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**The United States WTO Complaint on China's Agricultural Domestic Support:
Preliminary Observations (Paper)**

Lars Brink and David Orden

Selected Paper prepared for presentation at the International Agricultural Trade Research Consortium's (IATRC's) 2016 Annual Meeting: Climate Change and International Agricultural Trade in the Aftermath of COP21, December 11-13, 2016, Scottsdale, AZ.

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The United States WTO Complaint on China's Agricultural Domestic Support: Preliminary Observations*

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* Conference paper presented at the annual meeting of the International Agricultural Trade Research Consortium (IATRC), Scottsdale, Arizona, December 11-13, 2016, and subsequently updated. Lars Brink (lars.brink@hotmail.com) is an independent agricultural policy advisor (formerly at Agriculture and Agri-Food Canada) and an associated faculty of the [Global Issues Initiative \(GII\)](#), [Institute for Society, Culture and Environment \(ISCE\)](#) at Virginia Tech (VT). David Orden (orden@vt.edu) is professor of Agricultural and Applied Economics at VT and Director of ISCE-GII. Senior authorship is shared.

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Abstract

This note provides some preliminary observations on the complaint initiated in September 2016 by the United States about China's agricultural domestic support under the rules for dispute settlement of the World Trade Organization (WTO). The United States alleges that certain support for wheat, corn and rice exceeded China's commitments under the Agreement on Agriculture in the years 2012-2015. The WTO established a Panel for this dispute on 25 January 2017.

The note examines elements that may factor into a WTO Dispute Settlement Body ruling on this case, particularly the interpretation of "applied administered price" and "quantity of production eligible to receive the applied administered price", key terms that determine market price support under the Agreement. China's accession documents and annual support notifications, available only through 2010, report the eligible production as the quantities procured by state-authorized grain enterprises or less. The United States apparently is asserting that a larger production quantity, possibly total production, be counted and that China's announced support prices are applied administered prices.

The findings of a Panel or the Appellate Body on these definitional issues may involve the hierarchy between Agreement language that support be calculated "taking into account the constituent data and methodology" of a member and "in accordance with" the specific provisions of the Agreement. For rice, an issue is whether the administered price needs to be adjusted up from an unmilled to milled basis for comparability with the reference price of milled rice, which would increase calculated market price support.

Since the United States has not made public its support calculations, the note estimates the market price support that might be calculated under the Agreement using total production. These estimates indicate support in excess of China's limits on certain product-specific support, which is 8.5 percent of the value of production, for wheat and corn in all four years. Support for rice is excessive only if the administered price is adjusted to a milled basis. The excesses calculated under these assumptions sum to about USD 67 billion for 2015, a substantial amount compared to support within limits that would sum to about USD 19 billion.

Market price support measured under the Agreement differs from economic measurements of market price support, such as by OECD. For 2012-2015, OECD measures economic market price support in China for wheat, corn and rice in the range of 14 to 39 percent of each product's value of production. The coincidence of this situation with the possibility that China's support under the Agreement exceeded its limits raises the prospect that, in this and possibly other cases, the WTO rules on domestic support may have an effect on reining in certain economic support. To meet its WTO commitments a country would in these circumstances need to limit the amount of economic support, or at least resort to different policy instruments than applied administered prices.

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The United States WTO Complaint on China's Agricultural Domestic Support: Preliminary Observations

On 13 September 2016 the United States initiated proceedings against China concerning agricultural domestic support under the rules for dispute settlement of the World Trade Organization (WTO). The United States alleged, without presenting its calculations by product and year, that certain domestic support provided by China to agricultural producers, including producers of wheat, corn and rice in each of the years 2012, 2013, 2014 and 2015 exceeded China's commitments under the Agreement on Agriculture (WTO 2016a). The excesses were asserted to be large – in a background news release the United States claimed that in 2015 they totalled nearly US dollars (USD) 100 billion over the individual limits for these grains (USDA 2016a). Subsequently, on 5 December 2016 the United States requested the establishment of a Panel to settle this dispute (WTO 2016c). The request was made a second time at the meeting of the relevant WTO body on 25 January 2017 and a Panel was established.

