: STATA do file

```
*==========================
*Import trade data
*==========================

*Local path to be added
*cd ""

cd working

set type double, permanently
set more off

import excel ..\raw_data\imports_korea.xlsx, clear firstrow case(lower)

gen sp=strpos(commodity," ")
gen hs=substr(commodity,1,sp-1)
gen hsname=substr(commodity,sp+1,.)
save imports_korea, replace

use imports_korea, clear
keep if length(hs)==2
rename hs hs2
save imports_korea_hs2, replace

use imports_korea, clear
keep if length(hs)==10
save imports_korea_hs10, replace

gen hs2=substr(hs,1,2)
collapse (sum) v2016 v2017, by(hs2)
rename v2016 vv2016
rename v2017 vv2017

merge 1:1 hs2 using imports_korea_hs2, gen(check)
gen cc1=vv2016-v2016
sort cc1
gen cc2=vv2017-v2017
sort cc2


import excel ..\raw_data\imports_world.xlsx, clear firstrow case(lower)

gen sp=strpos(commodity," ")
gen hs=substr(commodity,1,sp-1)
gen hsname=substr(commodity,sp+1,.)
save imports_world, replace

use imports_world, clear
keep if length(hs)==2
rename hs hs2
save imports_world_hs2, replace

use imports_world, clear
keep if length(hs)==10
save imports_korea_hs10, replace

gen hs2=substr(hs,1,2)
collapse (sum) v2016 v2017, by(hs2)
rename v2016 vv2016
rename v2017 vv2017
```

```
merge 1:1 hs2 using imports_world_hs2, gen(check)
gen cc1=vv2016-v2016
sort cc1
gen cc2=vv2017-v2017
sort cc2

*We checked here whether the Census data are consistent, i.e. that the HS2 reported
*data are identical to the sum of the HS10 reported data. This is the case.

*==================================
*Import Census data
*==================================

*==================================
*Calculate Korea's market share
*==================================

*Compare Census and USITC Dataweb data
import excel using ..\raw_data\imports_hts2_dataweb.xlsx, clear firstrow
tostring hts, replace
replace hts="0"+hts if length(hts)==1
rename hts hs2
save hs2_dataweb, replace

*Calculate import shares at the Chapter level
use hs2_dataweb, clear
merge 1:1 hs2 using imports_korea_hs2, nogen
rename v2017 korea_census
keep hs2 world Korea commodity korea_census
merge 1:1 hs2 using imports_world_hs2, nogen
rename v2017 world_census
keep hs2 world Korea commodity korea_census world_census

gen mskorea_census=korea_census/world_census
gen mskorea_dataweb=Korea/world
gen check=mskorea_census-mskorea_dataweb
sort check
*The difference between the census and usitc dataweb data is tiny, so we stick
*to one consistent datasource, the census
keep hs2 mskorea_census
sort hs2
save mskorea_census, replace



*==========================================
*Calculate trade-weighted average substitution elasticity
*==========================================

use ..\raw_data\elast_LIMLhybrid_hs10, clear
keep good sigma
rename good hs
merge 1:1 hs using imports_korea_hs10, gen(check)
save elast_liml_hs10, replace

use elast_liml_hs10, clear
gen hs2=substr(hs,1,2)
*Somehow there are no trade data in hs2=46, so we take an unweighted average across
*the estimates hs10-substitution elasticities
replace v2017=1 if hs2=="46"
collapse sigma [iw=v2017], by(hs2)
```

```
save sigma_2017, replace

use elast_liml_hs10, clear
gen hs2=substr(hs,1,2)
replace v2016=1 if hs2=="46"
collapse sigma [iw=v2016], by(hs2)
rename sigma sigma16
merge 1:1 hs2 using sigma_2017, nogen
*Difference base year is relatively small, so we take 2017, consistent with use of 2017 data
*for other datasources in the case such as for LRWs for example

*Check collapse
