China – Domestic Support for Agricultural Producers: One Policy, Multiple Parameters Imply Modest Discipline

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Abstract

This paper assesses key issues in the dispute over the United States' claim that for certain grains China exceeded its limits on domestic support under the Agreement on Agriculture (AoA) during 2012–2015. The panel first determined that the base years for the reference price in calculating China's market price support were 1996–1998, rather than 1986–1988 as stipulated in the AoA, and that production in the geographic regions where the support programs operated, not the smaller quantities purchased at administered prices, constituted eligible production. The panel then found China had exceeded its limits in each of the four years for wheat, Indica rice, and Japonica rice. The possibility was left open that a government can determine eligible production by setting maximum purchases at support prices in its regulatory framework. China used this option to claim that its programs for 2020 implemented the recommendations and rulings of the DSB. We argue that use of outdated fixed external reference prices to measure the price gap and to define eligible production by limits on purchases, distance calculation under the AoA from economic support measurement. The measurement issues compound the discord among Members over levels of agricultural support.

1. Introduction

Discord over high levels of agricultural support and protection has confounded international economic relations for decades. Agriculture was initially excluded from the GATT in order to accommodate price support and supply management programs of the United States. Subsequently, as international markets expanded and the European Community developed its protective Common Agricultural Policy, the United States became a proponent of constraints for agriculture. At the conclusion of the Uruguay Round, the Agreement on Agriculture (AoA) embodied the first systematic multilateral disciplines on trade-related agricultural policies under three pillars: market access (tariffs and tariff-rate quotas), domestic support (market price support and subsidy payments to producers), and export competition (particularly export subsidies).

In late 2016, the United States initiated a dispute concerning China's domestic support for producers of wheat, rice, and corn (*China–Agricultural Producers*).[1] The United States argued that in each of the four years 2012 to 2015 China provided support that exceeded its ceiling commitment under the AoA. This occurred, the United States asserted, because price support to producers of each grain type was in excess of China's accession-negotiated limit under the AoA that

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[1]The Panel Report, *China – Domestic Support for Agricultural Producers (China–Agricultural Producers)*, DS511.

certain support be no more than a *de minimis* level of 8.5% of the crop's value of production at domestic prices. The dispute was initiated to seek reduced market distortions under the circumstance of increasing economic price support in China as world grain prices fell from relatively high levels during 2007–2011. The OECD (2019) estimates that China's economic price support at the farm level averaged 32.2% of the domestic value of production for wheat, 32.0% for rice, and 22.6% for corn during 2012 to 2015. Increased economic price support coincided with declining US exports of these grains to China and growing Chinese grain stocks.[2] Twenty-seven other WTO Members, including seven Article XII (non-original) Members, reserved their third-party right to participate in the dispute.

Under the AoA, market price support (MPS) is measured by the gap between an applied administered price (AAP) and a fixed external reference price (FERP) multiplied by the quantity of production eligible to receive the AAP. This quantity may be less than total production. In contrast, an economic measurement is based on the gap between the domestic market price and a contemporaneous international reference border price, and on the full quantity of national production to which this price gap applies. The difference in these two measurements raises the question of what calculation parameters and circumstances can make the AoA commitment instrumental in constraining economic support that distorts markets.

In principle, the legal issue in this case is simple and clear; whether MPS is in excess of China's commitment. In practice, this dispute entails various complicated interpretations. It is indeed surprising to see two such significant WTO Members disagree about the interpretation of most elements for MPS calculation, even after years of accession negotiation that dealt with these technical issues.

The panel found, based on its determination of values entering the MPS formula, that China exceeded its *de minimis* level of support for wheat and rice (evaluated separately for Indica and Japonica varieties) in each of the four years. The panel determined that China had terminated its price support program for corn in 2016 and declined to evaluate prior compliance.[3]

The support program parameters subsequently announced by China for 2020 demonstrate that MPS for wheat and rice, when measured in line with the DSB recommendations and rulings, may be accommodated within China's domestic support commitment while constraining economic support only modestly. This outcome is particular to the economic and policy circumstances of China's price support programs and to its obligations as a non-original Member as determined by the panel. The MPS formula remains problematic overall in terms of achieving the AoA objective and purpose of 'correcting and preventing restrictions and distortions in world agricultural markets'.[4]

2. Support Subject to Limit

The AoA identifies the ceiling limit or limits to which certain kinds of domestic support are subject, gives criteria for the policies under which support is exempt from limits, and lays down rules for measuring domestic support subject to limits against commitments to reduce support from its

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[2]China's wheat, rice, and corn end-year carryover stocks reached the quite-high levels of more than half of annual production at the end of the 2015/16 marketing year, having increased by 56%, 43%, and 86% from 2011/12 (data from FASA-AMIS, https://app.amis-outlook.org/#/market-database/supply-and-demand-overview). Total grain imports also increased with China's prices above world levels. However, imports of wheat, rice, and corn remained below the tariff-rate quota (TRQ) quantities China committed to allow annually at a negligible tariff of 1%. In these circumstances, the United States also initiated a second dispute about China's grain regime in late 2016, *China – Tariff Rate Quotas for Certain Agricultural Products* (*China–TRQs*), DS517. The United States argued that China had failed to ensure that its laws and administrative practices did not inhibit filling the TRQs. See Glauber and Lester (2021) and Orden et al. (2019).

[3]The United States argued that the corn MPS program was a measure at issue, while China asserted that the corn program had been terminated in 2016 so was not at issue. The panel agreed with China that the corn MPS program had ended, concluded it had the authority to rule on an expired measure, but declined to do so because it found no evidence that corn MPS might be reintroduced.

[4]Preamble of the AoA.

base period level.[5] A Member's Schedule of Concessions and Commitments (Part IV, Section I) gives 'Domestic Support: Total AMS Commitments', where the yearly level is often called the Bound Total Aggregate Measurement of Support (Bound Total AMS). Members who reduced their bound commitment from their Base Total AMS were subject to declining Bound Total AMS in each year of the reduction process before reaching the Final Bound Total AMS. A Member is not to provide a yearly amount of non-exempt support, measured in a particular way, larger than its Bound Total AMS (Article 3.2) and is in compliance if it does not do so (Article 6.3).