This note provides some preliminary observations on the nature of the US complaint about China's domestic support, the dispute process, the legal and economic issues at stake, and the implications of possible outcomes of this case for China's support levels and the influence of WTO rules on agricultural policies. The note is organized into six main sections:

- First it provides a brief background on the context in which this dispute arises, the domestic support rules and limits to which WTO members have committed, and the dispute settlement process and timeline of the case so far.
- Second, it summarizes some statistics about China's grain trade and production, with a focus particularly on the eight years 2008-2015 after the run-up of world prices that started in 2007.
- Third, it describes the US complaint, summarizes related discussion of China's market price support in the WTO Committee on Agriculture, and briefly characterizes China's price support programs for wheat, corn and rice.
- Fourth, it focuses on some specific definitional issues that arise in assessing China's annual levels of certain support and whether it has exceeded China's commitments.

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- Fifth, it makes rough estimates of China's domestic support being contested in this dispute to assess under what assumptions the US argument that China has exceeded its limits might be sustained, and it draws on estimates of producer support from the Organization for Economic Cooperation and Development (OECD) to assess the economic context to which any such decisions pertain.
- Finally, it summarizes and draws some preliminary conclusions about the case.

The fourth and fifth sections present the core of the analysis of the note. Data sources are detailed in Annex A. Because much of the data and information about the case is most easily available in English from US and other sources, and because the United States initiated the case as complainant, the preliminary observations relate somewhat more to the views that may be presented by the United States than those China might present. China has not submitted WTO notifications of its domestic support for the years 2012-2015, which once available will be informative material. At the end of 2016, China's most recent notification of domestic support (G/AG/N/CHN/28) was circulated on 6 May 2015 and covered calendar years 2009 and 2010 (WTO 2015a).

The 2016 US case against China on domestic support has proceeded in a context of increased recent activity around the legal framework conditioning China's agricultural imports from the United States. For example:

- In June 2016 the United States requested the establishment of a compliance Panel in a case initiated in 2011 against China's anti-dumping and countervailing duties on US broiler products (DS427; *China – Broiler Products*; WTO 2011a, 2016b).
- In September 2016 the United States requested consultations, and in December 2016 and again in January 2017 requested the establishment of a Panel, on the support China provides in favour of agricultural producers, i.e., the case discussed in this note (DS511; *China – Domestic Support for Agricultural Producers* (hereafter *China – Domestic Support*); WTO 2016a, 2016c).
- In September 2016 China increased anti-dumping duties and imposed countervailing duties on imports from the United States of DDGS (distillers' dried grains with

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solubles, a by-product of producing ethanol from grain; Ministry of Commerce 2016a; 2016b).

- In December 2016 the United States requested consultations with China on the administration of tariff rate quotas (TRQs) for wheat, corn and rice (DS517; *China – Tariff Rate Quotas for Certain Agricultural Products*; WTO 2016h).

Overall, the US complaint on China's domestic support is one of 20 cases the United States has initiated against China under the WTO dispute settlement rules since its accession to the WTO in 2001. Of these, only the three cases *China – Broiler Products*, *China – Domestic Support* and *China – Tariff Rate Quotas for Certain Agricultural Products* exclusively concern agriculture.

General background on WTO domestic support rules and dispute settlement

As in all WTO disputes many factors must coalesce to make it worthwhile for a government to initiate proceedings. They include the severity of the harm the responding country's measures are perceived to inflict on interest groups in the complaining country, and the forcefulness with which these groups articulate their concerns to their government. They also include the government's assessment of the likelihood and value of a successful outcome of the dispute and the cost to be incurred in pursuing it, such as remunerating legal expertise and allocating government resources over a period of several years. In some cases the complaining country considers its own potential vulnerability to the legal argumentation it wants to use against the responding country. Strategy with regard to how a country sees the role of WTO rules in governing international trade policy and how those rules may be changed through trade negotiations may also be a factor.