use elast_liml_hs10, clear
gen hs2=substr(hs,1,2)
gen sigmah=sigma*v2017
replace v2017=. if sigma==.
collapse(sum) sigmah v2017, by(hs2)
gen sigma2=sigmah/v2017
merge 1:1 hs2 using sigma_2017, nogen
*(Collapse statement with iw was of course correct)


*For two HSlines there are no substitution elasticity estimates, 98 and 99, so we
*use the trade-weighted average across the other lines for this
use elast_liml_hs10, clear
gen hs2=substr(hs,1,2)
collapse sigma [iw=v2016]
gen hs2="98"
save sigma_98, replace
replace hs2="99"
save sigma_99, replace

use sigma_2017, clear
drop if hs2=="98" | hs2=="99"
append using sigma_98
append using sigma_99
save sigma_2017_final, replace


*=========================================
*Concordance HS2 to GTAP
*=========================================

use imports_korea, clear
keep if length(hs)==6
rename hs hs6
save imports_korea_hs6, replace

import delimited ..\raw_data\conc_hs_comb_gtap, clear
tostring hscombinedproductcode, replace
rename hscombinedproductcode hs6
replace hs6="0"+hs6 if length(hs6)==5
gen hs2=substr(hs6,1,2)
joinby hs6 using imports_korea_hs6
rename gtapproductdescription gtap
gen comm=lower(substr(gtap,1,3))
save conc_h, replace


*=========================================
*Calculate price elasticity of demand and Total import share
*=========================================
```

```
import delimited ..\raw_data\ep, clear
keep if comm==v2
keep if reg=="usa"
keep comm value
rename value ep
save ep_usa, replace

import delimited ..\raw_data\imsh, clear
keep if reg=="usa"
keep comm value
rename value imsh
save imsh_usa, replace

use conc_h, clear
merge m:1 comm using ep_usa, gen(check)
merge m:1 comm using imsh_usa, nogen
sort check
keep if check==3
collapse ep imsh, by(hs2)
rename ep ep_unw
rename imsh imsh_unw
save epimsh_unw, replace

use conc_h, clear
merge m:1 comm using ep_usa, gen(check)
merge m:1 comm using imsh_usa, nogen
sort check
keep if check==3
collapse ep imsh [iw=v2017], by(hs2)
merge 1:1 hs2 using epimsh_unw, nogen
*Weighted and unweighted average differ considerably sometimes. We choose to
*work with the hs6 (Korea,US) trade value weighted average, as it is more exact
keep hs2 ep imsh
save epimsh_h, replace

*Generate hs lines 98 and 99
use conc_h, clear
merge m:1 comm using ep_usa, gen(check)
merge m:1 comm using imsh_usa, nogen
sort check
keep if check==3
collapse ep imsh [iw=v2017]
gen hs2="98"
save epimsh_98, replace
replace hs2="99"
save epimsh_99, replace

use epimsh_h, clear
append using epimsh_98
append using epimsh_99
save epimsh, replace


*=========================================
*Merge all results and calculate coefficient
*=========================================

use sigma_2017_final, clear
merge 1:1 hs2 using mskorea_census, nogen
merge 1:1 hs2 using epimsh, nogen
gen se=7.7
```

```
gen kor_imsh=mskorea_census*imsh
order hs2 sigma se ep mskorea_census imsh kor_imsh

*Calculate coefficient
gen coefficient      = ((se+1)*sigma*(se-ep)/(se+sigma))/(ep-se) ///
                                    - kor_imsh*((sigma+ep)*se*(se+1)/(se+sigma))/(ep-se)
save coefficient_and_inputs, replace
export excel using ..\results\coefficient_and_inputs, firstrow(variable) replace


*=========================================
*Summary stats
*=========================================

use coefficient_and_inputs, clear
estpost summ sigma se ep mskorea_census imsh kor_imsh coefficient
esttab using ..\results\summstats.csv, replace cells("mean(fmt(3)) sd(fmt(3)) max(fmt(3)) min(fmt(3))")
```