Non-exempt support is summed in an AMS 'for each basic agricultural product receiving market price support, non-exempt direct payments, or any other subsidy not exempted from the reduction commitment' (Annex 3, paragraph 1). A basic agricultural product is defined as close as possible to the first point of sale (Article 1(b)). The AoA also defines an AMS that measures 'non-product-specific support provided in favour of agricultural producers in general' (Article 1(a)), of which only one is calculated.

Rules for calculating AMSs are laid out in Annex 3 paragraphs 6–13. MPS calculated using the gap between the AAP and the FERP is one of the components of a product's AMS. The FERP can be adjusted for quality differences as necessary. The non-exempt direct payments in the AMS, and input subsidies and subsidies resulting from other non-exempt measures, are calculated using either budgetary outlays or a price-gap method.

To enable the comparison of a year's non-exempt support, i.e., AMS support, to the Bound Total AMS the product-specific AMSs and the non-product-specific AMS are summed to generate an amount of domestic support measured as a Current Total Aggregate Measurement of Support (Current Total AMS). Although the Current Total AMS sum is labelled 'Total', any product-specific AMS that is no larger than a given percentage of the product's value of production, and non-product-specific AMS no larger than the given percentage of the Member's value of total agricultural production, can be left out of the sum (Article 6.4). Three given percentages apply, called *de minimis* percentages: 5% for developed countries, 8.5% for China and Kazakhstan, and 10% for developing countries.[6]

Moreover, three categories of support regardless of the amount can be exempted from the Current Total AMS: (i) for developing country Members, certain investment subsidies and certain input subsidies to low-income or resource-poor producers or subsidies to encourage diversification from growing illicit narcotic crops (Article 6.2, an exemption China agreed in accession it was not eligible) and, for all Members, (ii) certain direct payments under production-limiting programmes (Article 6.5, often called the 'blue box'), and (iii) support measures meeting the criteria and conditions of Annex 2 (often called the 'green box') and its fundamental requirement that they have 'no, or at most minimal, trade-distorting effects or effects on production'.

The *de minimis* exemption of an AMS recognizes that AMS support in relatively low amounts may be of less concern than larger amounts of AMS support in the context of reducing trade-distorting agricultural support and protection. For most developing country Members, including China, the Bound Total AMS is zero, nil, or blank. For these Members, no single AMS is allowed to exceed its *de minimis* level – this level serves as a limit since any larger AMS would enter the Current Total AMS and make it exceed the commitment. In contrast, for Members with a positive Bound Total AMS, the *de minims* level acts as a threshold. If an AMS is larger than its *de minimis* level, the whole AMS, not just the excess, enters the Current Total AMS.

While disciplined under separate pillars, there is an interplay between a Member's market access commitments and its use of AAPs. A government can benchmark producer prices in the domestic market to an AAP within the space that is available from the scheduled border protection.

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[5]Brink and Orden (2020) provide a description of the AoA domestic support provisions and the policy space it allows different groups of Members.

[6]Article 6.4 specifies the 5% and 10%. The 8.5% results from China's and Kazakhstan's WTO accession negotiations.

Table 1. China's Schedule CLII, Part IV: Section I

SECTION I – Domestic Support: Total AMS Commitments		
BASE TOTAL AMS	Final bound commitment levels	Relevant Support Tables and document
–0–	Nil	WT/ACC//CHN/38/Rev.3

3. Legal Analysis of MPS

The key legal issue in this case is clear. The United States argued that the level of domestic support China provided in 2012, 2013, 2014, and 2015 was in excess of China's *de minimis* level of 8.5% for each of the products and thus China exceeded its commitment level of 'Nil' (see Table 1). China rebutted that the key methodologies for calculating MPS must be those found in China's constituent data and methodology (CDM) used in the tables of supporting material incorporated by reference in Part IV, Section I of China's Schedule of Concessions on Goods (CLII). This dispute entails various legal interpretations to determine whether China's MPS for each grain in each year exceeded the *de minimis* level and thus China exceeded its Bound Total AMS.

3.1 Calculation of AMS and Current Total AMS

AoA Article 1(a)(ii) provides that AMS is to be 'calculated *in accordance with* the provisions of Annex 3 of this Agreement and *taking into account* the constituent data and methodology used in the tables of supporting material incorporated by reference in Part IV of the Member's Schedule' (emphasis added). Article 1(h)(ii) establishes that Current Total AMS is to be 'calculated *in accordance with* the provisions of this Agreement, including Article 6, and *with* the constituent data and methodology' (again emphasis added). China's accession documents, especially WT/ACC/CHN/38/Rev.3 (hereinafter 'Rev.3'), which is referred to in China's Part IV, Section I, provide concrete CDM.

In spite of the different language of Articles 1(a)(ii) and 1(h)(ii), particularly of the words *taking into account* and *in accordance with*, China argued that the same data and methodology must be applied for the calculations of AMSs and their sum as Current Total AMS to ensure coherent calculations. The United States contended that those articles address different stages of the AMS calculations. It argued that the product-specific AMS calculation in Article 1(a)(ii) addresses the evaluation of domestic support provided on a product-by-product basis and that the Current Total AMS described in Article 1(h)(ii) is the summing of all AMSs after considering whether relevant *de minims* criteria and other considerations set out in Article 6 have been met.

The panel generally agreed with China that the calculation of AMS and Current Total AMS should be done on the basis of a harmonious interpretation of both Annex 3 and the CDM. It explained that CDM should be taken into account, if available, when calculating AMS in line with the wording in Article 1(a)(ii), and to give a higher priority to the wording of Annex 3. The panel ruled that Annex 3 and the CDM should be given equal consideration when calculating the Current Total AMS.[7]

3.2 Calculation of the Components of the MPS Formula

AoA Annex 3, paragraph 8 describes the formula for calculating MPS, which can be expressed as:

$$MPS_t = [AAP_t - FERP] \times [QEP_t]$$

where AAP is the applied administered price, FERP is the fixed external reference price, QEP is the quantity of production eligible to receive the AAP ('eligible production'), and *t* is the year. The

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[7]Panel Report, *China–Agricultural Producers*, para. 7.164.

United States and China agreed on their understanding of the AAP but presented conflicting arguments about the FERP and QEP components in the MPS formula.