From this perspective the timing of the US initiation of *China – Domestic Support* may seem curious, given that China already earlier in 2016 had announced a major change in its support policy for corn (USDA 2016b), with its domestic corn prices subsequently falling, and that observers of China's policies have hinted at the possibility of changes also for wheat and rice (Ministry of Agriculture 2016; USDA 2016f). The initiation of *China – Domestic Support* can, however, be seen in the context of increasing tensions in 2016 in agricultural trade between the United States and China. In particular, *China – Domestic Support* is accompanied by *China –*

Tariff Rate Quotas for Certain Agricultural Products, initiated just a few months later (WTO 2016h). In the TRQ case the United States alleges, *inter alia*, that China does not administer its TRQs for wheat, corn and rice on a transparent, predictable and fair basis and alleges deficiencies in China's administrative procedures and requirements. While pointing out that the two cases are separate, a US press release details both cases together (USTR 2016). This is not surprising, given that they concern US market access opportunities in China for the same grains.¹

Further context for the US actions on wheat, corn and rice is China's imposition or increase in September 2016 of anti-dumping and countervailing duties on imports of DDGS from the United States.² It has also been reported that two Chinese companies now have permission to export up to 2 million tonnes of corn, for the first time in ten years (Reuters 2016). Rising tensions more generally are evidenced by the request by China in December 2016 for consultations with the United States on the consistency between US law and the WTO Anti-Dumping Agreement (DS515; *United States – Measures Related to Price Comparison Methodologies*; WTO 2016f). This came immediately upon the expiration of the rules applying to China as a so-called non-market economy for 15 years after its accession to the WTO on 11 December 2001. China made a similar request for consultations with the European Union (WTO 2016g).

The timing of initiating *China – Domestic Support* may also have been influenced by political considerations in the context of the Obama administration's effort to secure congressional approval of the Trans-Pacific Partnership (TPP), or by the international trade positions articulated by candidates in the lead-up to the November 2016 US presidential election. While the establishment of a Panel was requested by the outgoing administration, it is

¹ The domestic support case concerns Indica and Japonica rice, while the TRQ case concerns short- and medium-grain rice and long-grain rice. Indica rice has long grains; Japonica rice has round grains (Calpe 2006). It is also reported that Indica rice has longer grains and Japonica rice has medium or short grains (Major differences 2016). The US Department of Agriculture reports on US production, trade and policy parameters in terms of long-grain, medium-grain and short-grain rice, sometimes combining medium-grain and short-grain (USDA 2016e).

² China's Ministry of Commerce announced anti-dumping duties of 33.8 percent on 26 September 2016 (an increase from the earlier 5 percent duty) and countervailing duties of between 10.0 and 10.7 percent on 29 September 2016 (Ministry of Commerce 2016a; 2016b; USDA 2016f). On 11 January 2017 these rates were raised to 42.2-53.7 percent and 11.2-12.0 percent, respectively (Ministry of Commerce 2017).

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not yet known how the incoming US administration will pursue the complaint on China's domestic support.

China – Domestic Support concerns the WTO Agreement on Agriculture (AA; WTO 1999a). It is noteworthy that it does not concern the WTO Agreement on Subsidies and Countervailing Duties (ASCM; WTO 1999b). Under the ASCM the United States would have to show that those subsidy measures in China that it complains about had adverse effects on the interests of the United States. Such adverse effects include injury to the US industry (production of wheat, corn and rice), nullification or impairment of the benefits accruing to the United States from China's tariffs bound in its WTO Schedule, or serious prejudice to US interests. The ASCM indicates that serious prejudice exists when subsidization exceeds 5 percent of the value of the product. The ASCM also spells out situations where serious prejudice may arise, such as displacement of imports or exports, price undercutting, price suppression, price depression, lost sales, or an increase in the subsidizing country's world market share. A complaint under the ASCM may thus require the complainant to demonstrate that certain market effects result from the subsidies. The US exported increasing quantities of corn and wheat to China from 2008 to 2013 or 2014, as well as increasing quantities of DDGS through 2015. Overall, China's total grain imports increased during 2008-2015. It may therefore prove difficult to show adverse effects strong enough to support an ASCM claim.

