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I. INTRODUCTION

1. In its first submission, the United States observed that the WTO dispute settlement system does not authorize punitive sanctions.¹ Having read the *EC First Submission*,² the United States would supplement this with the observation that the WTO dispute settlement system does not authorize unfounded countermeasures or suspension of concessions.

2. And completely unfounded is just what the EC's \$13.5 billion figure is.³ The errors in the EC's new methodologies are legion, and the United States will discuss them in detail below. However, it is worth highlighting at the outset some of the more remarkable errors committed by the EC.

3. In its calculation of the amount of the subsidy, the EC criticizes the tax expenditure forecasts of the U.S. Department of the Treasury ("Treasury"), but then proceeds to use *projected* U.S. export growth rates that grossly exceed the *actual* growth in U.S. exports as shown by *actual* data. In its economic model that purports to show the estimated trade impact of the U.S. subsidy, the EC uses excessive and outdated parameter estimates and reports no results of the trade impact on the EC. Finally, in attempting to calculate the alleged impact on EC exports to the United States of the ETI Act's 50 percent rule, the EC does not even attempt to calculate the percentage of fair market value accounted for by imported inputs in the output value of U.S. goods producing industries. When this calculation is done, however, reasonable estimates based upon the EC's own data show that the EC's estimates of the impact of the 50 percent rule on EC exports of input products to the United States is pure fiction.

¹ *First Written Submission of the United States of America ("US First Submission")*, 14 February 2002, para. 1.

² *First Submission of the European Communities ("EC First Submission")*, 14 February 2002.

³ *Id.*, para. 60.

4. The United States believes that the methodology it proposed in the *US First Submission* remains the appropriate methodology for determining the amount of countermeasures and suspension of concessions to which the EC is entitled in this dispute. However, the United States does agree with some of the points contained in the *EC First Submission*. As a result, and as explained in detail below, the United States has adjusted upward the figure of \$956 million set forth in its first submission.⁴ As a result of these changes, the United States believes that the amount of countermeasures and suspension of concessions to which the EC is entitled is no more than \$1.11 billion (based on data for the year 2000) or \$1.05 billion (should the Arbitrator decide to rely on data for the year 2001).

II. PRELIMINARY COMMENTS

5. Before turning to the substantive issues raised in this proceeding, the United States would like to make some preliminary comments.

A. **The *EC Methodology Paper* Misled the Arbitrator and the United States by Setting Forth a Methodology Different from the EC's Real Methodologies**

6. The task of the Arbitrator in this proceeding is to determine whether the amount of countermeasures requested by the EC are "appropriate" within the meaning of Article 4.10 of the *Agreement on Subsidies and Countervailing Measures* ("SCM Agreement"), and whether the level of suspension of concessions requested by the EC is "equivalent to the level of nullification or impairment" within the meaning of Article 22.7 of the *Understanding on Rules and Procedures Governing the Settlement of Disputes* ("DSU").⁵ In order to make this determination,

⁴ See, e.g., *US First Submission*, para. 78(c).

⁵ See in part WT/DS108/15 (27 November 2000).

the Arbitrator ultimately must compare the EC's request to some benchmark. The purpose of the submissions of the parties in this proceeding is to assist the Arbitrator in selecting the proper benchmark.

7. In light of that purpose, the United States was surprised and disappointed to find that the so-called "methodology" contained in the *EC Methodology Paper*⁶ bears absolutely no relationship to the methodologies used in the *EC First Submission* for purposes of calculating what the EC believes to be the correct benchmark amounts. The "methodology" contained in the *EC Methodology Paper* is based on the alleged total amount of the U.S. subsidy for the year 2000. However, in the *EC First Submission*, the EC's calculation is based on the alleged total amount of the U.S. subsidy for the year 2002. In addition, in the *EC First Submission*, the EC proposes an alternative methodology that purports to measure the alleged global trade impact of the U.S. export subsidy, a methodology not discussed in the *EC Methodology Paper*. Likewise, in the *EC First Submission*, the EC proposes a methodology that purports to measure the amount of actual nullification or impairment suffered by the EC as a result of the U.S. violation of Article III:4 of GATT 1994, a methodology that also was not discussed in the *EC Methodology Paper*.⁷

8. The United States believes that the EC's actions are inconsistent with the Arbitrator's Timetable and Working Procedures, which required the EC to provide by 4 February the methodologies it considered to be appropriate for calculating the benchmark amounts.

⁶ *Methodology Paper by the European Communities ("EC Methodology Paper")*, 4 February 2002.

⁷ Indeed, the EC did not provide the United States with the correct exhibit for this particular new methodology until February 25, the day before rebuttal submissions were due.

Unfortunately, the EC did not reveal the true methodologies on which it intends to rely⁸ in this proceeding until 14 February, when the EC filed its first submission.

9. As a result, the United States has been deprived of the opportunity granted by the Arbitrator to make comments on the EC's methodologies, and the United States has been deprived of time to prepare its response to the EC's methodologies. Nonetheless, the United States has done its best in this rebuttal submission to respond to the legal and factual issues posed by the EC's new methodologies.

B. The EC Has Yet to Identify That Portion of Its \$4.043 Billion Amount Which Is for "Appropriate Countermeasures" and That Portion Which Is For the "Suspension of Concessions"

10. The EC has yet to identify that portion of its \$4.043 billion amount which is for "appropriate countermeasures" under Article 4.10 of the SCM agreement and that portion which is for the "suspension of concessions" under Article 22.2 of the DSU. These are two completely separate provisions under which the DSB must act, and the DSB is entitled to know what it is authorizing under each provision.

C. Issues That Are and Are Not in Dispute

11. To facilitate the Arbitrator's work, the United States believes that it is useful at the outset to identify which issues are in dispute and which issues are not.

⁸ This assumes that the EC does not intend to propose yet another methodology or set of methodologies in this proceeding.

1. Issues in Dispute

12. Based upon the submissions to date, the United States believes that the issues identified below are the major issues in dispute. Because these issues are in dispute, the United States will discuss them in greater detail in subsequent sections of this submission.

a. The Standard for Determining Whether Countermeasures Are "Appropriate" Under Article 4.10 of the SCM Agreement

13. The single most important issue before the Arbitrator concerns the standard to be used in determining whether proposed countermeasures are "appropriate" under Article 4.10 of the SCM Agreement. The United States believes that the appropriateness of countermeasures must be assessed by reference to the trade impact of the U.S. subsidy on the EC.⁹ The EC, on the other hand, appears to believe that the proper standard is the trade impact of the subsidy on all countries.¹⁰ Whether measured in terms of the amount of the subsidy or by economic modeling, the EC maintains that the trade impact on the EC is irrelevant.

b. The Utility of Economic Modeling

14. The United States believes that economic modeling is of limited utility in this proceeding, and has proposed that the trade impact on the EC of the U.S. subsidy be measured by using the amount of the subsidy as a proxy.¹¹ It is not entirely clear to the United States that the EC disagrees with this point, given that it has proposed using the size of the subsidy as a benchmark (albeit a benchmark for measuring the global trade impact of the subsidy, as opposed to the trade impact on the EC). However, because the EC has proposed as an alternative methodology the

⁹ See *US First Submission*, paras. 16-57.

¹⁰ See *EC First Submission*, paras. 21-30.

¹¹ *US First Submission*, paras. 59-62.

use of economic modeling to measure the global trade impact of the subsidy,¹² it appears that there is at least a potential disagreement between the parties on this issue.

c. The Assumption of Full Pass-Through of the Tax Savings

15. If the Arbitrator should choose to employ economic modeling to measure the trade impact of the subsidy on the EC, the United States disagrees with the assumption contained in the EC economic model that 100 percent of the tax savings is passed through by the exporter/taxpayer to the purchaser.¹³ For reasons that the United States will explain, such an assumption is not empirically supported.

d. The Appropriate Time Period

16. The United States disagrees with the EC that the benchmark amounts should be calculated on the basis of the year 2002 and beyond. The United States believes that such calculations should be based on data for the year 2000.¹⁴ Nonetheless, the United States has calculated the total amount of the subsidy, and the EC's share thereof, for 2001, as well.

e. Calculation of the Amount of the Subsidy

17. Even if the Arbitrator were to decide not to utilize the Treasury tax expenditure estimates, the United States disagrees with the manner in which the EC has calculated the estimated amount of the subsidy. Among other things, the EC's calculations ignore the fact that the actual rate of growth in U.S. exports was far less than the extrapolated growth rate used by the EC.

¹² *EC First Submission*, paras. 61-66 and Exhibit EC-8.

¹³ See Exhibit EC-8, Annex 7, Table B-1.

¹⁴ The United States notes that this matter was referred to arbitration on the basis of a U.S. objection to the EC's request for authorization. The U.S. objection was dated November 27, 2000.

f. The Trade Impact of the Article III:4 Violation

18. The United States utterly disagrees with the EC's "methodology" for calculating the effect on EC exports to the United States of the violation of Article III:4. The EC's own data – properly interpreted – shows what the United States has maintained throughout this proceeding; namely, that the "content" rule – whether in its FSC or ETI Act incarnation – has had no discernible impact on EC exports to the United States. As will be demonstrated below, the figure calculated by the EC is pure speculation.

2. Issues That Are Not in Dispute

19. The United States believes that the following issues are not in dispute:

a. The ETI Act Is the Measure on Which the Calculation of Appropriate Countermeasures and Suspension of Concessions Should Be Based

20. The EC agrees with the United States that the ETI Act is the measure on which the calculations of appropriate countermeasures and suspension of concessions should be based.¹⁵ As noted above, however, the parties appear to disagree on the time period that should be used for purposes of these calculations.

b. No Adjustment to the Subsidy Amount Should Be Made for Subsidies Provided to Agricultural Products

21. Although the United States initially considered that the amount of subsidies attributable to exports of agricultural products should be deducted for purposes of determining the amount of

¹⁵ *EC First Submission*, paras. 11-16. The United States notes that the ETI Act was signed into law prior to the U.S. November 27, 2000 objection on which this arbitration proceeding is based.

“appropriate countermeasures” under Article 4.10 of the SCM Agreement,¹⁶ upon further reflection, the United States agrees with the EC that no adjustment is necessary,¹⁷ because the same proxy approach is necessary with respect to agricultural products.

c. An Adjustment for Exports of Services Should Be Limited to the Category of Engineering and Architectural Services

22. The United States initially proposed that the amount of the subsidy be adjusted by deducting amounts attributable to what it considered to be the export of services.¹⁸ The four categories of services identified by the United States were: (1) agricultural services; (2) computer software; (3) motion picture distribution; and (4) engineering and architectural services.¹⁹ The EC objected to this adjustment, asserting that, with the exception of category (4), the other categories involved the export of goods.²⁰

23. The initial U.S. proposal was premised on the assumption that the income reflected in these statistical categories was largely attributable to the export of services. Based upon further review, however, the United States believes that this assumption may not be correct, and, in any event, it is impossible to identify which portion of the income contained in these categories is attributable to goods, services or intellectual property rights. Accordingly, the United States

¹⁶ *Comments on the EC's Methodology Paper by the United States of America* (“US Comments”), 8 February 2002, para. 8.

¹⁷ See *EC First Submission*, paras. 87-89.

¹⁸ *First Written Submission of the United States of America* (“US First Submission”), 14 February 2002, paras. 72-74.

¹⁹ *Id.*, para. 73.

²⁰ *EC First Submission*, paras. 90-94.

agrees with the EC that the only statistical category for which an adjustment should be made is the category of engineering and architectural services.²¹

d. The Estimates of the Amount of the Subsidy Should Reflect the Increase in the Rate of Use of the Subsidy

24. The United States agrees with the EC that calculations of the estimated amount of the subsidy should reflect historical data regarding the increase in the rate of use of the subsidy.²² However, the United States believes that the EC's adjustment for this factor is too high. The United States discusses this issue in more detail below.

e. If Economic Modeling Is Used, No Adjustment Should Be Made for Exchange Rate Effects

25. For reasons previously explained, the United States believes that the Arbitrator will be unable to rely on economic modeling in estimating the trade impact of the U.S. subsidy on the EC.²³ However, should the Arbitrator decide it is able to use economic modeling, the United States agrees with the EC that any such modeling should not take into account exchange rate effects.²⁴

²¹ It appears, however, that because of the manner in which data is collected and reported, even the statistical categories that are labeled as "goods" likely contain some unquantifiable amount of income attributable to the export of services. Thus, limiting an adjustment for services exports to the engineering and architectural services category would operate to the detriment of the United States. Therefore, as a very conservative estimate, the United States would propose a 1 percent downward adjustment to the total subsidy amount. For purposes of the calculations contained in this submission, however, the United States has not made this adjustment.