ANNEX D

DECISION OF THE ARBITRATOR CONCERNING A PARTIALLY OPEN HEARING

ANNEX D-1

DECISION OF THE ARBITRATOR ON THE UNITED STATES' REQUEST FOR AN OPEN HEARING

A. INTRODUCTION

1.1. As noted in section 2.2 ("Procedural Matters") of the Decision, the United States requested that the Arbitrator's meeting with the parties be opened to other Members and the public. On 5 April 2018, the Arbitrator communicated its decision declining the United States' request, confirming that the Arbitration hearing would be conducted in closed session. This section sets out the reasons underlying that decision.

B. ANALYSIS

1.2. The United States initially requested that the Arbitrator's meeting with the parties be open to observation by other WTO Members and the public "in whole, if Korea's agrees … , or in part, if Korea does not".[1] In its written comments following the organizational meeting, the United States proposed a set of additional working procedures to conduct an open meeting [hereinafter, "first set of working procedures"].[2] Korea replied that it did not consent to public observation of the meeting[3] and further indicated that, in its view, the first set of working procedures did not "protect Korea's right to confidentiality as set out under Article 18.2 of the DSU."[4] In the event, however, that the Arbitrator were to allow the United States to disclose its own statements at the hearing, Korea asked the Arbitrator to adopt delayed-viewing and redaction procedures, modelled on those adopted by the arbitrator in *US – Tuna II (Mexico) (Article 22.6 – US)* [hereinafter, *Tuna II*].[5] Korea subsequently indicated that its "interests in ensuring protection of BCI and the United States' interests in opening the hearing to the public can be met by holding a partially open hearing on a recorded or delayed basis."[6]

1.3. Reacting to Korea's statements, the United States requested that the Arbitrator "permit[] the United States to deliver its statements in a partially open hearing", and indicated that the United States "did not object to recording the open portion of the hearing with a delayed viewing to allow for confirming that the recording does not contain business confidential information ('BCI')".[7] The United States also appended a second set of additional working procedures to conduct a partially open meeting [hereinafter, "second set of working procedures"].[8]

1.4. In light of the foregoing, we recognize that the United States has revised its initial request that the Arbitrator open the hearing either "in whole … or in part", to ask that the Arbitrator adopt procedures for a "partially open hearing". This directs us to focus our assessment on the United States' request for a partially open meeting and its second set of working procedures.[9]

1.5. The United States' second set of working procedures only provides for the protection, and redaction, of BCI.[10] To Korea, these working procedures "overlook[] important procedures that are

[1] See United States' comments on draft timetable and draft working procedures, p. 5.
[2] United States' "Additional Working Procedures for the Arbitrator: Open Meeting".
[3] Korea's comments on draft timetable and draft working procedures, para. 12.
[4] Korea's response to Arbitrator question No. 4 on open hearings, pp. 2-3.
[5] Korea's comments on draft timetable and draft working procedures, para. 12 and fn 4. See also Korea's response to Arbitrator question No. 4 on open hearings, p. 3.
[6] Korea's response to Arbitrator question No. 4 on open hearings, p. 3.
[7] United States' comments on Korea's response to Arbitrator question Nos. 3 and 5 on open hearings, paras. 3-4.
[8] The United States attached "an example of working procedures for a partially open hearing, based on those of the Arbitrator in *US – Tuna II (Mexico) (Article 22.6 – US)*". United States' comments on Korea's response to Arbitrator question Nos. 3 and 5 on open hearings, fn 4.
[9] Throughout this Decision, we indicate when we refer to a specific open hearing modality – partially or fully open – or to open hearings generally.
[10] See United States' "Additional Working Procedures of the Arbitrator on Partially Open Meetings", paras. 1.1, 3.3-3.4, and 3.8-3.10.

necessary for the protection of confidential information."[11] Instead, Korea reiterated its request that the Arbitrator either adopt working procedures modelled on those in *Tuna II* or devise a "simplified" redaction process.[12]

1.6. Thus, while we understand that the United States and Korea have agreed, in principle, that the meeting may be partially opened, the parties disagree on how to conduct such a meeting. More specifically, Korea and the United States differ on what may be disclosed, and, in particular, on whether the redaction "filter" should catch only BCI or should also catch "other confidential information".[13]

1.7. Therefore, we will evaluate the United States' request, along with its supporting reasoning, that the Arbitrator adopt the proposed second set of working procedures that limit the protection of confidential information to BCI, and Korea's proposals that extend such protection beyond BCI.