Rules for domestic support

A domestic support complaint under the AA does not hinge on demonstrating adverse effects. It requires the complainant to demonstrate that the respondent has exceeded a limit on certain domestic support in favour of agricultural producers. The relevant support is support that is not exempted under the rules of the AA. It is measured through a number of Aggregate Measurements of Support (AMSs). There is one AMS for each product whose producers are being supported and there is also a non-product-specific AMS. The country's legally binding Schedule of Concessions and Commitments (Part IV, Section I) shows the country's limit.³

³ See, e.g., Brink (2011) for a discussion of the WTO disciplines on domestic support.

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The Schedule of most countries, including China, shows a blank, nil or zero as the country's Bound Total AMS (32 countries have a larger-than-zero commitment level in their Schedules). This means that the country's Current Total AMS, i.e., the sum of AMSs when summed in a particular way for a given year, must not exceed zero. The summing into Current Total AMS leaves out any product-specific AMS that is no larger than its *de minimis* level, i.e., a given percentage multiplied by the product's value of production. Similarly, the non-product-specific AMS can be left out if it is no larger than a given percentage of the value of total agricultural production. The percentage is 10 and 5 for developing and developed countries, respectively.

China is a special case with a *de minimis* percentage of 8.5 percent (the same holds for Kazakhstan). China's 8.5 percentage is not specified in the AA but is taken as a commitment in the Report of the Working Party on China's accession to the WTO (WTO 2001b).⁴ The zero limit on Current Total AMS effectively means that no single AMS is allowed to exceed its *de minimis* level, which is thus a *de minimis* limit on each product's AMS and on the non-product-specific AMS in the year concerned. This is also spelled out in Article 7.2(b) of the AA.⁵ China's domestic support commitments are thus to maintain, for each year and each basic agricultural product, its AMSs at levels not exceeding 8.5 percent of the relevant values of production. Any AMS larger than its limit would need to be counted in the Current Total AMS, which according to Article 6.3 must not exceed the bound commitment level, i.e., nil for China. Article 3.2 also applies, saying that domestic support must not exceed the commitment levels specified in the Schedule. The obligation in Article 3.2 is subject to Article 6, which authorizes exemptions under Annex 2 (green box) and Article 6.5 (blue box). It also authorizes exemptions under Article 6.2 (mainly certain investment and input subsidies in developing countries). The Report of the Working Party precludes China from using the Article 6.2 exemption.

The US complaint on China's measures is one of only very few WTO disputes on domestic support in agriculture. *Korea – Various Measures on Beef* (hereafter *Korea – Beef*),

⁴ When acceding to the WTO, the commitments a country gives in the Report of the Working Party become an integral part of the WTO governing document, the WTO Agreement.

⁵ All references to articles in this note are to Articles in the AA.

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brought by the United States and Australia and concluded in 2000, clarified some issues in interpreting the AA (WTO 2000a; 2000b). Two domestic support cases initiated by Canada and Brazil against the United States in 2007 proceeded to a certain stage in the process but have essentially been inactive ever since (*United States – Agriculture Subsidies*; WTO 2007a; 2007b). The widely-known *United States – Upland Cotton* case (WTO 2009) initiated by Brazil in 2002 focussed on ASCM violations and did not concern domestic support excesses, although it did touch on some domestic support classification issues.

WTO dispute settlement and the timeline of *China – Domestic Support*

The establishment of the WTO included an Understanding on Rules and Procedures Governing the Settlement of Disputes (DSU; WTO 1999c). The DSU lays down precise rules for the stages countries can go through in settling disputes. While often thought of as litigation only, the procedures of the DSU allow countries to take steps in settling disputes without litigation, such as good offices, conciliation and mediation. If they fail, more formal steps can be initiated. The first of those steps is to request consultations. The United States submitted its request for consultations with China about domestic support on 13 September 2016, and the WTO Secretariat circulated it to members on 20 September 2016 (WTO 2016a).