3.2.1 Applied Administered Price (AAP)

The United States argued that the 'minimum procurement price' annually announced by China at which designated state-owned enterprises would purchase wheat and rice constitutes an AAP. These minimum procurement prices were identified in the annual Wheat MPS Notices and Rice MPS Notices.

The panel ruled that the AAP is the price set by the government at which specified entities purchase basic agricultural products. It explained that within the Chinese measures, the AAP is referred to as the 'minimum purchase price' and is defined as 'x yuan per *jin*' where 1 *jin* equals 0.5 kilograms, for 'standard' Grade 3 product. The AAP is set out for each product and for each year. Since the majority of grain is considered to be standard Grade 3, the prices for Grade 3 were considered to be an element of China's CDM for each product.[8]

3.2.2 Fixed External Reference Price (FERP)

Paragraph 9 of Annex 3 stipulates that the FERP 'shall be based on the years 1986 to 1988 and shall generally be the average f.o.b. unit value for the basic agricultural product concerned in a net exporting country and the average c.i.f. unit value for the basic agricultural product concerned in a net importing country in the base period'. For the United States, the ordinary meaning of the terms in 'fixed external reference price' as well as the reference to the average f.o.b. or c.i.f. unit value of the basic agricultural product in the period 1986 through 1988 establishes that the FERP is one unchanging value. It argued that the provision 'shall be based on the years 1986 to 1988' is mandatory and does not permit deviations.

China rebutted that a holistic reading of Annex 3 and Part IV of China's Schedule requires the FERP to be determined using the 1996–1998 period, rather than the 1986–1988 period. For China, the fact that (i) its tables of supporting material used a FERP based on the years 1996–1998 for the calculations of its Base Total AMS, and (ii) that other non-original Members did not use FERPs based on the 1986–1988 time period, coupled with the claim of an alleged requirement of consistency between Base Total AMS and Current Total AMS, implies that paragraph 9 of Annex 3 should not be read as an inflexible rule.

The panel noted that China's tables of supporting material contain the necessary information to source a FERP based on an average of the period 1996–1998, following the guidelines set out in paragraph 9 of Annex 3. In addition, it explained that out of 36 non-original Members, only one (Bulgaria) used a period of 1986–1988 as the base period. The panel concluded that this background provides important context in which to interpret China's Schedule.

China argued that the same CDM, including the same FERPs and the same methodology for determining eligible production, must be used to calculate both Base Total AMS and Current Total AMS. The United States asserted that Base Total AMS is an historical reflection of the Member's provision of domestic support at the time of the Uruguay Round or later accession. Thus, the commitments to maintain domestic support levels and to calculate product-specific AMS and Current Total AMS in accordance with the AoA, including Annex 3 and Article 6, apply whether or not the Base Total AMS was calculated consistently with Annex 3.

The panel concluded that Article 1 of the AoA does not set out any rules or calculation methodology for either the 'base period' or for later years. But it rejected the US argument that the AoA sets out no rules or guidance to calculate Base Total AMS. For example, paragraph 5 of Annex 3 indicates that the AMS calculated as outlined in paragraphs 5–13 of Annex 3 for the base period, that is, Base Total AMS, constitutes the base level for the implementation of the

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[8]Ibid., para. 7.178.

reduction commitment on domestic support. Furthermore, the panel found that paragraphs 6–13 of Annex 3 provide the same guidance for calculating Current Total AMS.

The panel explained that the calculation of Base Total AMS is part of a negotiating process among Members and the acceding candidate. Thus, even if paragraphs 5–13 seem to apply equally to the calculations of both Base Total AMS and Current Total AMS, there might be a difference arising from the negotiation process resulting in a difference in the methodologies for these measurements of domestic support. Nevertheless, it ruled that there should be some broad correspondence in methodology used in both calculation processes.

China also argued that the goal to reduce domestic support under the domestic support commitments requires consistency in the calculation of Base Total AMS and Current Total AMS because if otherwise, a reduction of domestic support may not flow from reduced support, but from variations of the CDM used for the calculations. The United States rebutted that the consistency is not required for the calculation of Current Total AMS since China has no reduction commitments and has an ongoing Final Bound Commitment Level of 'Nil'. The US argument is premised on the notion that the AoA distinguishes between domestic support reduction commitments, whereby a Member is required to reduce its Base Total AMS to a final bound commitment level at the end of the reduction period, and domestic support commitments that from the beginning are set to nil (as in the case of China) and therefore have no reduction implementation period.

The panel explained that Article 6 sets forth only one kind of commitment and does not give any basis to argue for different types of commitments. When reductions are completed, there would not be any difference between two alleged types of commitments except for the level itself, which would have been a result of the negotiation process among Members. Thus, the panel agreed with China that the assessment of whether a Member has complied with its reduction commitments seems to presuppose that Current Total AMS is calculated consistently with the manner in which Base Total AMS was calculated. In case no consistency is ensured for this process, any differences between Base Total AMS and Current Total AMS might be the result of differences in the methodology applied to construct the AMS values, not the actual domestic support measures. In conclusion, the panel decided that both the text of the AoA and the goal of achieving domestic support reduction commitments substantiated a broad correspondence in the methodologies used to calculate the Base Total AMS and the Current Total AMS.

The panel further explained that while the text of paragraph 9 explicitly refers to the FERP being based on the years 1986–1988, this language must be read in its proper context and in light of the object and purpose of the AoA. It stated that the FERP is meant to interact with the other two variables of the AMS formula, the AAP and the QEP, and should keep some harmony and consistency within the mathematical process envisaged by the AoA.