²² See, e.g., *EC First Submission*, para. 42.

²³ *US First Submission*, paras. 59-61.

²⁴ See *EC First Submission*, para. 65, in which the EC refers to exchange rate effects as "indirect effects."

f. The Amount of Countermeasures or Suspension of Concessions Awarded by the Arbitrator May Not Exceed the Amount Requested by the EC

26. The United States interprets paragraphs 95-97 of the *EC First Submission* as signifying the EC's agreement with the proposition that the amount of countermeasures or suspension of concessions awarded by the Arbitrator may not exceed the amount set forth in the EC's request for authorization by the DSB.²⁵

D. Burden of Proof

27. With respect to the discussion of burden of proof in the *EC First Submission*,²⁶ the United States does not dispute the proposition that in this proceeding the United States bears the ultimate burden of proving that the countermeasures requested by the EC are not "appropriate" and that the level of suspension of concessions requested by the EC is not "equivalent" to the level of nullification or impairment. The EC's discussion of burden of proof, however, is incomplete and inaccurate to the extent that it suggests that the United States bears the burden of disproving every factual assertion made by the EC.

28. To the contrary, in *EC Hormones*, the arbitrator took the position that the party asserting a specific fact – including the party requesting authority to suspend concessions – had the burden of proving that fact.²⁷ Thus, with respect to the effect of the EC's "test and hold" procedures of

²⁵ WT/DS108/13 (17 November 2000). If the United States' interpretation is incorrect, then the EC should clarify its position and indicate the legal authority on which its position is based.

²⁶ *EC First Submission*, paras. 6-10.

²⁷ *European Communities - Measures Concerning Meat and Meat Products (Hormones) - Original Complaint by the United States - Recourse to Arbitration by the European Communities Under Article 22.6 of the DSU ("EC Hormones")*, WT/DS26/ARB, Decision by the Arbitrators circulated 12 July 1999, para. 10 ("It is for the party alleging the fact to prove its existence.").

on U.S. exports, the arbitrator stated: "The test and hold effect on US exports has been alleged by the US. It is thus for the US to prove it."²⁸ Similarly, the arbitrator rejected a U.S. claim regarding certain lost exports because it "consider[ed] the causal link between the hormone ban and the allegedly lost exports . . . to be too remote. Taking such lost exports into account would, in our view, be too speculative."²⁹

29. Accordingly, where the EC alleges the existence of a specific fact, the burden is on the EC to prove it. The burden is not on the United States to disprove it.

III. SUMMARY OF ARGUMENT

30. In the sections that follow, the United States addresses the following issues. First, the United States responds to the EC's invocation of the *Brazil Aircraft* arbitration for the proposition that the Arbitrator should determine an appropriate amount of countermeasures without regard to the trade impact on the EC of the U.S. subsidy. The United States will demonstrate that reliance on *Brazil Aircraft* is improper because the case is distinguishable on its facts from the instant dispute, and because the reasoning of the arbitrator in that case – to the extent that the EC attempts to use that case as establishing a general principle applicable to all cases – was seriously flawed.

31. Second, the United States will address the EC's assertions regarding the amount of the U.S. subsidy. While the United States agrees with some of the adjustments proposed by the EC, other adjustments are incorrect and contradicted by the actual facts. The United States will

²⁸ *Id.*, para. 45.

²⁹ *Id.*, para. 77.

recalculate the amount of the subsidy using appropriate adjustments, incorporating those EC adjustments with which it agrees.

32. Third, the United States will discuss the problems inherent in using an economic modeling approach in this case. The United States also will address the errors in the EC's economic modeling exercise.

33. Finally, the United States will address the EC's claims regarding the trade impact of the 50 percent rule. The United States will demonstrate that the EC has attempted to measure the wrong thing. The United States will further demonstrate that when a proper analysis is performed, the trade impact of the 50 percent rule is zero.

IV. COUNTERMEASURES ARE NOT "APPROPRIATE" WITHIN THE MEANING OF ARTICLE 4.10 OF THE SCM AGREEMENT IF THEY ARE DISPROPORTIONATE TO THE TRADE IMPACT ON THE COMPLAINING MEMBER

34. The United States has proposed that the Arbitrator determine the appropriate amount of countermeasures under Article 4.10 of the SCM Agreement by reference to the trade impact of the U.S. subsidy on the EC.³⁰ To calculate the appropriate amount of countermeasures under this approach, the United States has proposed using the amount of the subsidy as a proxy for the amount of the global trade impact and awarding the EC its proportionate share of that amount.³¹

35. The EC, on the other hand, has insisted that the Arbitrator ignore the trade impact of the subsidy on the EC, and that the Arbitrator determine that countermeasures based on the total

³⁰ *US First Submission*, paras. 16-57.

³¹ *Id.*, paras. 58-75.

amount of the subsidy are appropriate.³² The EC has defended this approach by invoking the decision of the arbitrator in *Brazil Aircraft*.³³ In that case, the arbitrator found that "when dealing with a prohibited export subsidy, an amount of countermeasures which corresponds to the total amount of the subsidy is 'appropriate'."³⁴

36. As discussed below, the Arbitrator need not and should not follow the *Brazil Aircraft* approach in this case. First, *Brazil Aircraft* involved a quite different set of facts that distinguishes that case from the case at hand. In addition, *Brazil Aircraft* is of extremely limited utility for other prohibited subsidy cases, due to flaws in the arbitrator's reasoning.

A. *Brazil Aircraft* Is Not Binding Precedent

37. It goes without saying that under established WTO dispute settlement principles, the decision of the arbitrator in *Brazil Aircraft* is not binding precedent. In *Japan Alcoholic Beverages*, the Appellate Body found that adopted panel reports are not binding on future panels, and that, pursuant to Article IX:2 of the WTO Agreement, only the Ministerial Conference and the General Council have the authority to adopt authoritative interpretations of a WTO agreement.³⁵ Moreover, given that a decision of an arbitrator, such as the decision in *Brazil Aircraft*, is not subject to appeal to the Appellate Body, it necessarily has less precedential value than an adopted panel report.

³² *EC First Submission*, paras. 21-23. Alternatively, the EC suggests that countermeasures equal to the global trade impact of the subsidy, as calculated on the basis of economic modeling, would be appropriate. *Id.*, paras. 61-69.

³³ See *EC First Submission*, paras. 21-30, discussing *Brazil - Export Financing Programme for Aircraft - Recourse to Arbitration by Brazil Under Article 22.6 of the DSU and Article 4.11 of the SCM Agreement* ("Brazil Aircraft"), WT/DS46/ARB, Decision by the Arbitrators circulated 28 August 2000.

³⁴ *Id.*, para. 3.60 (footnote omitted).

³⁵ *Japan - Taxes on Alcoholic Beverages*, WT/DS8/AB/R, WT/DS10/AB/R, WT/DS11/AB/R, Report of the Appellate Body adopted 1 November 1996, page 13.

38. Indeed, the arbitrator in *Brazil Aircraft* did not profess to be establishing a general principle applicable to all cases. Instead, the arbitrator qualified its decision by emphasizing that “in practice there may be situations where countermeasures equivalent to the level of nullification or impairment will be appropriate”³⁶ Even if one were to look to *Brazil Aircraft* for guidance, that case could provide little guidance here, because the facts in the present case differ dramatically. Indeed, given the different factual situation posed by the present case, the application of an approach identical to *Brazil Aircraft*’s approach would result in countermeasures that are not “appropriate” within the meaning of Article 4.10 of the SCM Agreement.

B. *Brazil Aircraft* Is Distinguishable on Its Facts from the Present Case

1. In *Brazil Aircraft*, the Trade Impact on Canada Was Higher Than the Amount of the Subsidies and the Parties Agreed that the Amount of the Subsidies Was the Appropriate Starting Point

39. In *Brazil Aircraft*, the positions of the parties were quite different from the positions of the parties in the present case. Of particular importance is that in *Brazil Aircraft*, the parties agreed that the amount of the subsidy should serve as the starting point for assessing the appropriateness of countermeasures.³⁷ That is not the case here, where the United States is firmly of the view that the appropriateness of countermeasures should be based on the trade impact on the complaining Member.

³⁶ *Brazil Aircraft*, para. 3.57.

³⁷ *Brazil Aircraft*, para. 3.27 (“[B]oth parties, even though they disagree on the subsequent steps, suggested that the calculation of the level of appropriate countermeasures could be based on the amount of the subsidy.”), and para. 3.53 (“Brazil agreed with Canada that the countermeasures should relate to the amount of the subsidy.”).

40. Also significant is the fact that the amount of countermeasures sought by Canada based on the amount of the subsidy was significantly lower than the amount of trade harm alleged by Canada to exist. Canada alleged that the value of the Brazilian subsidies in question amounted to C\$3.2 billion,³⁸ while the value of the harm to Canada's regional aircraft industry was C\$4.7 billion.³⁹ Given this, the arbitrator may have been justified in concluding that calculating countermeasures on the basis of the amount of the subsidy would not be "disproportionate" within the meaning of footnote 9 to the SCM Agreement.

41. In the instant case, the situation is different, because the United States believes that any impact on EC trade interests caused by the U.S. subsidy is much less than the \$4.043 billion amount requested by the EC or the benchmark amounts alleged by the EC. Thus, unlike the situation in *Brazil Aircraft*, awarding the EC the entire amount of the subsidy would result in disproportionate countermeasures.

2. The Measure at Issue and the Products Involved Are Dramatically Different from Those Involved in *Brazil Aircraft*

42. As important as the considerations noted in the preceding section is the fact that the measure at issue and the products involved in *Brazil Aircraft* were dramatically different from the measure at issue and the products involved in the present case. This consideration makes the amount of countermeasures claimed by the EC particularly inappropriate.

43. *Brazil Aircraft* involved a subsidy scheme – PROEX – that was made available to a single category of products – regional aircraft – which were produced by a single Brazilian

³⁸ *Id.*, para. 3.19.

³⁹ *Id.*, para. 3.21.

company, Embraer.⁴⁰ Embraer itself had a relatively small number of competitors globally, its primary competitor being the Canadian company, Bombardier.⁴¹ Moreover, the *direct* beneficiaries of the PROEX subsidy were Embraer's customers, who received lower interest rates on their financing of Embraer aircraft. Thus, there was a legitimate basis for the view that the PROEX subsidies had a very real and significant impact on Canada's trade interests. Put differently, if the amount of the subsidy was to be the basis for assessing the appropriateness of countermeasures, Canada had a strong case for claiming the entire amount.

44. By contrast, the ETI Act (and the FSC provisions that preceded it) is a broad-based tax measure of essentially general application. The ETI Act potentially applies to all taxpayers subject to U.S. taxation and, but for a few limited exceptions, to essentially all products sold by U.S. taxpayers in all foreign countries.⁴² It undoubtedly is the case that some portion of transactions benefitting from the ETI Act have a potential effect on EC trade interests. However, given the breadth of U.S. companies and products to which the ETI Act applies, it is incorrect to claim that *every* ETI Act (or FSC) transaction has an effect on EC trade interests, and that the EC is the *only* WTO Member affected by the ETI Act. Yet that is the underlying logic of an

⁴⁰ Although Brazil applies the PROEX program to products other than regional aircraft, essentially a special "subprogram" existed for exports of regional aircraft. *Brazil - Export Financing Programme for Aircraft*, WT/DS46/R, Report of the Panel, as modified by the Appellate Body, adopted 20 August 1999, para. 2.3. It was this "subprogram" which Canada challenged. *Id.*, para. 7.2.

⁴¹ Although the United States was unable to locate published information, it did obtain information over the telephone from personnel at McGraw-Hill's publication *Aviation Week*, an aerospace industry trade journal, regarding shipments of regional aircraft in 2000. According to this information, Bombardier and Embraer accounted for 84.5 percent of the regional jet aircraft market and 82.4 percent of the total regional aircraft market (including turboprop aircraft). These figures underestimate the situation somewhat, because, according to McGraw-Hill, they: (1) include shipments of regional jet aircraft by British Aerospace, which was exiting the regional aircraft market; and (2) do not include the total number of shipments of the Embraer 120 turboprop aircraft.