While the DSU lays down specific time frames for each stage in the process, it also allows for flexibility on the length of any stage, especially if the parties mutually agree on flexibility. Consultations take place within 60 days of the responding party (in this case, China) receiving the request. Consultations on *China – Domestic Support* took place on 20 October 2016. Other countries that have a substantial trade interest in the consultations can request to participate. Australia, Canada, the European Union and Thailand requested to participate, which China accepted. The Philippines also made a request but it may have been made too late. Canada and the Philippines particularly referred to the measurement of support in their requests, while they and others also referred to their substantial trade in wheat, corn or rice.

The consultations did not settle the dispute. On 5 December 2016 the United States asked the WTO's Dispute Settlement Body (DSB) to establish a Panel (WTO 2016c). In the DSB meeting of 16 December, China said it could not accept such a request. The DSB therefore

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deferred the establishment of a Panel. The United States requested a second time that a Panel be established, and a Panel was established under DSU rules at the DSB meeting on 25 January 2017.

When a Panel has been established, the next step is to compose it, i.e., select or appoint panelists under the rules of the DSU, including its timelines. Once the Panel starts meeting with the parties they can submit their arguments in writing. Any country that has a substantial interest in the matter before the Panel as a third party can provide written submissions. This allows countries other than the United States and China to express their points of view to the Panel regarding the legal arguments raised.

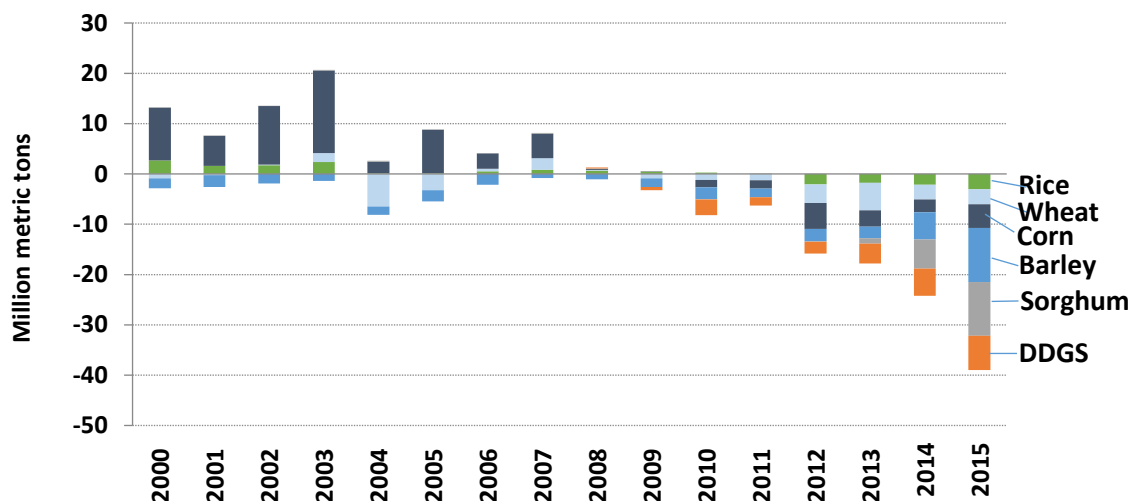
A Panel issues its report, where it can recommend that measures that violate a WTO agreement be made to conform to WTO rules. The report becomes the ruling or recommendation of the DSB. Either side can appeal a Panel's findings and sometimes both sides do so. Appeals must be based on points of law such as legal interpretation – they cannot re-examine existing evidence or examine new issues. An appeal finding by the Appellate Body (AB) can uphold, modify or reverse the Panel's legal findings and conclusions. The WTO Secretariat shows a target timeline for settling disputes that totals one year without appeal and one year and three months with an appeal, but often dispute cases extend longer.

While economic analysis has not usually played a major role in the settlement of disputes, there are examples where it has done so (such as *United States – Upland Cotton*) and some observers have the impression that the role of economic analysis is growing. The Panel process allows for expert input: if one side raises scientific or other technical matters, the Panel may consult experts or appoint an expert review group to prepare an advisory report.