The panel recognized that, among the three components of the MPS formula, the only one that does not measure a contemporaneous feature of the market is the FERP, which is anchored in a specific time period. Given that it would not change regardless of the year for which an amount is being calculated, the panel recognized that using one time period for the FERP in the Base Total AMS and another for the Current Total AMS would yield two different results in the MPS formula that would be entirely uncorrelated to changes in the actual provision of domestic support by a Member. The panel concluded, therefore, that allowing the use of a different time period in the FERP for Current Total AMS than the one used for the Base Total AMS would potentially entail an 'apples-to-oranges' comparison, which would go very much against the broad correspondence that should exist in the calculation process of both measurements. In this regard, the panel referred to its statements regarding the object and purpose of the AoA of achieving reduction commitments as an interpretative tool indicating that this provision cannot be read so as to allow incongruous results. Lastly, it recalled that both Annex 3 and the CDM have to be used when calculating Current Total AMS. Even if the CDM has only to be 'taken into account' when calculating a product's AMS, the panel considered that a decision to

use the 1996–1998 time period would be consistent because the general framework of paragraph 9 is still being applied, i.e., the FERP as a three-year average of certain values. Thus, the panel ruled that the FERP to be used in this case is one that conforms with the requirements of paragraph 9 of Annex 3, save for the time period, which should be based on the same years used to calculate China's Base Total AMS, i.e. 1996–1998.[9]

Indeed, most third parties such as Brazil, Canada, the European Union, and Japan as well as Kazakhstan and Russia supported such panel rulings to adopt the most recent three years as the basis.[10]

3.2.3 Quantity of Production Eligible to Receive the AAP (QEP)

The United States asserted that QEP within the meaning of Annex 3 is production which is fit or entitled to receive the administered price, whether or not the production was actually purchased, as determined by the Appellate Body in *Korea–Various Measures on Beef*.[11] The United States also argued that where a MPS instrument places no limits on the volume of production that may be purchased, the entirety of the production is eligible, and that conversely, if a limit such as on the geographic scope or a regulatory maximum is applied, that limit should be accounted for when determining the quantity eligible to receive the AAP. The Appellate Body had also ruled in *Korea–Various Measures on Beef* that 'in establishing its program for future market price support, a government is able to define and limit "eligible" production'.[12] However, since the minimum purchase price Implementation Plans for wheat and rice limited eligible production only by geographic scope, the United States argued the QEP is the entire production in the relevant areas. China argued that the appropriate methodology for the determination of QEP stems from a harmonious interpretation of the provisions of the AoA which gives meaning to both (i) the terms of Annex 3 and (ii) the definition of eligible production set out in Rev.3.

The panel explained that the eligible quantity is directly tied to the AAP, in the sense that only the amount of product that can receive the AAP enters the calculation of AMS. Therefore, it found that similarly to the AAP, the QEP should be determined with reference to the relevant regulatory framework and, in particular, the relevant measures.

China argued that the member-specific CDM may modify the ordinary meaning of eligible production, depending on the methodology that a Member used for its determination. China maintained that by explaining how the quantity of eligible production was determined for the measures in place at the time of its accession to the WTO, endnote 19 of its tables of supporting material (i.e. Rev.3) sets out a methodology that is capable of being, and should be, applied for purposes of calculating AMS. Endnote 19 with the heading, 'Eligible Production' provides information on China's MPS for the purposes of determining China's AMS during the years 1996–1998 as the amount purchased by state-owned enterprises from farmers at a 'State Procurement Price' for the food security purpose or a 'Protective Price' in order to protect farmers' incomes. China asserted that this wording reflects its commitment to apply a methodology that determines eligible production for MPS as the quantity of wheat and rice purchased under an AAP. The United States argued that the above provisions are not a 'definition' of eligible production but merely a factual description of MPS programs available to Chinese farmers between 1996 and 1998.

The panel rejected China's arguments. It stated that the usage of the word 'refers' suggests the mere description of the eligible production used in the tables of supporting material upon China's

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[9]Panel Report, *China–Agricultural Producers*, para. 7.275.
[10]Ibid., Annex C. Australia was an exception.
[11]The Appellate Body Report, *Korea – Measures Affecting Imports of Fresh, Chilled and Frozen Beef* (*Korea–Various Measures on Beef*), DS161 and DS169, para. 120.
[12]Ibid.

accession to the WTO. However, this did not establish a methodology to assess the QEP that should be applied when calculating AMS at any other point in time. The text of endnote 19 only mentions eligible production in the particular context of the programs that China had in place at the time of its accession. The panel explained that reference to eligible production in endnote 19 is directly tied to these programs, which had long since expired. Thus, it ruled that endnote 19 does not contain a time-invariant methodology that would be relevant to calculation of China's AMS.

China claimed that the regulatory framework underlying the challenged measures reveals five factors implicitly limiting the quantity of production eligible: (i) the geographic scope of application of the measures; (ii) the temporal application of the programs; (iii) the activation of the programs only when the market price falls below the AAP and de-activation when the price rises above; (iv) minimum quality requirements on products which may be purchased; and (v) consumption of a 'significant portion' of production on small-scale farms. By building limitations into the operation of the MPS program, China argued that it ensured only a limited amount of wheat and rice would be purchased at the AAP.

The United States countered that China's wheat and rice Implementation Plans specified the provinces where farmers were eligible to receive the AAP for their wheat and rice. The portion or amount of the agricultural product produced that is entitled to receive the administered price is identified in the measures as all production produced in the identified provinces.

In relation to the geographical limitation, the panel noted that each Implementation Plan expressly limits the provinces in which the measures can operate and that for the years 2012–2015 they covered (i) six wheat-producing provinces; (ii) five early-season Indica rice-producing provinces; and (iii) eleven mid-to-late season Indica and Japonica rice-producing provinces.[13] The values designated as the QEP only included data from the regions specified in the measures, approximately 80% of total national production of wheat and rice in the covered years. The data submitted by the parties, and the data being used by the panel in its calculations, are thus already limited geographically. In addition, the panel found the minimum grade requirements prescribed by the applicable national standards compelling, in that it directly impacts the amount of product that is eligible to receive the AAP. But the panel determined that temporal limitation and activation or/and de-activation of programs did not affect the eligibility of products to receive the AAP. Concerning consumption by small-scale farms, the panel explained that the pertinent question is whether the grain that was produced would be able to benefit from the AAP if the seller so desired. The panel considered that, as China had not specified a limitation on how much of each product could be purchased if the market price is below the AAP, the entirety of the crop produced on the farm would be eligible, in the ordinary meaning of the word, to receive the AAP.