⁴² The EC itself concedes that the subsidy "applies across virtually the whole range of US exports." *EC First Submission*, para. 2.

approach which would base the amount of countermeasures to which the EC is entitled on the total amount of the subsidy.

C. The Flawed Reasoning of *Brazil Aircraft* Cannot Be Applied to Other Prohibited Subsidy Cases

45. Given its unique facts, the outcome in *Brazil Aircraft* was not unreasonable. However, to the extent that the EC is attempting to apply the approach in *Brazil Aircraft* to a dramatically different factual situation, it is necessary to point out the significant flaws in the arbitrator's reasoning.

1. The Arbitrator in *Brazil Aircraft* Gave Inadequate Consideration to the Meaning of the Term "Disproportionate" in Footnotes 9 and 10 of the SCM Agreement

46. Article 4.10 and Article 4.11 of the SCM Agreement are qualified by footnotes 9 and 10, which provide that countermeasures are not "appropriate" if they are "disproportionate." In considering the significance of the footnotes, however, the arbitrator in *Brazil Aircraft* said only that the footnotes confirm "that the term 'appropriate' in Articles 4.10 and 4.11 of the SCM Agreement should not be given the same meaning as the term 'equivalent' in Article 22 of the DSU."⁴³ The arbitrator failed to explain what it believed the footnotes mean or how they might affect the application of Articles 4.10 and 4.11 in that case.

47. To merely state that footnotes 9 and 10 help to differentiate between the word "appropriate" as used in Articles 4.10 and 4.11 and the word "equivalent" as used in Article 22.4 of the DSU does little to clarify the meaning of Articles 4.10 and 4.11. The arbitrator in *EC*

⁴³ *Brazil Aircraft*, para. 3.51.

Bananas found the ordinary meaning of “appropriate” and “equivalent” sufficient to distinguish between the two terms, stating that the term “equivalent” signified a stricter relationship between the level of suspension of concessions and the level of nullification or impairment than the term “appropriate.”⁴⁴

48. The arbitrator in *Brazil Aircraft* appeared to recognize that footnotes 9 and 10 go beyond that mere distinction, noting that the two footnotes are predicated on the notion that authorized countermeasures are not to be “disproportionate in light of the fact that the subsidies dealt with under these provisions are prohibited” and that the prohibited nature of the subsidies “can most probably be considered more as an aggravating factor than as a mitigating factor.”⁴⁵ However, the observation that the prohibited nature of a subsidy may be one factor begs the question of what other factors go into a consideration of whether countermeasures are “disproportionate.”

49. The failure of the arbitrator in *Brazil Aircraft* to fully explore the meaning of footnotes 9 and 10 is probably attributable to the fact that it simply assumed that, as alleged by Canada, the trade impact on Canada was greater than the amount of the subsidies at issue, and that this fact automatically rendered the claimed countermeasures not disproportionate. However, if that were not the case, and if Canada had been harmed in an amount less than the amount of the subsidies, it would have been incumbent upon the arbitrator to have addressed more fully the meaning of

⁴⁴ *European Communities - Regime for the Importation, Sale and Distribution of Bananas - Recourse to Arbitration by the European Communities Under Article 22.6 of the DSU (“EC Bananas”)*, para. 6.5.

⁴⁵ *Brazil Aircraft*, para. 3.51.

footnotes 9 and 10, and to explain how countermeasures in excess of the trade impact on the complaining Member are not disproportionate.⁴⁶

2. The Arbitrator in *Brazil Aircraft* Gave Undue Weight to the Need to "Induce Compliance"

50. The arbitrator in *Brazil Aircraft* gave two related reasons for refusing to make a downward adjustment to the total amount of the subsidies as the proper level of countermeasures. First, it accorded great weight to the need to "induce compliance" by Brazil with respect to the DSB's recommendations and rulings in that case. Second, it believed that the provision in the SCM Agreement calling upon panels to recommend that prohibited subsidies be "withdrawn without delay" underscored the need for compliance. While these considerations may have justified the arbitrator's refusal to make a downward adjustment to the total amount of the subsidies in a case where the trade impact on the complaining Member was greater than the amount of the subsidies, these factors would not justify countermeasures equal to the total amount of the subsidies if that amount was "disproportionate" to the trade impact on the complaining Member.

a. The Objective of Inducing Compliance Is Not Unique to Article 4.10

51. The arbitrator in *Brazil Aircraft* considered that the purpose of a countermeasure is to induce compliance.⁴⁷ That observation, standing alone, is neither remarkable nor controversial.

⁴⁶ In this regard, *Brazil Aircraft* reflects no consideration of the negotiating history of the SCM Agreement. As demonstrated in the *US First Submission*, paras. 47-54, this negotiating history confirms that in order for countermeasures to be "appropriate" under Article 4.10, they must be proportional to the trade impact on the complaining Member.

⁴⁷ *Brazil Aircraft*, para. 3.44.

However, the arbitrator appears to have ignored the fact that inducing compliance is also the purpose of suspension of concessions under Article 22 of the DSU.⁴⁸ Given that Article 4.10 and Article 22.4 have the same purpose, and given that the standard of Article 22.4 is "equivalency" to the nullification or impairment suffered, the arbitrator's observation is a slim reed indeed for the EC's assertion that countermeasures under Article 4.10 can be considered "appropriate" when they are "disproportionate" to the actual trade impact on the complaining Member.

52. The arbitrator then went on to assert that "requiring that countermeasures in the form of suspension of concessions or other obligations be equivalent to the level of nullification or impairment would be contrary to the principle of effectiveness by significantly limiting the efficacy of countermeasures in the case of prohibited subsidies."⁴⁹ If the arbitrator was referring to the principle of effectiveness of treaty interpretation, the arbitrator misapplied that principle. As frequently observed by the Appellate Body, the principle of effectiveness prevents a treaty interpreter from interpreting one provision of a treaty in a way that renders another treaty provision ineffective.⁵⁰ However, interpreting Article 4.10 and footnote 9 as requiring that countermeasures be proportionate – or even equivalent – to the trade impact on the complaining Member in no way renders those provisions or any other provision of the WTO agreements ineffective.

53. If, on the other hand, the arbitrator's reference to the principle of effectiveness was intended to convey the notion that linking the amount of countermeasures under Article 4.10 to

⁴⁸ See *EC Bananas*, para. 6.3.

⁴⁹ *Id.*, para. 3.58.

⁵⁰ See, e.g., *United States - Standards for Reformulated and Conventional Gasoline*, WT/DS2/AB/R, Report of the Appellate Body adopted 20 May 1996, page 23.

the trade impact on the complaining Member would undermine the operational effectiveness of such countermeasures, the arbitrator crossed over the line that separates legitimate treaty interpretation from illegitimate policy making. The arbitrator's criticism that countermeasures would be more effective if they were not linked to the trade impact could apply equally as well to the general standard of the DSU found in Article 22.4. The arbitrator's task, however, was to interpret the relevant provisions as written, and not to substitute its judgment for that of the drafters.⁵¹ Unfortunately, the arbitrator avoided this task, and its analysis failed to come to grips with the meaning of the word "disproportionate."

b. The Arbitrator Assigned Undue Significance to the Requirement that a Prohibited Subsidy Be "Withdrawn Without Delay"

54. The arbitrator in *Brazil Aircraft* also attempted to distinguish between Articles 4.10 and 4.11 of the SCM Agreement and Article 22.4 of the DSU by pointing to the SCM Agreement's allegedly unique remedy for prohibited subsidies.⁵² The arbitrator stated that "Article 4.7 of the SCM Agreement provides in this respect that if a measure is found to be a prohibited subsidy, it shall be withdrawn without delay. In such a case, effectively 'inducing compliance' means inducing the withdrawal of the prohibited subsidy."⁵³ According to the arbitrator, this

⁵¹ As noted above, the *Brazil Aircraft* decision shows no evidence that the arbitrator referred to the negotiating history of the SCM Agreement, which demonstrates that the drafters intended that "appropriate countermeasures" be proportional to the trade impact on the complaining Member. Before second-guessing the intent of the drafters, it would have been wise for the arbitrator to have tried to discern what that intent actually was.

⁵² *Brazil Aircraft*, para. 3.48.

⁵³ *Id.*, para. 3.45.

differentiates the remedy of “appropriate countermeasures” from other WTO remedies because “other illegal measures do not have to be withdrawn without delay.”⁵⁴

55. The arbitrator’s reasoning overlooks several key points. First, the notion of “withdrawal” is not unique to Article 4.7. Article 3.7 of the DSU specifically states that “[i]n the absence of mutually agreed solution, the *first objective* of the dispute settlement mechanism is usually to secure the *withdrawal* of the measures concerned if these are found to be inconsistent with the provisions of any of the covered agreements.” (Emphasis added).

56. Likewise, the concept of withdrawal “without delay” is not unique to Article 4.7. Article 21.1 of the DSU states that “[p]rompt compliance with recommendations or rulings of the DSB is essential” Similarly, under Article 21.3 of the DSU, the default obligation is “to comply immediately”.⁵⁵ Only where immediate compliance is “impracticable” is a Member afforded a “reasonable period of time” in which to comply.

57. In any event, the arbitrator’s observations regarding Article 4.7 shed little light on the question of what constitutes “disproportionate” countermeasures. Instead, the arbitrator’s analysis begs the question.⁵⁶

⁵⁴ *Id.*, para. 3.48 and note 50.

⁵⁵ As recently noted by former Appellate Body member Feliciano in an arbitration under Article 21.3(c) of the DSU, “‘prompt compliance’ translates into ‘immediate compliance’.” *United States - Anti-Dumping Measures on Certain Hot-Rolled Steel Products from Japan*, WT/DS184/13, Award of the Arbitrator circulated 19 February 2002, para. 25.

⁵⁶ Again, these shortcomings in the arbitrator’s analysis may be attributable to the fact that the arbitrator simply assumed that an amount of countermeasures that was less than the amount of the trade impact on the complaining Member was, by definition, not “disproportionate.”

3. The Arbitrator Improperly Assumed that Prohibited Subsidies Are More Objectionable Measures than Other Measures that Violate WTO Rules

58. Running through the arbitrator's decision is the implicit assumption that prohibited subsidies are somehow more objectionable measures than other measures that violate WTO rules. It was this assumption that seemed to be the source of the arbitrator's suggestions that countermeasures under Article 4.10 could be deemed "appropriate" without any consideration of the trade impact on a complaining Member. In making this assumption, the arbitrator looked at things from the wrong perspective and, as a result, got things backwards.

59. When one looks at the SCM Agreement from a proper perspective, what is clear is that subsidies are not condemned *per se*. Certain subsidies – currently non-specific subsidies that probably account for the bulk of the universe of subsidies – are permissible, and are not subject to challenge even if they cause adverse trade effects. Other subsidies are actionable, and can be challenged subject to a demonstration that they cause adverse trade effects. It is only the category of prohibited subsidies that is treated in the same manner as other types of WTO rules violations; *i.e.*, it is only prohibited subsidies that can be found to violate WTO rules without regard to their actual trade effects.

60. Viewed from this perspective, the case for assessing the "appropriateness" of countermeasures without regard to the trade impact on the complaining Member evaporates. While prohibited subsidies may be the most objectionable category of measures within the universe of subsidies, within the universe of all measures subject to WTO rules, they are just one

more type of WTO-inconsistent measure. As such, there is no basis for reading out of Article 4.10 the element of proportionality.⁵⁷

4. The Conclusion that the Arbitrator Drew from a Comparison of Articles 4.10 and 7.9 of the SCM Agreement Was Illogical

61. The arbitrator in *Brazil Aircraft* also relied on a comparison of Articles 4.10 and 7.9 of the SCM Agreement. Article 7.9, which applies to actionable subsidy disputes, provides for countermeasures "commensurate with the degree and nature of the adverse effects determined to exist". From this language, the arbitrator drew the inference that the negotiators did not intend to limit "appropriate countermeasures" under Article 4.10 "to the effect caused by the subsidy on a Member's trade ...".⁵⁸

62. If, by this statement, the arbitrator meant simply that the amount of countermeasures under Article 4.10 does not have to be identical to the amount of the trade impact on the complaining Member, the statement is unobjectionable. However, if the arbitrator meant that the amount of countermeasures under Article 4.10 need not have any relationship to the amount of trade impact, such a conclusion is not supported by the text of Article 4.10, the context provided by other dispute settlement provisions of the WTO agreements, or the negotiating history of Article 4.10. There is no logical reason why the drafters would have chosen to ignore trade impact in assessing countermeasures under Article 4.10 when they required its consideration in

⁵⁷ While footnotes 9 and 10 of the SCM Agreement may allow an arbitrator to take the prohibited nature of a subsidy into account, it does not eliminate the requirement that countermeasures not be disproportionate.