1.8. However, before turning to the parties' arguments on procedures to conduct a partially open meeting, we wish to address the United States' argument that "Korea's choice to maintain the confidentiality of its own statements would not be a basis to deny a U.S. request to the Arbitrator to lift the confidentiality of U.S. statements at the time they are made at the arbitration meeting" under Article 18.2 of the DSU, since "one party to this arbitration does not have a right to prevent the other party from delivering its statements in open hearing."[14]

1.9. As background, we recall that the DSU does not "expressly contemplate" open meetings.[15] The working procedures contained in Appendix 3 of the DSU, paragraph 2, provide that "panels shall meet in closed session."[16] Article 12.1 of the DSU sets forth the possibility for a panel to depart from those working procedures, if the panel "consult[s] the parties to the dispute."[17] Past WTO adjudicators – including arbitrators in Article 22.6 proceedings – have done so and opened meetings, either partially or in full, to public observation in limited circumstances. Where both parties have agreed to open meetings to public observation, panels and the Appellate Body have granted the request and adopted appropriate working procedures.[18] Where parties have disagreed, WTO adjudicators have declined the request in all instances[19], except one.[20] This practice confirms that it is the WTO adjudicator that ultimately decides, in due consideration of the parties' positions and the circumstances of the proceeding, to either open a meeting (in full or in part) or to keep it closed.

1.10. The United States' argument mischaracterizes Article 18.2 of the DSU in relation to the issues raised by a partially or fully open hearing. The second sentence of Article 18.2 of the DSU states that "[n]othing in [the DSU] shall preclude a party to a dispute from disclosing statements of its own positions to the public". We therefore agree with the United States and Korea that the second

[11] Korea's response to Arbitrator question on United States' second set of working procedures, p. 1.

[12] Korea's response to Arbitrator question on United States' second set of working procedures, p. 3.

[13] See Korea's response to Arbitrator question No. 4 on open hearings, p. 3; Korea's response to Arbitrator question on United States' second set of working procedures, p. 1.

[14] United States' comments on draft timetable and draft working procedures, p. 6; and United States' response to Arbitrator question No. 1 on open hearings, para. 4. See also United States' comments on Korea's comments on draft timetable and draft working procedures, p. 4.

[15] Panel Reports, *US – Continued Suspension*, para. 7.45; and *Canada – Continued Suspension*, para.7.43.

[16] As the panels in *US/Canada – Continued Suspension* note, paragraph 2 of Appendix 3 of the DSU also provides: "The parties to the dispute, and interested parties, shall be present at the meeting only when invited by the panel to appear before it." There is no reference in that provision to the public or any other participant. Panel Reports, *US – Continued Suspension*, para. 7.45; and *Canada – Continued Suspension*, para. 7.43.

[17] Panel Reports, *US – Continued Suspension*, para. 7.46; and *Canada – Continued Suspension*, para. 7.44. Similarly, panels may neither reshape substantive provisions of the DSU nor deviate from the working procedures in Appendix 3 in a way that would contravene an express prohibition in the DSU. Panel Reports, *US – Continued Suspension*, para. 7.45; and *Canada – Continued Suspension*, para. 7.43.

[18] In 2005, the disputing parties requested, for the first time, opening the meetings with the parties to public observation in the *US/Canada – Continued Suspension* panel proceedings. The panels accepted the request. See Panel Reports, *US – Continued Suspension*, para. 4.2; and *Canada – Continued Suspension*, para. 4.2. To date, meetings have been opened in more than 30 disputes.

[19] See, e.g. Appellate Body Report, *EU – Biodiesel (Argentina)*, Add.1, Annex D-2, para. 6; and Panel Report, *US – OCTG (Korea)*, Add.1, Annex E-1, para. 3.4.

[20] The *Tuna II* parallel compliance panel proceedings and Article 22.6 arbitration are and remain the only examples in which an adjudicator granted one party's request for a "partially" open hearing – but over the objection of the other party. See Decision by the Arbitrator, *US – Tuna II (Mexico) (Article 22.6 – Mexico)*, fn 31 and Add.1., Annex A-3.

sentence of this provision confers a right of disclosure to a party of statements of its own position; however, it does not follow from the mere existence of this right that an arbitrator must open a meeting, be it in full or in part, in order to provide a "vehicle" for a party to exercise its right of disclosure under Article 18.2. Article 18.2 does not address the question of whether hearings should be open or partially open. Further, there is nothing in any other part of the DSU that indicates a party's right to disclose statements of its position under Article 18.2 must be exercised through holding a fully or partially open hearing. Accordingly, nothing in the DSU suggests that an arbitrator – or any other WTO adjudicator – is required either to facilitate a Member's exercise of its rights under Article 18.2 to disclose statements of its positions or to "automatically"[21] grant the request to open a meeting.[22] In summary, the text of Article 18.2 of the DSU does not oblige the Arbitrator to accept a request to partially open a meeting.