China's grain crops: Trade, production, support, stocks, and trade policies

For most years from 2000 to 2007 China was a net exporter of grains, primarily corn (Figure 1). From 2008 through 2015 China's net imports of grains increased steadily and rapidly. From 2012 to 2015, the years covered by *China – Domestic Support*, China's net imports of the aggregate of wheat, corn and rice did not increase and they actually fell in 2013 and 2014. On the other hand, net imports of barley, sorghum and DDGS increased substantially.

Figure 1. China's net trade in grains, 2000-2015



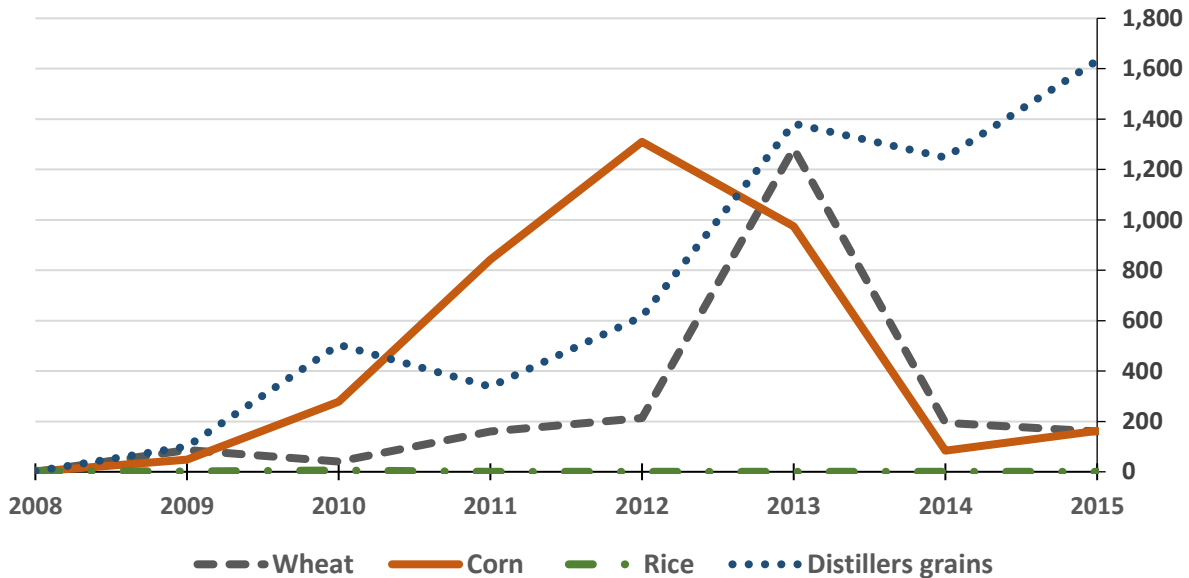
Source: Gale et al. (2015) (kindly updated by Gale in 2016).

Note: Negative quantity is imports.

The swiftly growing role of China as a destination for US exports of grains and DDGS from 2009 is clear from Figure 2. While the United States exports only small quantities of rice to China, exports of wheat, corn and DDGS increased from 2008 to 2012. However, starting in 2013 and 2014, respectively, there are sharp declines in US exports to China of corn and wheat. US exports of DDGS also experienced a drop in 2014 but increased again in 2015. The trading pattern in grains between the United States and China thus continues to undergo major changes and even reversals.

Policy-induced increases in China's production are part of the causes for the changes in grain trade. China's growing net grain imports in the 2008-2015 period have accompanied increasing domestic production, not substituted for it. For wheat, corn and rice, quantities of production increased by 16 percent, 35 percent and 8 percent, respectively, from 2008 to 2015, while the values of production increased by 67 percent, 105 percent and 63 percent, respectively (OECD 2016a). The increased output fits China's high-level policy framework for food security through 95 percent self-reliance or self-sufficiency in wheat and rice and complementing domestic production with imports from international sources (Gale et al. 2015; OECD 2016b).