⁵⁸ *Brazil Aircraft*, para. 3.49.

every other relevant dispute settlement provision.⁵⁹ Moreover, the statement ignores the presence of footnote 9, and begs the question of what the term "disproportionate" in that footnote means.

D. Summary

63. To conclude on this point, *Brazil Aircraft* may have reached the correct outcome based on the facts before the arbitrator, and the arbitrator may have been correct in rejecting the proposition that countermeasures under Article 4.10 must be "equivalent" to the trade impact on the complaining Member. However, the approach taken by the arbitrator is inappropriate in the present case, because the amount of countermeasures claimed by the EC is disproportionate to any possible trade impact of the U.S. subsidy on the EC. Moreover, to the extent that the EC characterizes *Brazil Aircraft* as standing for the proposition that countermeasures under Article 4.10 need never be proportionate to the trade impact, the reasoning of *Brazil Aircraft* was flawed.

V. THE EC'S CALCULATION OF THE AMOUNT OF THE SUBSIDY IS INACCURATE AND EXCESSIVE

64. In the *US First Submission*, the United States responded to the methodology set forth in the *EC Methodology Paper*. The United States asserted that based on the information contained, and the methodology described, in the *EC Methodology Paper*, the EC should be awarded countermeasures in an amount no greater than \$956 million per annum. This figure attributed to

⁵⁹ Indeed, as noted above, the negotiating history demonstrates that they intended that countermeasures be proportional to the trade impact on the complaining Member.

the EC its proportionate share⁶⁰ of the total subsidy amount (with certain adjustments) for the year 2000, the year on which the EC purported to rely.

65. Unfortunately, as noted above, in the *EC First Submission* the EC revealed that its true methodologies are different from the methodology described in the *EC Methodology Paper*.

Relying on a different methodology and a different time period, the EC now claims that it could have claimed countermeasures in the amount of \$7.5 billion based on its new estimate of the amount of the subsidy in 2002.

66. The EC, however, has made several significant errors of calculation in applying its new methodology. Appropriate corrections result in a significantly lower amount of the total subsidy than that calculated by the EC, although somewhat higher than the amount used by the United States for purposes of the *US First Submission*. Below, the United States will describe the EC's errors and explain the corrections that must be made. The United States will then recalculate its estimate of the subsidy for the years 2000 and 2001, taking into account certain points raised in the *EC First Submission* with which the United States does not take issue.

A. A Description of the EC's New Methodology

67. The EC's new methodology is straightforward. Relying on three U.S. Government estimates of net exempt income under the FSC (for 1987, 1992 and 1996), the EC calculates that between 1987 and 1996, net exempt income rose at an average compound rate of 16.7 percent (from \$2.111 billion in 1987 to \$8.496 billion in 1996).⁶¹ The EC then applies this 16.7 percent

⁶⁰ To reiterate, the United States calculated the EC's proportionate share based on the EC's share of global goods production (less U.S. production and foreign production exported to the United States).

⁶¹ *EC First Submission*, paras. 40-41.

compound growth rate to the subsidy for the six-year period from 1996 to 2002 to arrive at an estimated subsidy of \$7.5 billion for 2002.⁶²

68. For purposes of considering the EC's new methodology, two factors are relevant to an assessment of the growth of tax exempt income due to the FSC provisions: changes in the level of U.S. exports and changes in the rate of usage of the FSC provisions by U.S. exporters. In extrapolating FSC net exempt income and the tax subsidy derived therefrom, the EC is, in effect, extrapolating both the growth of U.S. goods exports and the growth in FSC usage after 1996. Notwithstanding the EC's assertion that its extrapolations are more accurate than the estimates of the Treasury Department, there is one problem with the EC's extrapolations: they are contradicted by the facts.

B. The EC's Extrapolations Are Seriously Flawed

1. The EC's Extrapolations of the Growth in U.S. Exports After 1996 Are Contradicted by Actual Export Data

69. The extrapolation of U.S. export growth after 1996, which is inherent in the EC's new methodology, has the obvious effect of exaggerating its estimates of the FSC subsidy in later years. In the period used by the EC for calculating its 16.7 percent compound growth rate for FSC net exempt income, U.S. goods exports were rising at an average compound rate of 10.5 percent (from \$254.1 billion in 1987 to \$625.1 billion in 1996). The EC uses its 16.7 percent growth rate to extrapolate FSC net exempt income through the year 2002 by assuming that U.S. exports had continued to grow at an annual rate of 10.5 percent. However, the *actual* growth of

⁶² *Id.*, para. 48.

U.S. exports during the period 1996-2001 was *more than two-thirds lower* than the 10.5 percent export growth rate of 1987-1996 on which the EC relies. U.S. exports grew at merely a 3.2 percent annual rate from 1996 (\$625.1 billion) to 2001 (\$730.9 billion).⁶³

70. Exhibit US-7 graphically illustrates the problem with the EC's new methodology. Starting from a base of 1996, the EC extrapolation of U.S. export growth at the 10.5 percent rate for 1987-1996 results in an export level of \$932.9 billion in 2000, *19.3 percent higher* than what actually occurred. The export level under the EC's approach for 2001 is \$1,030.6 billion, *41 percent higher* than what actually occurred. For U.S. goods exports to reach the \$1,139 billion level in 2002 implied by the EC's new methodology, U.S. exports would have to grow by an astounding *55.8 percent* from their actual level for 2001 of \$730.9 billion.

71. While the United States wishes that its exports had grown at the levels reflected in the EC's allegedly more accurate estimates, the hard facts show that they did not. Clearly, any estimation of the FSC subsidy should reflect actual levels of U.S. exports in those years, rather than wildly inflated and unnecessary extrapolations.

72. Fortunately, the EC's massaging of the numbers can be easily corrected by using real data for U.S. exports for the period after 1996 and extrapolating the rate of growth in usage of the FSC. The calculations reflecting this correction are shown in Exhibit US-8.

73. Exhibit US-8 relies on the growth in the rate of FSC usage observed during the period 1987 to 1996. As shown in both the United States and EC data, FSC net exempt income totaled

⁶³ Source: U.S. Department of Commerce. Calendar year 2001 is the last full year for which actual data on U.S. goods exports is available.

0.83 percent of U.S. exports in 1987 and reached 1.36 percent of U.S. exports by 1996.⁶⁴ Thus, the average rate of increase between 1987 and 1996 was 0.0587 percentage points per year; *i.e.*, the average annual percentage point increase that brought FSC usage from 0.83 percent of exports in 1987 to 1.36 percent in 1996. By this extension, the rate of FSC usage would rise to 1.59 percent in 2000 (the year in which the United States referred this matter to arbitration and the most recent year for which full U.S. trade data was available at the time of the *US First Submission*) and to 1.65 percent in 2001 (the most recent year for which full U.S. trade data is available at the time of the instant submission).

74. Making these corrections to the EC's new methodology, estimated FSC net exempt income would have been \$12.464 billion in 2000⁶⁵ and \$12.077 billion in 2001.⁶⁶ The decline in the estimated amount of net exempt income from 2000 to 2001 reflects the fact that the hypothesized increase in the use of FSC between these two years is more than offset by the *actual* 6.5 percent decline in U.S. exports between 2000 and 2001.

75. The estimated subsidy itself is obtained by multiplying the estimated net exempt income for 2000 and 2001 by the corporate tax rate, 35 percent. Thus, the estimated subsidy on total U.S. exports is \$4.362 billion in 2000 and \$4.227 billion in 2001. These figures, based on actual U.S. export data, are not far off from the Treasury estimates that the EC so roundly ridicules.

⁶⁴ See Exhibit US-8. The percentages are calculated by dividing net exempt income (as supplied in the *EC First Submission*, paras. 40-41) by actual total U.S. goods exports (as supplied from U.S. Department of Commerce trade data).

⁶⁵ 1.59 percent X \$781.9 billion in U.S. exports.

⁶⁶ 1.65 percent X \$730.9 billion in U.S. exports.

However, they are *more than \$3 billion below* the \$7.5 billion figure estimated by the EC on the basis of extrapolated, rather than actual, exports.

2. The EC's Extrapolations of the Rate of FSC Usage Are Inaccurate

76. Unfortunately, the EC's failure to use actual export data is not the only error in the EC's new methodology. An additional problem is that the EC's simple extrapolation of the historical growth rate in FSC usage introduces an additional factor that overstates the estimated amount of the subsidy. The reasons for this are as follows.

77. The growth in FSC usage can be expressed as the sum of the growth in two elements: (1) the cost of the tax exemption per dollar of FSC exports; and (2) FSC exports as a percentage of total U.S. exports.⁶⁷

a. FSC Revenue Cost Per Dollar of FSC Exports

78. The revenue cost per dollar of FSC exports was 0.092 percent in 1987, 0.091 percent in 1992, and 0.104 percent in 1996.⁶⁸ Thus, the cost per dollar of FSC exports shrank very slightly from 1987 to 1992, and then grew at an average rate of 3.3 percent from 1992 to 1996. The reason for this decline between 1987 and 1992 is that the corporate income tax rate declined from fiscal year 1987 (when it was a mix of 40 percent for calendar year 1986 and 36 percent for

⁶⁷ The overall revenue cost of the FSC provisions can be expressed as the product of three elements: (1) the cost of the tax exemption per dollar of FSC exports; (2) FSC exports as a percentage of total U.S. exports; and (3) total U.S. exports. Mathematically, the revenue cost can be expressed as follows:

$$\text{FSC revenue cost} = (\text{FSC revenue cost per dollar of FSC exports}) \times (\text{FSC exports as a percentage of total U.S. exports}) \times (\text{Total U.S. exports})$$

The first two elements relate to usage, while the latter element relates to overall exports.

⁶⁸ These percentages were calculated based upon data in the Treasury studies of FSC for the years 1987 and 1992, and the SOI data for 1996.

calendar year 1987) to fiscal year 1992 (when it was 34 percent). If the tax rate had been 34 percent in both years, the revenue cost per dollar of FSC exports would have grown at an average rate of 1.3 percent per year from 1987 to 1992.

79. One reason for the growth after 1992 is that the corporate income tax rate was higher (35 percent) in 1996. If the tax rate had been the same (35 percent in both 1992 and 1996), the revenue cost per dollar of FSC exports would have grown by only 2.7 percent per year from 1992 to 1996. The probable reason for the remaining part of the growth is that taxpayers "sharpened their pencils" and used computerized methods to break down FSC profits by more detailed line items of exports and were thereby able to maximize the FSC tax saving.⁶⁹ Another probable reason for the growth is that profits on U.S. manufacturing sales increased strongly over this period. The rates of taxable income to gross receipts grew by about 7.7 percent per year for U.S. manufacturing corporations paying federal income tax.

80. With tax rates unchanged since 1996, however, and given that there is a limit to taxpayer accounting refinements, it is not clear how much room there is left to increase the FSC or ETI Act tax saving on the same amount of export sales.

⁶⁹ As the Arbitrator may recall, at an earlier stage of this proceeding, the EC lamented the appearance of computer software that enabled taxpayers to maximize their FSC tax savings. *See, e.g., United States - Tax Treatment for "Foreign Sales Corporations"*, WT/DS108/R, Report of the Panel, as modified by the Appellate Body, adopted 20 March 2000, para. 4.194.

b. FSC Exports as a Share of Total Exports

81. FSC exports as a share of total U.S. exports was about 33.7 percent in 1987, about 34.6 percent in 1992, and about 46.7 percent in 1996.⁷⁰ The FSC share of total exports grew at an average rate of 0.7 percent per year from 1987 to 1992 and at an average rate of 7.5 percent per year from 1992 to 1996.