1.11. We also disagree with the United States to the extent it suggests that as "the DSU makes no reference to the confidentiality of Article 22.6 arbitration proceedings … there is even less basis to determine that one party to an Article 22.6 proceeding may prevent another party from delivering its statements in open hearing".[23] First, we find this view inconsistent with the United States' overall argument that it has a right to forego confidentiality of statements of its own position under Article 18.2, second sentence. Second, as noted above, past arbitrators have determined that the confidentiality rules of Article 18 of the DSU, which are expressly stated as being applicable to panel and Appellate Body proceedings, also apply to Article 22.6 proceedings, whether or not textually indicated.[24]

1.12. Turning now to the parties' proposed procedures to implement a partially open meeting, we recall that the United States' second set of working procedures limit the scope of what may not be disclosed to BCI alone – and only BCI would be subject to review and redaction.[25] Korea confirms that a narrow view of confidentiality limited to BCI is not satisfactory, given Korea's stated concerns on disclosure of its "other confidential information".[26]

1.13. We note, in this regard, that Korea proposed amendments to the United States' second set of working procedures, which we do not view as a separate request but as an attempt, by Korea, to find common ground between it and the United States. Korea indicates that the United States' working procedures "overlook[] important procedures that are necessary for the protection of confidential information", namely those redaction procedures in *Tuna II*.[27] Korea's amendments would re-introduce certain elements of the *Tuna II* redaction procedure – elements that we note the United States set aside in its second set of working procedures – to permit redaction of its "arguments" and "positions".[28] As Korea acknowledges[29], the United States does not agree to the *Tuna II* working procedures, specifically the redaction process, which it criticized as "flawed"[30]. No matter how the *Tuna II* redaction procedure could hypothetically be reformed, redaction beyond BCI is opposed by the United States.[31] In other words, we find it impossible to reconcile a *Tuna II* approach to redact Korea's "other confidential information" with the United States' view of confidentiality as limited to BCI.

1.14. We further emphasize that, without the agreement of the parties on this fundamental issue – the scope of confidentiality for the purpose of conducting a partially open meeting in this proceeding – we cannot do as the parties wish, without, in practice, contravening the parties' respective views on disclosure and confidentiality.

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[21] See Decision by the Arbitrator, *US – Tuna II (Mexico) (Article 22.6 – Mexico)*, para. 2.24 and fn 28.

[22] Decision by the Arbitrator, *US – Tuna II (Mexico) (Article 22.6 – Mexico)*, para. 2.24.

[23] United States' response to Arbitrator question No. 1 on open hearings, para. 6. In its response, the United States commented on the findings of the Appellate Body in *US – Continued Suspension* on the scope of confidentiality in Article 17.10 of the DSU. See ibid. para. 5.

[24] See Decision by the Arbitrator, *US – Upland Cotton (Article 22.6 – US I)*, para. 1.33.

[25] See United States' "Additional Working Procedures of the Arbitrator on Partially Open Meetings".

[26] Korea's response to Arbitrator question No. 4 on open hearings, p. 3; and Korea's response to Arbitrator question on United States' second set of working procedures, p. 1.

[27] Korea's response to Arbitrator question on United States' second set of working procedures, pp. 2-3.

[28] Korea's response to Arbitrator question on United States' second set of working procedures, pp. 2-3.

[29] Korea's response to Arbitrator question on United States' second set of working procedures, p. 3.

[30] United States' comments on Korea's comments on draft timetable and draft working procedures, p. 4.

[31] United States' comments on Korea's response to Arbitrator question Nos. 3 and 5 on open hearings, para. 4.

1.15. In light of the foregoing, we decline to adopt the United States' second set of working procedures on a partially open hearing as well as Korea's proposed amendments thereto.

1.16. In the alternative, Korea asks the Arbitrator to "provide the parties with a simplified redaction procedure … in which the parties may request redaction of statements that directly or indirectly disclose exhibits, arguments, and positions of the non-disclosing party."[32] Korea offers no guidance or detail on what may be "simplified".