In conclusion, the panel ruled that, in addition to the geographical limitation already taken into account in the data provided by the parties, only one of the alleged limitations – the volume of out-of-grade grain for each year, which disqualified less than 3% of production in any year – impacts the eligibility of the relevant products to receive the AAP. The panel determined that, 'In the absence of any explicit or implicit limits in the challenged Chinese measures', the QEP is the entire volume of production in the relevant specified provinces, less any out-of-grade grain.[14]

3.2.4 Processing-level Adjustment

This issue arises because the FERP refers to 'milled and semi-milled rice', while the AAP provides for 'unmilled paddy rice', thus requiring an adjustment of some of the variables to either a higher or lower level of processing to avoid an inappropriate comparison. China claimed that since the data for the AAP and the QEP are presented at the level of unmilled rice, it is necessary to adjust

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[13]For rice, provinces include the Guangxi Zhuang autonomous region.
[14]Panel Report, *China–Agricultural Producers*, para. 7.315.

both of these to reflect the processing level of 'semi-milled or wholly milled rice', the level of the FERP. China's adjustment thus used a 'milling rate' of 70% to adjust both the quantity of eligible production and the AAP from unmilled rice to milled rice, which is the same rate as used in Rev.3. The United States argued for adjustment of the FERP (milled rice) downwards, to match the unmilled level of the AAP and the QEP. The United States explained that it constructed a price-based adjustment factor, 60%, based on a comparison of available monthly pricing data for milled rice versus unmilled rice in China.

As regards variables to be adjusted, the panel explained that while China is able to specify the basic agricultural product in its Schedule, this may not necessarily extend to specifying the level of processing, especially for the purpose of calculating AMS. Since there is no obligation to determine the basic agricultural product on the basis of China's tables of supporting material alone, the panel considered the 'point of first sale', as specifically directed by Annex 3.

The panel ruled that the relevant point of first sale of the basic agricultural product would be the point at which Chinese producers of rice in the relevant provinces sell their product to the government or its relevant purchasing entities, i.e., the unmilled rice. On this basis, the panel concluded it would adjust the FERP downwards to a level equivalent to unmilled rice.

Regarding the adjustment rate, the panel noted that a point of contention was the use by the United States of 'polished long-grained non-glutinous rice and polished round-grained rice', the highest quality and thus the most expensive product, in determining its price-based adjustment rate. After considering the various stages of processing, the panel concluded that, in the absence of more accurate price-based data for the conversion, it would complete its calculations using a 'less-preferable, but equally valid, volume-based conversion rate' of 70%.[15]

3.3 Panel Conclusion

Based on the decisions described above, the panel found that in each year 2012–2015 China's level of support in favor of domestic producers was in excess of China's commitment level of 'nil'. Therefore, it ruled that during each year 2012–2015 China was not in compliance with its domestic support commitment pursuant to Articles 3.2 and 6.3 of the AoA.[16] Neither party appealed the panel findings, and the DSB adopted the panel report on 26 April 2019.[17] China and the United States agreed that 31 March 2020 would be the reasonable period of time for China to implement the recommendations and rulings of the DSB.[18] This was later extended to 30 June 2020 to 'allow the United States additional time to evaluate China's actions'.[19]

4. Modest Economic Constraint from the Panel Rulings

The panel conclusion that China exceeded its Bound Total AMS of nil in each year 2012–2015 rests on MPSs for wheat, Indica rice, and Japonica rice found to exceed China's *de minims* limits of 8.5% of value of production. The MPS as a percent of value of production (%MPS) exceeded the limit for each crop in each year (see Table 2), rising over the four years and averaging 18.6% for wheat, 29.3% for Indica rice, and 18.6% for Japonica rice.

The panel findings have several important implications concerning China. One point follows from the panel's decision that eligible production is based on production and not on purchases. A second point relates to the panel's decision that the FERP be based on 1996–1998 and not on

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[15]Ibid., para. 7.351.
[16]Ibid., para. 7.413.
[17]WT/DS511/12 (dated 29 April 2019).
[18]WT/DS511/14 (dated 12 June 2019).
[19]WT/DS511/16 (dated 3 April 2020).

Table 2. Panel determination of China's AMSs

	2012	2013	2014	2015
	Percent MPS			
Wheat	12.1%	18.2%	21.7%	22.4%
Indica rice	23.6%	30.3%	31.3%	31.9%
Japonica rice	13.3%	18.9%	20.7%	21.3%

Note: Panel's AMS includes only market price support and no subsidies. Entries for rice are averages of panel's alternative calculations.
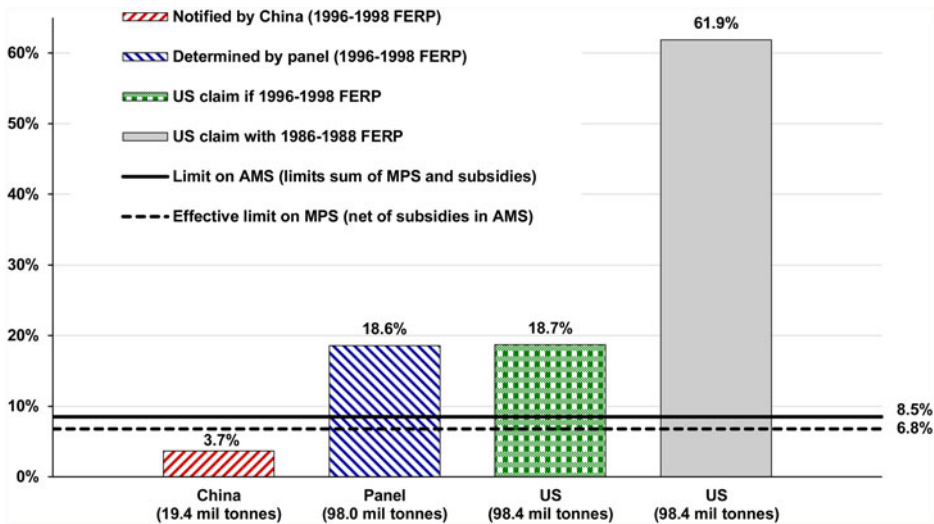
Figure 1. China's wheat %MPS using alternative eligible production and FERP, 2012–2015 averages
Source: Brink and Orden (2020) based on the Panel Report, US written submission and China's notifications of 2012–2015 domestic support.

1986–1988. A third point derives from the panel leaving open the possibility that a government setting a maximum quantity to be purchased in the legal framework of an MPS program may determine the eligible production.