82. The share of FSC exports is a factor of how many U.S. companies are in a tax loss situation. Companies in a tax loss situation have no incentive to use the FSC provisions for their exports. The gross receipts of companies paying taxes were 84 percent of gross receipts of all manufacturing companies in 1992 and 88 percent in 1996.⁷¹

83. In 1999 – the most recent year for which such data are available – gross receipts of companies paying taxes fell to 84 percent of gross receipts of all manufacturing companies.⁷²

Accordingly, the most recent data available indicates that FSC exports as a share of total exports should have declined.

c. Putting the Growth Elements Together Lowers the Estimated Subsidy Under the EC's New Methodology Even Further

84. On the basis of the analysis described above, Treasury's official forecast forward from 1996 is for the first two elements of the FSC revenue cost equation (FSC revenue cost per dollar

⁷⁰ This percentage is calculated by dividing FSC gross receipts by the value of total U.S. exports. FSC gross receipts are reported in the Treasury FSC reports for the years 1987 and 1992, and in the SOI data for 1996. The value of total U.S. exports is based on U.S. Department of Commerce data.

⁷¹ Office of Tax Analysis, U.S. Department of the Treasury. Not all corporations have a positive federal income tax liability each year. Putting the point in the text differently, in 1992 companies that did *not* pay any taxes accounted for 16 percent of gross receipts of all manufacturing companies, and 12 percent in 1996.

⁷² Office of Tax Analysis, U.S. Department of the Treasury.

of exports and FSC exports as a share of total U.S. exports) to increase FSC net exempt income per dollar of U.S. exports by about 1 percent per year.⁷³

85. As noted above, the "usage" of FSC (or the ratio of exempted revenues to the value of total exports) was 1.36 percent in 1996. This figure covers the effects of changes in the first two elements of the revenue cost equation: (1) FSC revenue per dollar of FSC exports; and (2) FSC exports as a share of total U.S. exports. At a 1 percent average annual growth rate, this figure would reach 1.414 percent in 2000 and 1.429 percent in 2001.

86. Applying the correct forecasted usage rate to actual total U.S. goods exports of \$781.9 billion in 2000 and \$730.9 billion in 2001 results in estimated FSC net exempt income of \$11.06 billion in 2000 and \$10.44 billion in 2001. At a 35 percent corporate income tax rate, this results in a total global subsidy of \$3.87 billion in 2000 and \$3.65 billion in 2001.

C. Recalculation of the Subsidy Amount for 2000 and 2001

87. As described above, when corrections are made to the inaccurate extrapolations contained in the EC's new methodology, the resulting subsidy amount is \$3.87 billion in 2000 and \$3.65 billion in 2001. However, two additional adjustments are necessary to account for certain exports of services and the shift from the FSC to the ETI Act.

1. Adjustment for Engineering and Architectural Services

88. As noted above, the United States agrees that the adjustment to the subsidy amount for exports of services should be limited to the category of engineering and architectural services.

⁷³ Treasury has forecasted the third element of the FSC revenue cost equation (total U.S. exports) as growing at a rate of 6 percent per year. The forecast for this element, combined with the forecasted rate of increase in FSC usage of 1 percent cited above, accounts for Treasury's widely cited forecast of 7 percent annual growth in FSC tax loss.

Accordingly, the amounts calculated for 2000 and 2001 should be reduced by 0.57 percent.⁷⁴

Making this adjustment reduces the total worldwide subsidy amount to \$3.85 billion in 2000 and \$3.63 billion in 2001.⁷⁵

2. Adjustment for the Shift to the ETI Act

89. The EC has asserted that the shift from the FSC to the ETI Act has increased the amount of the subsidy.⁷⁶ The United States agrees with the EC on this point, and believes that the subsidy amount for 2001 should be adjusted upward by 7.2 percent, an amount which appropriately reflects the new features of the ETI Act that have been found to be WTO-inconsistent.

90. Exhibit US-4 shows that the U.S. Government estimated that the enactment of the ETI Act would increase the amount of the subsidy from the estimated \$3.89 billion in 2000 under the FSC to \$4.49 billion in 2001 under the ETI Act; *i.e.*, an increase of \$600 million (or 15 percent). Of the \$600 million estimated increase, \$270 million (or 7 percent) of the increase was based on the standard Treasury forecasted annual growth rate for the FSC. The remaining \$330 million (8 percent) was a one-time upward adjustment that took into account the new features of the ETI Act.

⁷⁴ As indicated in the *US First Submission*, para. 73, in 1996 net exempt income for engineering and architectural services was \$48.68 million, while total net exempt income for all goods and services was \$8.496 billion. Dividing the first number by the second number results in a percentage of 0.57.

⁷⁵ As noted above, the United States believes it would be appropriate to adjust the amount of the subsidy downward by 1 percent to account for the fact that income from the export of services is mixed in with income from the export of goods.

⁷⁶ See *EC First Submission*, paras. 49-51.

91. The new features of the ETI Act were as follows: (1) the extension of the subsidy to 100 percent of military exports;⁷⁷ (2) the extension of the subsidy to non-corporate exporters; and (3) the extension of the subsidy to sales of goods produced and sold abroad. The estimated amount for each of these features is discussed below.

a. Military Exports

92. The U.S. Government estimated that the ETI Act would increase the subsidy for military exports to \$200 million in FY 2001. The amount of the subsidy for military exports would have been approximately \$100 million in FY 2001 if the FSC provisions had remained in effect.⁷⁸ Because these exports were eligible for only 50 percent of the full FSC subsidy, and because the ETI Act entitled these exports to 100 percent, this suggests that full coverage for military exports would have doubled the revenue loss for such exports under the ETI Act in 2001.

b. Non-Corporate Exporters

93. Treasury estimated that the extension of the ETI Act subsidy to non-corporate exporters resulted in an additional revenue loss of \$180 million in FY 2001. Manufacturing corporations account for almost 98 percent of total output in manufacturing, with non-corporate manufacturers accounting for the remaining 2 percent.⁷⁹ Treasury assumed, for technical reasons, that 100 percent of the exports of non-corporate exporters would benefit from the ETI Act subsidy,

⁷⁷ Under the FSC, military exports were limited to 50 percent of the subsidy. *See, e.g., EC First Submission*, para. 51.

⁷⁸ Office of Tax Analysis, U.S. Department of the Treasury, based on corporate tax returns.

⁷⁹ Office of Tax Analysis, U.S. Department of the Treasury. These figures are based on an estimate produced by economists in the Office of Tax Analysis that the capital stock of companies subject to the corporate income tax account for about 98 percent of the total capital stock of all companies in manufacturing (sole proprietorships, partnerships, and corporations).

instead of the 47 to 48 percent rate for corporate exporters. In addition, the non-corporate tax saving would be slightly higher per dollar of exports than the corresponding tax saving for corporations, because non-corporations face a slightly higher marginal tax rate (a top rate of 39.6 percent versus a top rate of 35 percent for corporations). Based on a corporate tax saving of about \$4 billion in 2001,⁸⁰ Treasury made a generous estimate of between \$160 million and \$200 million for non-corporate exporters. Treasury ultimately selected the mid-point in this range of \$180 million.

c. Goods Produced and Sold Abroad

94. As the Arbitrator knows, the ETI Act extended the subsidy to the sale of goods produced and sold abroad.⁸¹ The U.S. Government estimated that the revenue loss attributable to these transactions would amount to \$50 million in 2001.

d. Putting the ETI Act Adjustments Together

95. Of the three new features of the ETI Act described above, only the first two were found to be WTO-inconsistent. Neither the Panel nor the Appellate Body made findings with respect to the extension of the subsidy to the sale of goods produced and sold abroad.

96. Accordingly, the subsidy amounts for 2000 and 2001 should be adjusted upward for military exports (\$100 million) and non-corporate exporters (\$180 million). As a percentage, this adjustment increases the subsidy amount by 7.2 percent.⁸² Applying this adjustment to the

⁸⁰ See Exhibit US-4.

⁸¹ This is what the EC has called the "extended FSC replacement scheme".

⁸² Dividing \$280 million by the \$3.89 billion estimated amount for FY 2000 yields 7.2 percent.

amounts for 2000 and 2001 calculated above, the total worldwide subsidy is \$4.15 billion in 2000 and \$3.91 billion in 2001.

D. Attributing to the EC Its Proportionate Share of the Subsidy

97. The last step in the calculation is to attribute to the EC its proportionate share of the total worldwide subsidy. In the *US First Submission*, the United States used the figure of 26.8 percent based on the EC's share of world goods production, less production in the United States and world goods exports to the United States.⁸³ Applying this percentage to the recalculated subsidy amounts of \$4.15 billion in 2000 and \$3.91 billion in 2001, the amount of the subsidy attributable to the EC is \$1.11 billion for 2000 and \$1.05 billion for 2001.⁸⁴ As previously indicated, the United States believes that one of these amounts – or perhaps an average of the two – should be used as a proxy for the actual trade impact on the EC of the U.S. subsidy, and that appropriate countermeasures should not exceed these amounts.⁸⁵

E. The Amount of Countermeasures Should Not Be Based on Years Beyond 2001

98. Before leaving the topic of the subsidy amount, the United States wishes to comment on the appropriate time period to be used for purposes of calculating that amount. The EC has suggested that the Arbitrator should speculate on the amount of the subsidy for the years 2002 and beyond and provide the EC with an award that is not based on the actual impact on the EC, but rather is based on speculation as to when the countermeasures and suspension of concessions

⁸³ *US First Submission*, paras. 63-69.

⁸⁴ These amounts are graphically represented in Exhibit US-9.

⁸⁵ To be clear, in light of the adjustments the United States has made to the calculations contained in the *US First Submission*, the United States is proposing these figures as a substitute for its original figure of \$956 million.

would be applied.⁸⁶ The United States disagrees. The EC has provided no legal basis in the WTO agreements for such an approach.⁸⁷

99. The United States believes that the Arbitrator's analysis should rely on the year 2000, the year of the referral to arbitration and the most recent historical period for which actual data is available. In any event, the EC's approach is impractical. The year 2001 is the most recent full calendar year and the year for which trade data are only just now becoming available. There is no legal basis or precedent for estimating the amount of countermeasures or the amount of suspension of concessions based on speculation as to what may happen in the future.

100. The United States is not aware of any arbitration, whether under Article 22.6 or Article 25 of the DSU, where arbitrators have looked at anything other than an historical time period. The EC claims that the arbitrator in *Brazil Aircraft* looked to the future, but the EC mischaracterizes what the arbitrator actually did in that case. In *Brazil Aircraft*, the arbitrator clearly stated that it would "use a period of time which covers the foreseeable production *based on existing firm orders and conversions of existing options as of 30 June 2000.*"⁸⁸ Thus, the arbitrator confined itself to sales of aircraft made by Embraer before the date of the arbitrator's decision, 28 August 2000. If the arbitrator had applied the approach suggested by the EC, it would have estimated the number of aircraft that Embraer would sell after 28 August 2000.

⁸⁶ *EC First Submission*, paras. 46-48.

⁸⁷ For example, Article 22.7 of the DSU states that the task of an arbitrator is to determine whether the level of suspension of concessions "is" equivalent to the nullification or impairment, not whether it "will be" equivalent at some point in the future.

⁸⁸ *Brazil Aircraft*, para. 3.74 (emphasis added).

VI. BECAUSE OF THE UNCERTAINTY OF THE MEASUREMENTS AND THE RANGE OF REASONABLE OUTCOMES, THE ARBITRATOR SHOULD REFRAIN FROM USING AN ECONOMIC MODELING APPROACH IN THIS CASE

101. The United States believes that the appropriate amount of countermeasures should be based on the trade impact of the subsidy on the EC. As discussed in the *US First Submission*, however, the United States believes that, given the unique facts of this case, the trade impact on the EC should be measured by using the amount of the subsidy as a proxy for the global trade impact of the subsidy. Although in its first submission the EC does not appear to reject using the amount of the subsidy as a standard, it also argues in the alternative that the trade impact of the subsidy be measured by means of economic modeling.⁸⁹

102. The United States strongly urges the Arbitrator to reject this alternative approach, because the measurements under this approach are too uncertain and the range of reasonable outcomes under this approach result in U.S. export increases both greater and lesser than the amount of the subsidy. The United States will discuss some of these uncertainties, and will demonstrate the wide variance in trade effects that follow from reasonable variations in the economic parameter estimates employed.

A. The Necessary Parameters for an Economic Model Are Either Unknown or Vary Widely

103. In an economic modeling approach, it is necessary to determine how the subsidy affects the price of U.S. exports, the level of U.S. exports and then the impact on the EC in the form of reduced sales of relevant EC products. In a perfectly competitive market, the export subsidy will

⁸⁹ Of course, even under this alternative, the EC incorrectly claims that it is entitled to countermeasures equal to the amount of the global trade impact of the subsidy.

shift the export supply curve out.⁹⁰ Producers increase supply at any given price, because the subsidy reduces the cost of exports.