Figure 2. US grain exports to China, 2008-2015 (USD million)



Source: USDA (2016d).

In managing and adjusting to the changes in trade and production, both the United States and China have resorted to various trade and domestic support policy actions. In China, rising market price support as well as increased input subsidies and other support measures have been policy components since farm commodity prices and input costs increased worldwide after 2007. Grain support prices are set by the National Development and Reform Commission (NDRC).⁶ Support prices, the administered prices at the center of the domestic support dispute, were raised for wheat by 58 percent between 2008 and 2015 (from 1,490 to 2,360 RMB/tonne), for corn by 50 percent (from 1,500 to 2,250 RMB/tonne), and for rice by 80 percent (weighted average for Indica and Japonica; from 1,573 to 2,834 RMB/tonne) (USDA 2015a; see data sources in Annex A).

The rising administered prices have been associated with increased procurement and growing Chinese stocks of the supported grains. As assessed by USDA (2016c), China's stocks of

⁶ China's support prices under different programs carry different labels in different reports and studies, both in China and elsewhere through different translations. They include support price, minimum support price, purchase price, procurement price, floor price, protective price, protected price, minimum price, minimum purchase price, minimum guaranteed price, and state-set price. This note generally refers to these as support prices and interprets a support price as an administered price, an AA term.

wheat that had averaged 53.8 million tonnes during crop years 2008/9-2010/11 rose to an average of 73.1 million tonnes during 2012/13-2015/16, reaching 97.0 million tonnes at the end of 2015/16. Similarly, corn stocks averaged 52.8 million tonnes during 2008/9-2010/11, then averaged 90.0 million tonnes during 2012/13-2015/16, reaching 110.7 million tonnes at the end of 2015/16. For rice (milled), stocks averaged 41.7 million tonnes during 2008/9-2010/11, rose to an average of 56.0 million tonnes during 2012/13-2015/16, reaching 63.7 million tonnes at the end of 2015/16.⁷

China's government grain procurement and storage programs with administered prices for wheat, corn and rice have operated in a context of TRQs for total imports, from all source countries, that range between 4 and 9 percent of domestic consumption. Most of the TRQs are reserved for state-designated (state-trading) enterprises: 90, 60, and 50 percent for wheat, corn and rice, respectively (WTO 2016d). The United States reports that fill rates were low in earlier years and considers the over-quota tariff rates of 65 percent as prohibitive (USITC 2011). In the 2012-2015 period, China's imports correspond to fill rates for wheat and corn in some years well above 50 percent but mostly below (USTR 2016). Fill rates for short- and medium-grain rice do not seem to reach even 40 percent in any of those years, while long-grain rice fill rates are much higher. No TRQ for wheat, corn or rice appears to have been fully filled in any of the 2012-2015 years, despite the increasing support prices in China.

The rising administered prices in China have contributed to the expanded imports of other grains, as shown in Figure 1. Tariffs for grains such as sorghum, barley and DDGS, as well

⁷ The authors did not find consistent data series for procurements associated with these stock accumulations and Gale (personal communication) indicates consistent procurement series are not readily available for recent years. USDA (2016b) indicates that Sinograin reportedly purchased 20.8 million tonnes of the 2015 wheat crop (p. 5) and 32 million tonnes of rice (p. 9). Gale (2015) cites Chinese authorities reporting purchases of 124 million tonnes in 2014 (p. 3). Gale et al. (2015) report that authorities in China purchased 70 million tonnes of corn in 2013/14, then during 2014 sought to release up to 63 million tonnes from stocks (p. 18), while during 2013 grain procurement was over 82 million tonnes (p. 22). DTB Associates (2014) reports that at least 61 million tonnes of corn were procured in 2013/14, about 28 percent of production, compared to 30 million tonnes (14 percent of production) in 2012/13 (p. 15). Gale (2013) reports that "authorities purchase large volumes of wheat at minimum prices in most years" but none in 2011 (p. 17) and shows grain purchased for government reserves with loans from the Agricultural Development Bank of China exceeding 20 percent in all years from 2001 through 2012 (p. 20). However, Gale (2013) also reports that wheat market price support in 2012, through procurement of 23.3 million tonnes, was estimated to be about 3 percent of the value of wheat production, and that data on support purchases for 2012 were not available for rice and corn but news reports indicated small volumes (p. 26-27). For 2008/09, he reports procurement of about one-third of wheat, 18 percent of corn, and 8 percent of rice (p. 28).