Figure 1 facilitates discussion of these points. It illustrates the %MPS for wheat (on average over the four years) under alternative quantities of eligible production using the 1996–1998 FERP, and also for the eligible production as in the US claim using 1986–1988 to determine the FERP.[20] Two limits on %MPS are illustrated: China's AMS limit of 8.5% of value of production and a lower effective limit on MPS during those years taking into account input subsidies (for improved crop strains and seeds) which China includes in its AMSs for 2012–2015. China notified these subsidies to the WTO, under Article 18.2 of the AoA, only in December 2018 and they were not under consideration in the *China-Agricultural Producers* dispute.[21] The input subsidies averaged 1.7% of wheat value of production, which reduces the effective limit on %MPS from 8.5% to 6.8% on average for wheat, and similarly for rice.

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[20]Annual calculations for wheat, Indica rice, and Japonica rice are presented by Brink and Orden (2020). The 1996–1998 FERP for wheat is 1,698 yuan/tonne. The United States calculated that an FERP based on 1986–1988 was 431 yuan/tonne (USTR, 2017).

[21]Committee on Agriculture, G/AG/N/CHN/43, 44, 45, 46 for 2012–2015, respectively (14 December 2018). Latest notification to date is for 2016: G/AG/N/CHN/47 (14 December 2018).

The panel's view that eligible production is based on production and not on purchases would have required support prices (the AAPs) to be lower in order to make MPSs fit within China's AMS limits. With the panel's QEP the %MPSs for wheat are 12.1% in 2012 rising to 22.4% in 2015 (Table 2). To bring AMSs into compliance with China's limits at the QEP determined by the panel would have required AAPs from about 7.7% lower in 2012 to 19.4% lower in 2015.[22] China's domestic market prices tracked the support price closely during 2012–2015. Had domestic market prices moved down with the lower AAPs, they still would have exceeded border prices but economic price support would have been less than reported by OECD. The reduced AAPs would have exceeded border prices for wheat (expressed by OECD at the farm level) by between 13.0% (in 2013) and 27.7% (in 2015). Thus, under a policy alternative of lower AAPs, the AMS limits would have curtailed economic support for wheat without eliminating it.[23] Similar results hold for rice. AMSs in compliance with their limits would have required AAPs for Indica rice to be about 23.6% lower in 2012 to 29.0% lower in 2015 at the QEP determined by the panel.[24] For Japonica rice, the AAPs would have had to be from about 8.5% lower in 2012 to 17.0% lower in 2015.

The panel's adoption of the wheat FERP from 1996–1998 and not 1986–1988 reduces the extent to which support prices would have had to be lower. This is illustrated for the US-claimed eligible production of wheat in the last two columns of Figure 1. The %MPSs for wheat are more than three times larger when calculated with the lower 1986–1988 FERP than with the higher 1996–1998 FERP. Correspondingly, larger reductions in support prices would have been required to meet the limits. Bringing AMS into compliance with China's limits with the 1986–1988 FERP and the US-claimed eligible production would have required AAPs for wheat to be on the order of at least 60% lower. These lower AAPs would have been below border prices and precluded any economic support through a price support program. Use of 1986–1988 FERPs has similar implications for rice.

Together the points above suggest the panel decisions allow China some room for economic price support but constrain its levels. However, the panel left open the possibility that defining a maximum quantity that would be purchased at the support price in a program's legal framework may determine the QEP. This enables a government to manage the combination of two policy-determined variables, AAP and QEP, such that a product's AMS stays within each year's limit.

China's maximum QEP within its AMS limits averaged 37.3 million tonnes for wheat during 2012–2015 at the announced AAPs, the 1996–1998 FERP, and accounting for the subsidies included in the AMSs. China's notified purchases of wheat at support prices averaged 19.4 million tonnes (see Figure 1), with a %MPS each year below the effective AMS limit taking subsidies into account. Thus, China potentially could have complied with its wheat AMS limits during 2012–2015 without reducing support prices if its legal framework had defined maximum purchase quantities that were less than the quantities exhausting the effective AMS limits, yet larger than the quantities of wheat actually purchased. The results are similar for Indica rice. The potential maximum purchases averaged 25.6 million tonnes, while China's actual purchases averaged 11.6 million tonnes and were below the maximum each year. For Japonica rice, the potential maximum exceeded China's purchases in 2012 and 2013. However, the maximum would have been binding in 2014 and 2015 when China's Japonica rice purchases rose to 18.2 and 20.1

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[22]The reductions are not shown in Figure 1. See Brink and Orden (2020).

[23]The complementarity between pressuring China about both its MPS and TRQ administration is interesting in this regard. Larger TRQ fill makes maintaining any given AAP more difficult – more grain has to be purchased to maintain the support price – but it does not preclude any AAP level. A lower AAP makes it easier to allow TRQs to be filled but lessens the arbitrage incentive for imports. If TRQ fill is below import demand at a given AAP, then domestic prices can rise above the support price until the market clears with the limited imports. Glauber and Lester (2021) note the disincentive toward allowing TRQ imports that arose during 2012–2015 from high support prices and increasing grain carry-over stocks.

[24]Had the panel adopted the US factor of 0.6, it would have resulted in lower FERP for unmilled rice and thus higher MPS and %MPS.

million tonnes, respectively, compared to 4.0 and 13.5 million tonnes the previous two years. At the actual purchases in 2014 and 2015, AMS for Japonica rice exceeds the *de minimis* level when the input subsidies are included.[25]

Use of the two policy parameters plays a crucial role in China's claim to have brought its wheat and rice AMSs into compliance with the recommendations and rulings of the DSB within the reasonable period of time.[26] China began reducing its wheat and rice support prices in 2016. The support price for wheat had been reduced by 5.1% (to 2,240 yuan/tonne) by 2019, Indica rice by 9.9% (to 2,460 yuan/tonne averaged over early and mid-to-late varieties), and Japonica rice by 16.1% (to 2,600 yuan/tonne). If these lower support prices, in conjunction with the QEP determined by the panel, had been applied in 2012–2015, the MPSs for Japonica rice would essentially have been within the AMS limits. For wheat and Indica rice, however, these support price reductions alone would not have been sufficient to bring support into compliance. The actual reductions of AAPs, for example, were only about one-quarter for wheat and one-third for Indica rice of the reductions that would have brought the AMSs within limit in 2015.