104. The degree that prices are lowered, however, depends on the elasticity of export supply (or the responsiveness of export supply to a given change in the price received for exports). On one end of the spectrum is perfectly elastic export supply (horizontal supply curve) where producers' marginal costs of production do not rise at higher levels of production and where producers pass on the full amount of the subsidy to their customers in the form of lower prices. Another way to look at this situation is that producers are willing to shift all shipments to export markets with a small export subsidy. At the other end of the spectrum is the perfectly inelastic export supply curve (vertical supply curve) where higher prices do not induce increased production or export shipments, and producers do not pass any of the subsidy on to their customers in the form of lower prices. Between these extremes are situations where the export supply curve is less than perfectly elastic but more than perfectly inelastic; *i.e.*, upward sloping. In this situation, producers are willing to increase export shipments, but do not reduce prices by the full amount of the subsidy. When the export supply curve is less than perfectly elastic, as producers increase export shipments, marginal costs increase. Because part of the subsidy is used to cover these increased costs associated with the increased export shipments, export prices cannot be reduced by the full amount of the subsidy.

105. If the assumption of perfectly competitive markets is relaxed, the problem of the pass-through becomes even more complex. When firms employ pricing power as part of some

⁹⁰ Except in the extreme case of perfectly inelastic supply.

strategy of maximization, the question of the effect of the subsidy on export prices and levels cannot be answered without very specific knowledge and analysis of the particular industry.

Because the FSC/ETI applies to exports of literally hundreds or thousands of products, such an analysis would be extremely difficult to conduct.

106. The issue of the extent to which the taxpayer/exporter passes the subsidy through to the purchaser in the form of lower export prices is critical in determining the trade effect of the export subsidy. In perfectly competitive markets, under a full pass-through scenario, a perfectly elastic export supply curve is assumed (horizontal). This assumption implies that marginal costs do not increase with increased levels of export shipments. Under this assumption, firms receiving the FSC/ETI subsidy would reduce their export prices by the full amount of the subsidy. Given the reduced price for U.S. exports, foreign consumers would shift expenditures toward U.S. products, resulting in increased exports for the United States. This scenario, of the three, would have the greatest trade impact on EC producers. As consumers shift expenditures to U.S. products in both third country markets and the EC domestic market, demand for EC products declines, resulting in reduced levels of EC sales.⁹¹

107. On the other hand, under a partial pass-through scenario, it is assumed that export supply is elastic or upward sloping. Unlike the full pass-through scenario, firms do not reduce export prices by the full amount of the subsidy. Whereas in the full pass-through scenario, increased export shipments did not increase marginal costs, with a less than perfectly elastic supply curve, increases in export shipment levels will result in increased marginal costs. Firms therefore keep

⁹¹ A graphical representation of this full pass-through scenario is contained in Exhibit US-10, page 1.

a portion of the subsidy to offset these additional costs. The mechanics of the subsidy impact on EC producers are similar to the full pass-through scenario, except that the trade impact on EC producers is less than under full pass-through. The trade effect is lower under this scenario because the inducement towards U.S. exports is less, given that the price reduction under the partial pass-through scenario is not as great as in the full pass-through scenario.⁹²

108. The third scenario is of no pass-through. The assumption of this scenario is that export supply is perfectly inelastic. Thus, firms taking advantage of the FSC/ETI subsidy keep all of the tax savings for themselves in the form of increased profits. In this situation, the subsidy does not induce the producers to increase supply, because the costs associated with shifting or increasing production are greater than the subsidy benefit.⁹³ Under this scenario there would be no trade impact on EC producers because U.S. firms would not alter their export practices as a result of the subsidy.⁹⁴

109. As has been demonstrated, the elasticity of export supply is critical to the measurement of the trade effect of an export subsidy. The question thus becomes: How price elastic is export supply? To the best of our knowledge, there have been no actual empirical studies in the economic literature that actually attempt to estimate export supply elasticities. In work requiring export supply elasticities, the elasticity value is made on the basis of assumptions, not on the basis of empirical estimates. Because export supply can be increased by either shifting existing production from the home to foreign markets or by increasing production, and because export

⁹² A graphical representation of the partial pass-through scenario is contained in Exhibit US-10, page 2.

⁹³ Note in this regard that, using the SOI data from 1996, the amount of the FSC/ETI subsidy is in the vicinity of 0.48 percent when applied against all goods exports (\$2.972 billion/\$625.1 billion).

⁹⁴ A graphical representation of the no pass-through scenario is contained in Exhibit US-10, page 3.

supply is usually considerably smaller than domestic production, export supply is considered to be quite elastic in many markets. In empirical work where export supply elasticities are called for, the assumption of perfectly elastic supply is often used, based on the belief that such supply is often quite elastic and in the absence of any specific knowledge of how much short of perfect elasticity export supply might fall in any particular market.

110. Empirical practitioners acknowledge, however, that the use of perfectly elastic export supply overstates the effects of export subsidies. Thus, if the Arbitrator decided not to use the amount of the subsidy as a proxy for the global trade effect and instead decided to employ economic modeling to measure the trade impact of the subsidy on the EC, the Arbitrator would face the following problem: It would need to render a judgment affecting potentially unprecedentedly large amounts of countermeasures on the basis of *assumptions* about the elasticity of export supply for which support would be at best notional, not empirical.

111. The trade effect of the U.S. export subsidy is also influenced by demand. Holding everything else constant, the more elastic the demand for U.S. exports, the greater the impact on EC producers. Unlike export supply elasticities, however, there have been some empirical studies on U.S. export demand elasticities. Sawyer and Sprinkle (1997)⁹⁵ estimated that the U.S. export demand elasticity for aggregate finished manufacturing is -1.1302. Stern, Francis and Schumaker (1976)⁹⁶ report export demand elasticities for the U.S. economy to be between -0.56 and -2.53 with a "best" point estimate at -1.41.

⁹⁵ Charles W. Sawyer and Richard L. Sprinkle, *An Examination of U.S. Imports and Exports of Finished Manufactures*, 44 *Rivista Internazionale de Scienze Economiche e Commerciali*, March 1997, pp. 139-148.

⁹⁶ Robert M. Stern, Jonathon Francis, and Bruce Schumaker, *Price Elasticities in International Trade*, Trade Policy Research Centre, Macmillan, London, 1976.

112. As an alternative to estimating the U.S. export demand elasticity, an estimate of the elasticity of substitution between U.S. exports and EC products could be used. The advantage of this approach is that the effect on the level of U.S. exports and the lost EC sales can be calculated simultaneously. Additionally, export demand elasticities can be imputed from these substitution elasticities.⁹⁷ All else being equal, the greater the substitutability between the products, the greater the trade effect on the EC.

113. The most recent study of econometric estimates of trade substitution elasticities is provided by Gallaway et al (2001).⁹⁸ Elasticity estimates are provided for 311 industries at the 4-digit SIC level over the period 1989 to 1995. Their estimation results offer the most comprehensive, disaggregated, and up-to-date set of Armington elasticities.⁹⁹ Both short- and long-run estimates are estimated using well-recognized time-series econometric techniques, and the results indicate that long-run estimates are on average twice as large as the short-run estimates. This finding is important, because long-run estimates are more appropriate for most

⁹⁷ These substitution elasticities may be converted to price elasticities of export demand with a generally accepted formula as follows:

$$Nu = VuNa - (1-Vu) S$$

where Vu is the value share of US exports in world (i.e. non-US) markets, Na is the aggregate world demand elasticity for all goods and services, and S is the Armington substitution elasticity. See Francois and Hall (1997) for a derivation of this relationship. Exhibit US-11. With the current share of U.S. goods exports in world markets (defined as world goods production excluding U.S. goods production, but including U.S. exports) at nearly 10 percent and the assumption that total world (non-U.S.) expenditure on goods and services is constant (i.e., Na is assumed equal to -1.0.), a range of Armington substitution elasticities from 1.5 to 2.5 implies a range of price elasticities of demand for US exports from -1.5 to -2.4.

⁹⁸ Michael P. Gallaway, Christine A. McDaniel, and Sandra A. Rivera, *Long-Run Industry-level Estimates of U.S. Armington Elasticities*, USITC Working Paper 2000-091, U.S. International Trade Commission, Washington, DC, 2001. <http://papers.ssrn.com/sol3/papers.cfm?abstract_id=249027>.

⁹⁹ The "Armington trade substitution elasticity" measures the degree of substitution between imported and domestic goods. Specifically, it is the ratio of the percentage change in the domestic price relative to the import price, to the percentage change in domestic sales relative to import sales.

trade policy analysis.¹⁰⁰ The results indicate that the average short-run estimate is 0.9 and the average long-run estimate is 1.7. The short-run estimates range from 0.150 to 1.699, and the long-run estimates range from 0.725 to 4.834.

114. There are several previous econometric estimates of Armington elasticities in the literature. Shiells et al (1986)¹⁰¹ estimate substitution elasticities for 41 sectors at the 3-digit SIC level for 1962-78. Their estimates range from 0.454 to 6.507, and the average is 2.47. Reinert and Roland-Holst (1992)¹⁰² estimate Armington elasticities for 163 sectors over 1980-88. Their estimates range from 0.14 to 3.49. Estimates from Shiells and Reinert (1993)¹⁰³ were in the range of 0.039 to 2.97 and were estimated from data on 22 sectors at the 2-digit SIC level, over the period of 1980-88.

115. Fundamental problems remain, however, for anyone attempting to conduct an empirical trade effects analysis in this case. These problems are: the wide range of products affected; the probable presence of imperfect competition for much of the affected trade given the advanced nature of much U.S. production, and the presence of new products and products whose trade is affected by the temporary protection of associated intellectual property rights; and uncertainties about economic parameter estimates, most importantly for export supply elasticities.

¹⁰⁰ The United States has always considered that the measurement of nullification or impairment should be conducted as a comparative static exercise with the impact on trade of the non-compliant measure judged on the basis of a framework in which all long-run adjustments are reflected – hence the use of long-run elasticities.

¹⁰¹ Clinton R. Shiells, Alan Deardorff, and Robert Stern, *Estimates of the Elasticities of Substitution Between Imports and Home goods for the United States*, Weltwirtschaftliches Archive, 1986, 122, pp. 497-519.

¹⁰² Kenneth A. Reinert and David W. Roland-Holst, *Armington Elasticities for the United States Manufacturing Sectors*, Journal of Policy Modeling, 1992, 14, pp. 631-639.

¹⁰³ Clinton R. Shiells and Kenneth A. Reinert, *Armington Models and Terms-Of-Trade Effects: Some Econometric Evidence for North America*, Canadian Journal of Economics, 1993, 26, pp. 299-316.

116. The United States believes that the Arbitrator would be well-advised to avoid these problems by using the amount of the subsidy as proxy for the global trade impact. Nonetheless, because the EC has raised the issue, the United States will now provide comments on the trade effect calculation provided by the EC in its first submission, as well as provide an alternative model to measure trade effects. The U.S. analysis will demonstrate the breadth of the reasonable variances in estimated export enhancement relative to the value of the FSC/ETI export subsidy.

B. When Proper Adjustments Are Made, the EC's Methodology Generates Widely Varying Results Depending Upon the Assumptions Made

117. To calculate the trade effects of the U.S. subsidy, the EC applied a methodology employed by Treasury in its 1997 report on the FSC program.¹⁰⁴ While the Treasury methodology is one of several possible valid methodologies that could have been used, there are three major problems with the way it was applied by the EC. First, this methodology only estimates the increase in total U.S. exports to the world. There is no attempt to separate out the effect on the EC from the effect on other countries.

118. Second, the calculation assumes that U.S. producers were willing to supply an infinite quantity of exports in response to even the very small marginal tax savings provided by the FSC/ETI program. Although the 1997 Treasury report on the possible effect of eliminating the program makes a similar assumption, it also clearly states that this approach will "tend to overstate the loss in exports that would accompany the removal of FSC benefits".¹⁰⁵

¹⁰⁴ The 1997 Treasury report was submitted as Exhibit EC-1. The EC study is contained in Annex 7 to Exhibit EC-8.

¹⁰⁵ Exhibit EC-1, page 14.