1.17. In our view, Korea's suggestion that the Arbitrator devise and adopt a "simplified" redaction procedure would require the Arbitrator to determine what information is confidential and therefore susceptible to redaction. Notwithstanding the Arbitrator's attempts – through questions – to arrive at a satisfactory procedural solution, the parties did not compromise their views on the scope of confidentiality and the attendant redaction procedures. "Simplified" working procedures would fail to bridge this gap as form cannot compensate for missing substantive agreement.

1.18. Furthermore, other considerations must be accounted for, in particular the prompt settlement of disputes.[33] In this regard, fulfilling Korea's request would place a burden on the Arbitrator, which goes directly against Korea's stated concern that "administrative burdens must be avoided in the interest of prompt settlement of a dispute".[34] Relatedly, should we have devised a "simplified" redaction process, without further direction from Korea, the proponent of the request, guaranteeing both parties' due process rights – through several rounds of questions and comments – would have affected the timetable.[35]

1.19. Accordingly, we abstain from proposing "simplified" procedures due to these time constraints and the significant differences between the parties' views regarding such procedures.

1.20. In ultimately denying the United States' request to partially open the meeting in this Arbitration, we are not prohibiting the United States from disclosing its statements of its own position and thereby depriving the United States of its right under Article 18.2 of the DSU. Members routinely publish submissions, methodology papers, responses to questions, oral statements, and other materials on publicly accessible websites, regardless of whether the meetings were opened to the public.[36] Hence, the United States can still exercise its right to disclose statements of its own positions by other means as it may determine under Article 18.2.

1.21. Finally, we are mindful of the issue of transparency in WTO proceedings, how it has figured in discussions among Members to improve and clarify the DSU, and its particular significance in the context of dispute settlement.[37] To this point, we consider the conclusion of the panels in *US/Canada – Continued Suspension* to apply equally in this Arbitration:

[32] Korea's response to Arbitrator question on United States' second set of working procedures, p. 3.

[33] The arbitrator in *Tuna II* identified four factors that guide an evaluation of whether to grant a request to partially open a meeting: "(a) a non-disclosing party's right to confidentiality protection of statements of its own position, (b) due process, (c) the prompt settlement of disputes, or (d) the careful and efficient discharge, or the integrity, of the adjudicative function." Decision by the Arbitrator, *US – Tuna II (US) (Article 22.6 – Mexico)*, para. 2.31. Both the United States and Korea consider these factors relevant to this proceeding. See United States' response to Arbitrator question No. 6 on open hearings, para. 14; and Korea's response to Arbitrator question No. 6 on open hearings, p. 4.

[34] Korea's response to Arbitrator question on United States' second set of working procedures, p. 3. The United States shares this concern, and it is one of the reasons the United States opposes the *Tuna II* redaction process, one which, according to the United States, "adds significantly to the burden on the Arbitrator and the Secretariat". United States' comments on Korea's response to Arbitrator question Nos. 3 and 5 on open hearings, para. 4.

[35] We are aware that this reason has weighed significantly in the decisions of panels and the Appellate Body in determining whether to partially open meetings and hearings. See, e.g., Appellate Body Report, *EU – Biodiesel (Argentina)*, Add.1, Annex D-2, para. 6; and Panel Report, *US – OCTG (Korea)*, Add.1, Annex E-1, para. 3.2.

[36] Panel Report, *US – Upland Cotton (Article 21.5 – Brazil)*, para. 8.20. See also Panel Report, *US – OCTG (Korea)*, Add.1, E-3, para. 3.4.

[37] See Panel Reports, *US – Continued Suspension*, para. 7.50; and *Canada – Continued Suspension*, para. 7.48.

> The Panel considers that its role is not to address transparency in general terms, but to determine whether the DSU as it currently stands permits that, under the circumstances of this particular case, the Panel hearing be open to public observation.[38]

1.22. In light of the parties' fundamental disagreement on how to conduct a partially open meeting, as well as other considerations in this Article 22.6 arbitration proceeding, we have decided, after consulting with the parties, to conduct the Arbitration hearing in closed session.[39]

[38] See Panel Reports, *US – Continued Suspension*, para. 7.52; and *Canada – Continued Suspension*, para. 7.50.

[39] Paragraph 10 of the working procedures of the Arbitrator states: "The arbitration hearing will be conducted in closed session, unless the Arbitrator decides otherwise after consultations with the parties."