China announced further steps to affect its MPS for wheat in October 2019 (NDRC, 2019). Specifically, China indicated that for 2020 the support price would be maintained at the 2019 level and 37 million tonnes would be imposed as the maximum quantity to be purchased. The maximum quantity was above past purchases and anticipated 2020 purchases but low enough that China's 2020 wheat AMS could be expected to be below its limit. The %MPS with QEP of 37 million tonnes is around 6.9% of value of production assuming domestic prices at the level of the 2020 AAP and forecast production. China announced similar steps to affect the MPS for rice in February 2020 (NDRC, 2020). Maximum purchases were set at 20 million tonnes for Indica rice and 30 million tonnes for Japonica rice, again exceeding past purchases at support prices. With the announced AAPs for 2020, the maximum purchase quantities imply %MPSs around 5% of value of production if fully utilized. For both wheat and rice, monitoring procedures were announced to ensure that the purchase maximum would not be exceeded. The authority to purchase 90% of these amounts would be allocated across provinces initially, then the remaining 10% would be assigned to certain areas if needed. The monitoring associated with maximum purchases of wheat and rice at AAPs will increase transparency about China's price support programs. China has in the past made such information available in domestic support notifications only with long delays.

Setting of maximum purchases to define China's eligible production breaks the correspondence of the quantity variable in the AoA legal assessment of MPS and in the economic measurement of price support. China's announcements of maximum purchases of wheat and rice below total production in the provinces in which the support program operates thus weakens the constraint the panel decisions otherwise impose on China's economic support. China can choose a combination of AAPs and maximum purchase quantities anywhere on a compliance curve where the combination meets the product's AMS limit (with the given FERP). For the range of AAPs announced since 2012, the purchase limits are well above the actual purchases at support prices, except in the case of Japonica rice in a few years. Thus, the outcome of *China–Agricultural Producers* places only modest constraint on China's levels of AAPs and, through this constraint, on its levels of economic price support. It is, nonetheless, a legal constraint clarified by a dispute ruling – on the compliance curve an AAP can be raised only if the purchases maximum is reduced. Facing this constraint creates a disincentive for China to provide AMS subsidies to wheat and rice, especially if the authorities seek to maintain some distance between announced maximum quantities eligible to be purchased and actual purchases and also between the expected levels of

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[25]China's notifications calculate MPS separately for Indica rice and Japonica rice then include both in a single rice AMS, which, including the subsidies, is notified as remaining below the 8.5% level.

[26]WT/DS511/15/Add.2 (dated 19 June 2020).

AMS at the maximum purchases and the *de minimis* limits on AMS. In 2016, China ended the product-specific input subsidies it had provided for wheat and rice during 2012–2015, leaving more room for MPS within its AMS limits. China also initiated a program of exempt payments to corn producers under Article 6.5 (blue box), in place of the corn MPS program it terminated.

5. Additional Challenges Concerning Market Price Support

Measuring MPS under the AoA has been contentious from the outset as Members have interpreted differently its provisions on the AAP, FERP, and eligible production. *China–Agricultural Producers* provides some clarifications of Members' obligations but the consequences for economic price support of legal compliance are specific to China's circumstances. The broader context of this dispute includes other ongoing controversies around MPS measurement under the AoA. Indeed, one concern about the DSB recommendations and rulings is that while they provide consistency between China's Base Total AMS and Current Total AMS measurements, different base periods for non-original Members than for original Members creates inconsistency of obligations among the membership. One can argue to the contrary that with 17 countries applying for accession during the Uruguay Round negotiation period of 1986–1993, provisions to incorporate flexible elements for acceding countries might have been established in the AoA if that was the intention of the drafters.

India is a second large agricultural producer for which several Members have challenged its recent levels of domestic support, particularly the calculation of MPS. Brazil, Australia, and Guatemala have initiated disputes against India about sugar and sugarcane during marketing years 2014/15 to 2018/19.[27] The United States, Canada, and Australia have since May 2018 made submissions to the Committee on Agriculture under Article 18.7 of the AoA, so-called 'counter-notifications', that relate to India's support for four products (wheat, rice, cotton, and sugarcane) and a product group (pulses).[28]

The capacity of the AoA to constrain agricultural support is affected by different calculation complexities for India than China. India has in most years notified negative MPS for wheat and positive MPS for rice, cotton, and pulses within its 10% *de minimis* AMS limits.[29] As an original WTO Member, India's external reference prices in Indian rupees/tonne are based on 1986–1988 world prices. India converts its external reference prices into US dollars/tonne at a fixed exchange rate but its AAP at subsequent yearly exchange rates. This substantially narrows the price gap in the MPS formula, a gap that occurs for India in large part from inflation that since 1986–1988 is offset by currency devaluations. India uses only procured quantities as QEP in its notifications. In contrast, the counter-notifications use AAP and FERP in Indian rupees/tonne and total production as the QEP. By not converting AAP and FERP at different exchange rates and using a larger QEP, the counter-notifications yield much larger %MPS than in India's notifications – the effect on %MPS is along similar lines to the US calculation of China's %MPS for wheat shown in the right column of Figure 1.[30] For sugarcane, India argues there are no government procurements and therefore does not notify AMS support. Australia holds that minimum prices that India sets for purchases of sugarcane by sugar millers are AAPs and total production is the QEP for MPS.[31]

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[27]*India – Measures Concerning Sugar and Sugarcane*, WT/DS579/7, WT/DS580/7, and WT/DS581/8, respectively (12 July 2019).

[28]Committee for Agriculture, G/AG/W/174 (wheat and rice) (9 May 2018); G/AG/W/188 (cotton) (9 November 2018); G/AG/W/189 (sugarcane) (16 November 2018); G/AG/W/193 (pulses) (12 February 2019).

[29]Committee of Agriculture, latest notification to-date: G/AG/N/IND/18 (31 March 2020) for marketing year 2018/19.

[30]Counter-notified MPS during 2010–2013 ranges from 60.1% to 68.5% for wheat, 74.0% to 84.2% for rice, and 53.7% to 70.9% for cotton, and during 2011–2016 from 77.7% to 99.8% for sugarcane.