119. And third, the EC applied the Treasury methodology using industry level estimates of the price responsiveness of demand for U.S. exports that are based on a single article published 30 years ago.¹⁰⁶ These elasticity estimates are well above other published estimates. The estimates used by the EC ranged from -1.6 to -4.1, depending upon the industry, and averaged -3.0. However, as stated earlier, in a slightly more recent study by Stern, Francis, and Schumacher (1976), elasticity estimates ranged from -0.56 to -2.53, with a "best" point estimate of -1.41. Also, in a very recent study, Sawyer and Sprinkle (1997) estimated a single U.S. export demand elasticity for finished manufactures of -1.13.

120. To illustrate the importance of these elasticity estimates, the following table contains estimates of the effect of removing the FSC/ETI program on U.S. exports using the EC/Treasury methodology applied to the total value of U.S. exports in 2000 (\$781.918 billion) under the full pass-through assumption. For purposes of these estimates, instead of the \$4.13 billion net subsidy amount, we use a pre-tax equivalent subsidy rate on U.S. exports of 0.87 percent (or \$6.35 billion) and calculate the EC share of the decline in U.S. exports by using the EC share of world production sold outside of the United States (26.8 percent).

¹⁰⁶ The estimates come from Margaret Buckler and Clopper Almon, *Imports and Exports in an Input-Output Model*, American Statistical Proceedings (1972).

	Elasticity of Export Demand	Change in Value of US Exports	EC Share of US Exports
case 1:	-1.13	\$830 million	\$222 million
case 2:	-1.41	\$2,618 million	\$702 million
case 3:	-2.53	\$9,768 million	\$2,619 million

121. As illustrated in the table, the trade effect exceeds the \$4.13 billion subsidy only in case 3 (\$9.8 billion) when the elasticity of export demand nears the -3.0 average of the elasticity estimates used in the EC and Treasury calculations. And, as in the EC and Treasury studies, we have assumed a full pass-through of the subsidy that overstates the loss of U.S. exports that would accompany removal of the FSC/ETI subsidy.

122. Another valid methodology for estimating the direct effect of the FSC/ETI program is the use of a partial equilibrium Armington trade model. There are at least two significant advantages to this approach. First, unlike the EC/Treasury approach, it measures the direct effect of the FSC/ETI program on the sales of EC products alone, both in the EC market and in EC export markets. It does not assume that U.S. exports only displace EC products. Second, because the Armington trade model is so widely used, there are many statistical estimates of Armington trade substitution elasticities, as described above.

123. Armington trade models are now relatively standard in trade policy modeling. The partial equilibrium version that we use follows the original model in Armington (1969)¹⁰⁷ fairly closely, and is described in detail in Francois and Hall (1997).¹⁰⁸ Buyers have well-established preferences for products differentiated by their country of origin. Moreover, while products are differentiated, markets are still assumed to be competitive. We use the non-linear demand version of the model under the assumption of a constant elasticity of substitution. Also, total expenditure is assumed constant and all supply functions are assumed to have constant price elasticities. The inputs required in the model are:

1. a current market value share for each of the products;
2. an *ad valorem* measure of the subsidy;
3. an estimate of the substitutability of the different products for each other (the elasticity of substitution);
4. an estimate of the price sensitivity of supply for each product (the elasticity of U.S. export supply, EC production, and rest-of-the-world production); and
5. an estimate of the demand elasticity (because we have assumed that total expenditure is constant, the demand elasticity is -1).

124. Starting from a base year of 2000, we use the model to conduct a simple comparative static exercise where the likely effects of removing an export subsidy are calculated. Therefore, the counterfactual question is how much lower would U.S. exports have been in the year 2000 had the FSC/ETI program not been in place. Similarly, we ask how much higher would EC and other world production for non-U.S. markets have been. The output of the model is as follows:

¹⁰⁷ Paul Armington, *A Theory of Demand For Products Distinguished By Place of Origin*, IMF Staff Papers, 1969, 16, pp. 159-178.

¹⁰⁸ See Exhibit US-11.

1. an estimate of the pass-through of the subsidy (the percentage increase in U.S. export prices when the subsidy is removed);
2. an estimate of the decrease in U.S. export sales in both the EC and other non-U.S. markets;
3. an estimate of the increase in EC sales in both the EC and other non-U.S. markets; and
4. an estimate of the increase in other sales in both the EC and other non-U.S. markets.

125. To illustrate this approach and the significance of substitution elasticity estimates, the following table contains estimates of the effect of removing the FSC/ETI program on U.S. exports using the total value of U.S. exports (\$781.918 billion), EC production (\$1,955.833 billion), and production in the rest of the world (\$5,340.231 billion) for the year 2000 under a nearly full pass-through assumption (the U.S. export supply elasticity ranges from 10 to 20). As in the previous illustration, we use a pre-tax equivalent subsidy rate on total US goods exports of 0.87 percent (or \$6.35 billion). Because we are estimating the trade effects on total U.S. goods exports, the high level of aggregation would suggest a fairly low range of substitution elasticities. Based on the discussion above on statistical estimates of substitution elasticities and the high level of aggregation, we assume a range of elasticities from 1.5 to 2.5. Additionally, we assume that EC and other non-U.S. production supply elasticities range from 1 to 2.

	Low	High
EC Production	\$656 million	\$1,974 million
US Exports	-\$2,447 million	-\$7,339 million

126. The results from this model are consistent with the EC/Treasury methodology. The trade effect ranges from well below to well above the \$4.13 billion subsidy level. And we have assumed a very high U.S. export supply elasticity that may well overstate the loss of U.S. exports that would accompany removal of the FSC/ETI subsidy.

127. The analysis set forth above makes clear that the use of economic modeling can result in a measure of trade effects well below the dollar value of the subsidy. The United States believes, however, that the pursuit of a modeling approach simply would result in an extended debate between the parties over the market characteristics and the most appropriate models and parameter values for estimating trade effects. Given that we are dealing with a tax subsidy covering half of U.S. goods exports, such a debate would raise issues not easily resolved by the Arbitrator.

128. What does seem clear to the United States is that reasonable estimates of world-wide trade effects of the subsidy range from well below to above the value of the subsidy. In light of this situation, the United States adopted what it considered a sensible and fair recommendation to the Arbitrator that the level of the subsidy be adopted as a proxy for the direct effects (that is to say, with no reduction for exchange rate adjustment) of the FSC/ETI program. There does not appear to be a more reasonable method of measurement, and such an approach is not inconsistent with the decision of the arbitrator in *Brazil Aircraft*.¹⁰⁹

¹⁰⁹ Of course, for the reasons set forth above, the countermeasures awarded the EC should not be based on the entire amount of the subsidy, but instead on the basis of the EC's proportionate share of the total subsidy.

VII. THE EC METHODOLOGY FOR ESTIMATING THE ALLEGED NULLIFICATION OR IMPAIRMENT ATTRIBUTABLE TO THE VIOLATION OF GATT ARTICLE III:4 IS CONCEPTUALLY FLAWED AND UNSUPPORTED BY FACTS

129. The Panel found, and the Appellate Body affirmed, that the 50 percent limit on certain foreign value ("50 percent rule") contained in the ETI Act is inconsistent with Article III:4 of the GATT 1994. In the *EC First Submission*, the EC alleges that as a result of this violation, the EC has suffered nullification or impairment in the amount of \$6.1 billion in lost exports of input products to the United States.¹¹⁰ The EC further asserts that this amount is in addition to the amount of countermeasures it calculates as a result of the finding that the ETI Act confers a prohibited export subsidy.¹¹¹

130. The EC's analysis – to the extent the United States can reconstruct it – contains numerous errors. However, there is one particular empirical error that totally undermines the EC analysis. The United States will elaborate on this error in more detail below. Before doing so, however, the United States first will discuss a conceptual flaw in the EC approach.

A. Because Any Trade Impact of the 50 Percent Rule Reduces the Trade Impact of the Export Subsidy, It Would Be Reasonable for the Arbitrator to Simply Ignore the EC's Claim Regarding the 50 percent Rule

131. As noted above, the EC asserts that the nullification or impairment it claims with respect to the 50 percent rule is additive to the amount it claims with respect to the finding that the ETI Act confers an export subsidy. The United States disagrees that there is any actual nullification or impairment as a result of the 50 percent rule. However, assuming *arguendo* that there were,

¹¹⁰ *EC First Submission*, paras. 52-57.

¹¹¹ *Id.*, para. 60.

the amount of any nullification or impairment attributable to the 50 percent rule has to be subtracted from any amount attributable to the export subsidy finding. Given this, it would be reasonable for the Arbitrator to simply ignore the EC's claim regarding the 50 percent rule altogether, because whatever the Arbitrator might decide to give the EC with respect to the 50 percent rule would have to be subtracted from the amount given to the EC with respect to the export subsidy finding.

132. To understand why this is so, one must start with the proposition that a subsidy typically promotes exports if part of the subsidy is passed through to foreign purchasers in the form of lower prices, thereby increasing exports to a level above that which would exist in the absence of a subsidy. If none of the subsidy is passed through to purchasers, there is no effect on exports and the trade impact of the subsidy would be zero.

133. The EC has argued that the export subsidy aspect of the ETI Act causes the EC to lose shipments in its home market and in third country markets. The United States has conceded this impact in the *US First Submission* by proposing that the amount of the subsidy be used as a proxy for the actual trade impact of the export subsidy on the EC. The EC then alleges that trade impact in the form of lost EC exports to the United States as a result of the 50 percent rule should be added to the trade impact of the export subsidy. Here, the EC commits an error which can be understood only when one takes into account the position of a firm claiming the FSC/ETI subsidy and the basic underlying economics.

134. The ETI Act lowers the potential cost of exporting to U.S. firms if the conditions are such that at least a part of the subsidy is passed through in the form of lower export prices. This is a

benefit to exports confirmed by the Act. However, in return for this benefit, the law also imposes a requirement on the firms. Under the ETI Act, no more than 50 percent of the value of the exported product can consist of certain foreign content. It is important to understand how this requirement interacts with the tax benefit.

135. If a U.S. firm, in the absence of the ETI Act, would be exporting goods that already satisfy the 50 percent rule, the desire of the firm to avail itself of the export subsidy would have no effect on the firm's sourcing decisions. In this case, the 50 percent rule has no impact on foreign exports to the U.S. market.

136. If, on the other hand, a U.S. firm, in the absence of the ETI Act, would be exporting goods that do not satisfy the 50 percent rule, it becomes important to consider why the firm would be importing material inputs to incorporate into its exported output.¹¹² The obvious broad answer is that the U.S. firm is purchasing imported inputs to go into export production because the imported inputs can be purchased more cheaply than competing U.S. domestic inputs (with the price here being considered on a quality-adjusted basis to cover variances in a wide variety of product characteristics distinguishing competing foreign and domestically-produced inputs). Thus, imported inputs themselves confer a benefit on the U.S. exporter, a notion fundamental to our understanding of the benefits of free trade. In this case, then, the U.S. exporter must relinquish a benefit (lower priced imported inputs) in order to receive the benefit of the export subsidy. For some firms, this may be a bad tradeoff and a move that they will not make. In such

¹¹² Again, for purposes of the instant discussion, the United States is assuming that the 50 percent rule does restrict EC exports of input products to the United States. For reasons discussed in the following sections, the EC's own data demonstrate the lack of any discernible impact of the 50 percent rule on imports of input products into the United States.

instances, because the costs outweigh the benefits, exporters will not avail themselves of the ETI Act and, accordingly, there will be no negative impact on foreign exports of inputs to the U.S. market.

137. Thus, for purposes of assessing the EC's claim regarding the impact of the 50 percent rule, the situation comes down to those exporters that do cut back on their use of imported material inputs in order to satisfy the 50 percent rule and qualify for the export subsidy (again, assuming *arguendo* that there are exporters actually faced with this situation). From the point of view of the exporters, claiming the export subsidy confers a benefit in the form of lowering the costs of their export production, while satisfying the 50 percent rule imposes offsetting costs resulting from the required shift from foreign to domestic material inputs. If an exporter chooses to claim the export subsidy, presumably the benefit of the subsidy outweighs the additional cost of shifting to domestic material inputs. The important point, however, is that because of the additional costs imposed by purchasing domestic inputs, there is a dollar-for-dollar reduction in the exporter's ability to lower its export prices as a result of the export subsidy.

138. In assessing the export subsidy from the point of view of the impact on EC sales in the EC and in third country markets, the methodology proposed in the *US First Submission* did not make any provision for netting out the increased costs imposed by the 50 percent rule.¹¹³ As explained below, the Arbitrator should reject the EC's methodology concerning the impact of the 50 percent rule, and should find that the level of nullification or impairment is zero. However, if the Arbitrator should disagree and should calculate an amount attributable to the 50 percent rule,

¹¹³ The reason for this is that, as noted above, in the *EC Methodology Paper* the EC failed to disclose that it was calculating an amount attributable to the alleged impact of the 50 percent rule.

the United States submits that the Arbitrator would have to net this amount out of any figure calculated to account for the trade impact of the export subsidy. That being the case, it would be easier for the Arbitrator to simply refrain from determining any amount for the 50 percent rule.

139. In other words, any restrictive effect caused by the 50 percent rule on imports of inputs into the United States is not additive to the export enhancing effect of the subsidy itself, at least as that effect has been discussed and measured thus far by the United States and the EC in this proceeding. Instead, import restrictive effects – if they exist at all – come at the expense of, and are substitutable for – the export advantage conferred by the export subsidy. Thus, the United States recommends that the Arbitrator consider only the export subsidy aspect of the ETI Act, understanding that any import restrictive effect would reduce the export advantage conferred by the Act.

B. The EC's Methodology Is Fundamentally Flawed Because It Does Not Measure the Effect of the 50 Percent Rule on Imports of Inputs Into the United States

140. Should the Arbitrator decide to measure the impact of the 50 percent rule on EC exports of input products to the United States, it is important that the Arbitrator understand at the outset that there is a fundamental flaw in the EC's methodology. Specifically, it does not deal with the effect of the 50 percent rule on imports into the United States.

141. To appreciate why this is so, it is first necessary to describe the EC methodology. As the United States understands it, the EC's methodology is as follows:¹¹⁴

¹¹⁴ As discussed above, the failure of the EC to describe this methodology in the *EC Methodology Paper* has limited the time available to the United States to analyze the methodology. Moreover, the description of this methodology in the *EC First Submission* is, to say the least, terse. Among other things, the *EC First Submission* is
(continued...)

- (A) Using a U.S. 1998 input-output model, the EC identified industry sectors for which more than 40 percent of the value of finished production consists of material inputs.
- (B) The EC took the difference between the actual value of inputs by sector and the value of the 40 percent to determine the value of U.S. material inputs into U.S. goods production with respect to which imports of foreign inputs compete with domestically-produced inputs (and, thus, are potentially threatened by the 50 percent rule).
- (C) To determine the estimated loss in exports of foreign inputs to the United States, the EC took as a share of the value described in (B), above, the value of U.S. goods exports to total U.S. domestic production. This appears to be the EC's view of the global loss in exports of inputs to the United States due to the 50 percent rule.
- (D) To determine the EC's lost exports of input products to the United States, the EC took a share of (C), above, equal to "the share of European Communities production in the total U.S. market" (18 percent), resulting in a "trade diversion effect of \$6.074 billion for the EC in 1998."¹¹⁵

142. Although it is not the only error, the fundamental flaw in the EC's methodology occurs in step (A). The EC apparently has used Input-Output (I-O) data from the Bureau of Economic Analysis ("BEA") of the U.S. Department of Commerce for 1998, the latest year for which data exists. These I-O tables provide data on the ratio of input to the final output value of both industries and commodities. The difference between the values of inputs and the value of

¹¹⁴ (...continued)

cites as a data source only a non-working website address. Moreover, it was not until February 25 – the day before rebuttal submissions were due – that the EC informed the United States that Exhibit EC-7 consisted of the wrong document. Accordingly, the United States has had to spend a considerable amount of time simply reconstructing what the EC purports to have done. Based on its limited review, the United States has identified other flaws in the EC's methodology. However, the error discussed in this section is so fundamental as to discredit the EC's approach in its entirety.

¹¹⁵ *EC First Submission*, para. 56.

outputs is, of course, the value added by each industry and commodity producer.¹¹⁶ The BEA uses the North American Industrial Classification system to define industries and commodities. The data which the EC appears to have used can be found in Table 2 of the appendix to *Annual Input-Output Accounts of the U.S. Economy, 1998*, U.S. Department of Commerce, Bureau of Economic Analysis, *Survey of Current Business*, December 2001.¹¹⁷

143. The EC states the following: "The European Communities estimates that when the value of incorporated 'articles' reaches 40%, producers will start to take care to ensure they respect the foreign content limitation and this will therefore start to influence their sourcing decisions."¹¹⁸

The United States finds this statement truly mystifying. The 40 percent figure referred to by the EC is not a reference to the value of *imported* material inputs into U.S. goods production, but instead is a reference to *domestic* material inputs into U.S. goods production. In order to accept the EC's logic of taking 40 percent as a threshold after which the 50 percent rule becomes relevant, one would have to believe that all of this 40 percent consists of imported inputs.¹¹⁹

144. To make matters worse, the EC apparently would have the Arbitrator believe that 100 percent of the inputs are imports, when, in fact, the relevant inputs cited in the I-O table are 100 percent domestic input. Imports are not included in any of the reported inputs because of the difficulties in attempting to differentiate finished versus intermediate imported products. Instead,

¹¹⁶ Total output by industries and commodities are not quite the same, because some industries may produce more than one commodity, and some commodities may be produced by more than one industry.

¹¹⁷ A copy of Table 2 is attached as Exhibit US-12. A copy of the entire article can be downloaded from <<http://www.bea.doc.gov/bea/ARTICLES/2001/12december/1201io98.pdf>>.

¹¹⁸ *EC First Submission*, para. 56, note 28.

¹¹⁹ In other words, as imported inputs begin to account for 40 percent or more of the value of the output, a manufacturer, under the EC's theory, would begin to shift from imports to domestic inputs.

imports are reported as a final value in the I-O table (column 95, at the far right of Table 2). The United States does not report statistics showing the value of imported inputs into the final value of U.S. production, and any EC representation to the contrary is completely inaccurate.

145. In short, the EC methodology does not demonstrate what it purports to show. For that reason, the Arbitrator should dismiss it out of hand.

C. A Proper Analysis Shows That in No Sector Do Imported Inputs Come Close to Approaching the 50 Percent Level, Thereby Demonstrating that the 50 Percent Rule Has Had No Discernible Impact on EC Exports of Input Products to the United States

146. Although the EC methodology utterly fails to measure what it purports to measure, the intention of the EC analysis, nevertheless, poses an intriguing question: What is the relative share of imported material inputs as a percentage of the output value for each of the U.S. goods producing industries? If this share were around 50 percent for a particular sector, perhaps the 50 percent rule might have some impact on exports of inputs to the United States after all.

147. Although no actual data exist on imported inputs as a share of U.S. production, it is possible to attempt to estimate the share of production accounted for by imported inputs by using the same I-O table used by the EC (but not, of course, by assuming that 100 percent of the inputs are imported). Such an exercise could be predicated on the assumption that imports of any particular commodity are distributed among the various U.S. outputting industries in the same proportion as domestic commodity inputs are distributed to outputting industries (or, to put it differently, final consumption). Following this approach, one can estimate the imported material inputs for each U.S. outputting industry, and thereby estimate the share of U.S. production accounted for by imported inputs.

148. The details of this methodology are as follows:¹²⁰

- (1) The distribution of U.S. commodity production is calculated by looking at its various destination markets, as shown in Table 2 (Exhibit US-12). U.S. commodity inputs for each industry sector are calculated as a share of total U.S. commodity output (Exhibit US-13). Total U.S. commodity output is defined as total commodity output (second to the last column in Table 2, page 69), but excluding imports.¹²¹ Because the purpose of this exercise is to examine only U.S. production, imports are excluded from total commodity output to derive total U.S. commodity output. Therefore, the results of this calculation are set forth in column 87 of Exhibit US-13.
- (2) The value of imported commodities is set forth in column 95 of Table 2. For purposes of our methodology, we assume that imported commodities are distributed among output industries in the same manner as U.S.-produced commodities.¹²² Using this method, the value of imported inputs for each industry sector can be estimated. Having calculated the figure for U.S. commodity input share for each industry sector (as described in (1), above), we then multiply these percentages by the value of total imports for each commodity category, as set forth in column 95 of Table 2, page 68. The resulting figures represent the estimated values of imported inputs of commodities listed by industries, as shown in Exhibit US-14.
- (3) The value of the estimated imports of inputs are totaled for each industry, and are shown at the bottom of Exhibit US-14. The share of the value of the industry output accounted for by imported inputs is then calculated by taking the value of the imported inputs for each industry and dividing this figure by the sum of the total of U.S. output for each industry (row T at the bottom of Table 2) and the estimated value of the imported inputs for each industry.¹²³

¹²⁰ For purposes of this exercise, the United States has considered only that portion of the matrix in the I-O table covering industries and commodities 1-64, which include agriculture, mining and manufacturing.

¹²¹ As noted above, Table 2 does not include imports in the distribution of material inputs by industry, but does incorporate imports into total commodity output.

¹²² For example, with respect to the commodity category "Livestock and livestock products", 0.1 percent of the U.S.-produced commodity is used by the "Forestry and fishery products" industry sector and 80.5 percent is used by the "Food and kindred products" industry sector. With respect to imports of the commodity category "Livestock and livestock products", we assume that 0.1 percent is used by the "Forestry and fishery products" industry sector and 80.5 percent is used by the "Food and kindred products" industry sector.

¹²³ The reason the estimated value of imported inputs is included in the denominator is that once the value of imported inputs is included in the numerator, they become part of the value of industry output.

149. As clearly demonstrated in the bottom row of Exhibit US-14, there is no industry where estimated imported inputs come anywhere close to the 50 percent level or even the EC's arbitrary level of 40 percent. The highest value – an estimated imported input share of only *17.9 percent* – is for the footwear, leather and leather products industry.¹²⁴ While these data may be colored somewhat by the existence of the FSC version of the 50 percent rule in place in 1998, the estimated average shares of imported inputs by industry are so far removed from 50 percent or 40 percent as to eliminate at this level of aggregation any serious possibility that the 50 percent rule has had, or is having, a limiting effect on exports of inputs to the United States.

150. In short, the data demonstrates what the United States has maintained throughout this dispute; namely, that the 50 percent rule, whether in its FSC or ETI Act incarnation, does not have any discernible impact on exports of inputs to the United States. The United States does not rule out the possibility that some firm, somewhere, may alter its sourcing decisions because of the 50 percent rule. However, the United States is unaware of any such firm, and the EC's methodology does not present an even remotely credible way of identifying such a firm. Moreover, the United States is not required to prove the negative.

151. None of this is to say that the findings of a WTO-inconsistency by the Panel and the Appellate Body are somehow invalid. The United States respects these findings, and intends to comply with them. However, the fact that the Panel and the Appellate Body found, pursuant to Article 3.8 of the DSU, that the violation of Article III:4 caused by the 50 percent rule gave rise

¹²⁴ See bottom row of column 33&34 of Exhibit US-14. Of course, this 17.9 percent figure represents imported inputs from *all* countries, not merely from the EC.

to a *presumption* of nullification or impairment does not mean that there is any *actual* nullification or impairment.

152. Accordingly, the United States believes that the Arbitrator should find the level of the EC's nullification or impairment caused by the 50 percent rule to be zero. Alternatively, if the Arbitrator feels that it should find some positive amount, the United States believes that a nominal amount would be appropriate. However, for the reasons set forth above, this nominal amount should be subtracted from any amount awarded by the Arbitrator as a result of the ETI Act's status as an export subsidy.

VIII. CONCLUSION

153. For the foregoing reasons, the United States respectfully requests that the Arbitrator:
- (a) find pursuant to Article 4.11 of the SCM Agreement that the countermeasures requested by the EC are not appropriate;
 - (b) find pursuant to Article 22.7 of the DSU that the level of suspension of concessions or other obligations requested by the EC is not equivalent to the level of nullification or impairment; and
 - (c) find that the amount of countermeasures or suspension of concessions or other obligations to which the EC is entitled is no more than \$1.11 billion (based on data for the year 2000) or \$1.05 billion (if the Arbitrator should decide to rely on data for the year 2001).¹²⁵

¹²⁵ Again, a 1 percent downward adjustment to these figures to account for exports of services would be appropriate and conservative.