[31]DFAT (Department of Foreign Affairs and Trade), 16 January 2020. India's submissions are not public.

Differences in economic context are also important for assessing the role the AoA commitments on domestic support can have in constraining support that distorts markets. The OECD calculates that India's economic price support for wheat, rice, and cotton was mostly negative during the 15-year period 2005–2019. For sugarcane, the OECD calculates positive support by India since 2012, although not nearly as high as the %MPS calculated by Australia in its dispute submissions to-date.

The contrast for India compared to China on the comparison of MPS calculated under the AoA and economic support is striking. India's administered prices for wheat, rice, and cotton have mostly been below international reference border prices. If India were to calculate MPS for these crops as in the US counter-notifications, keeping %MPS within its limits would require setting even lower AAPs or setting maximum procurements at levels far below past procurements. Reaching the compliance curve through either approach, or any combination, would preclude India's price support programs for these crops from operating as they have. This potential effect of the AoA commitment contrasts against the evident modest constraint in the case of China. For sugarcane, India's AoA commitment could reduce positive price support if MPS were to be calculated with the price gaps and QEP used by Australia in its counter-notification and dispute submission.

The incongruence between measurement of MPS under the AoA and its economic implications spills over into ongoing negotiations about the treatment of MPS calculated under the Annex 2 (green box) rules for 'Public stockholding for food security purposes'. Developing country Members can exempt expenditures on accumulating and holding food stocks when the stocks are acquired and released at administered prices if the resulting MPS is included in the AMS. This can make AMS large enough to exceed its limit, as in the case of wheat and rice for India as calculated in the US counter-notification. Some Members have therefore sought to remove the requirement to include the MPS in an AMS when developing countries acquire public stocks for food security purposes at administered prices.[32] The 2013 WTO Ministerial conference decided that a developing country Member, which includes MPS in the AMS in this context, would not face a legal challenge under the dispute settlement rules even if exceeding its commitment.[33] This was followed in a decision by the WTO General Council in 2014 and in a Ministerial decision of 2015.[34] The flexibility provided by these decisions is an interim solution, which only India has utilized (when notifying an excessive rice AMS for 2018). The interim solution is in place until a permanent solution is found.

6. Conclusion

The legal rulings in the dispute *China–Agricultural Producers* clarify some of the fundamental issues for interpreting the AoA but still raise difficult questions for applying it. At time of writing, it appears there may be further negotiations or adjudication in this dispute. Shortly after China communicated that its modified price support programs implemented the recommendations and rulings of the DSB, the United States requested retaliation authorization under DSU Article 22.2. The United States considered that China had failed to bring its measures into compliance with its WTO obligations, with resulting nullification and impairment of benefits to the United States for which a preliminary estimate of $1.3 billion for 2020 was given.[35] China promptly communicated that it disagreed with this allegation, triggering arbitration under DSU Article 22.6.[36] China also initiated the compliance panel procedure under DSU Article 21.5, which usually precedes a

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[32]See, *inter alia*, Matthews (2015), Diaz-Bonilla (2017) and Brink and Orden (2020) for discussion of these issues.

[33]Ministerial Conference, WT/MIN(13)/38 and WT/L/913 (11 December 2013). This interim agreement is contingent on certain conditions being met and monitoring by the Committee on Agriculture.

[34]WT/MIN(15)/W/46 (19 December 2015).

[35]WT/DS511/17 (dated 17 July 2020).

[36]WT/DS511/18 (dated 28 July 2020).

retaliation arbitration.[37] A compliance panel was established 28 September 2020, with the United States indicating it would pause the arbitration proceedings.

The United States had not appealed the panel report even though, contrary to one of the US core assertions, it based the FERP on 1996–1998 instead of 1986–1988. The US decision not to appeal the panel report may have reflected its recognition that, with the Appellate Body likely to be non-functional by the end of 2019, an appeal would have left the dispute in limbo. On the second key issue in the dispute, the United States does not appear to have argued in the panel proceedings that total production in the relevant provinces was eligible production *even if* there were explicit maximum purchases defined in a Member's legal framework regulating its provision of MPS. Thus, the subsequent response by the United States to China's claimed compliance is surprising. The response may simply be to keep the dispute proceedings open as one forum in which to press China about its agricultural support until the actual AMS values under China's 2020 measures can be determined, rather than to raise fundamental issues about the panel findings.

Legally speaking, it is not impossible for disputing parties to take issue with the decisions adopted in a panel report in an Article 21.5 panel proceeding, *albeit* the absence of such a case in previous disputes. Practically, however, there is little chance of the same panel reconsidering its rulings. If this proves the outcome in *China–Agricultural Producers*, MPS measurement applied pursuant to the dispute will provide consistency between China's Base Total AMS and Current Total AMS. However, it will for some products and countries, depending on world price developments since 1986–1988, advantage non-original Members due to their later-in-time membership.

Accordingly, more consistent application of the AoA may require all Members to abide by the criteria explicitly enunciated in the text, instead of constituting new legal obligations for non-original Members by allowing FERP from later base periods, as was the decision of the panel. The absence of a functional Appellate Body precludes a definitive ruling on interpretation of the AoA that would address these conflicting consequences. This highlights the need for the WTO Members to refine the current text to better reflect the volatile realities of agricultural markets over time. Yet, any successful negotiations along such lines seems far off, as illustrated, for example, in the stalled negotiations over MPS associated with acquisition of public stocks for food security purposes.

In economic terms, there remain two underlying problems with MPS as calculated under the AoA. The first is the use of a very out-of-date FERP by original Members (less so for most non-original Members) in measuring the price gap that enters the MPS calculation. In many cases, the resulting gap, using FERPs from more than 30 years ago, generates a large amount of MPS even if currently there is only little or no support in economic terms. Allowing eligible production to be defined by limits on purchases at administered prices also distances MPS from an economic measurement, in this case making MPS smaller than if total production were used. Thus, even as the calculation of MPS is clarified through dispute settlement, its role in effecting reduced economic support through the AoA rules remains problematic. Problems of MPS measurement compound the issues of high agricultural support and protection that have long confounded international economic relations.

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