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as soybeans, are low, in the 3-5 percent range. These commodities do not receive price support nor are they subject to TRQs. They are therefore protected neither by high over-quota tariffs nor the potential for any import restricting effects of particular TRQ administration practices. Trading partners nevertheless are concerned about China's sanitary and phytosanitary (SPS) requirements and other issues affecting trade of these and other grains (Gale 2015; Gale et al. 2015). The increase in China's DDGS imports, combined with large Chinese domestic stocks of corn and other agricultural commodities, was context for China's investigation and then increase of anti-dumping and imposition of countervailing duties on DDGS imports from the United States in September 2016, which is an ongoing US concern.

Concerns about levels of China's support

The rising levels of support for agricultural production in China have been a concern to US interests for several years. For example, in 2009 the US government noted the significant transition from taxing the rural sector to providing subsidies (USDA 2009). The report identified direct payments, price supports, subsidized credit, and preferential tax policies as instruments supporting agriculture, including livestock, grains, oilseeds, and other commodities. Various other reports from the US government have examined support to agriculture in China, such as USDA (2010). Other studies have analyzed, for example, China's value-added tax system for agricultural products, with particular focus on the implications for trade (DTB et al. 2009).

The particular concern about agricultural support in China having grown large enough to threaten violations of China's commitments in the WTO has been explored by, for example, Gale (2013). He noted the potential for support to exceed the relevant ceilings. Calculations by DTB Associates (2014) demonstrated large excesses for wheat, corn and rice under certain assumptions. Organizations such as the US Grains Council, US Wheat Associates, and the National Association of Wheat Growers have voiced concerns about support levels in China, based in some cases on the analysis of Carriquiry et al. (2016 and earlier versions).⁸ Cheng (2011) assessed the potential of China violating its AMS limits under several assumptions about

⁸ Carriquiry et al. (2016) estimate effects on US production, trade and farm price of wheat if China's support for wheat was removed. While they could be evidence in an ASCM case, such estimates do not play a role in determining whether the support exceeds China's WTO limits under the AA.

the level of minimum purchase prices and procured quantities. He saw little risk of violations for wheat, corn and rice through 2016 if increases in minimum purchase prices were only moderate, but projects that support could exceed the *de minimis* limits for wheat and corn during 2013-2016 if increases in administered prices were large.

The US complaint over China's domestic support

The US complaint cites as a concern all support China provides in favour of agricultural producers (WTO 2016a).⁹ The United States claims, more specifically, that China provided domestic support in excess of its nil commitment level for Current Total AMS because China provided domestic support in excess of the *de minimis* levels for each of wheat, corn, Indica rice and Japonica rice, in particular market price support at the announced support prices at which the government will purchase these grains in major producing provinces during the harvest season (USDA 2016a). The United States refers to these product-specific excesses as examples, leaving open the possibility of claiming excesses also for other products.

The US government expresses the view that it aims to help reduce market distortions for wheat, corn and rice (USDA 2016a). The US complaint does not seem to concern issues of support being or not being exemptible under the rules of the AA. In other words, it does not seem to involve classification of policies as meeting or not meeting the criteria of the green box or blue box. The concern instead involves questions of the correct measurement of support under policies that China does not claim as exempt.

As is required for dispute settlement, the request by the United States for consultations identifies the measures ("legal instruments") through which it claims China provides domestic support (WTO 2016a). They number 33. They include several of the yearly so-called Number 1 documents, issued by the Communist Party of China and the State Council to outline the evolving policy priorities in agriculture, and a large number of notices by government agencies

⁹ The wording allows a reading that includes China's border measures as well as its variety of domestic policy instruments affecting the grains sector more or less directly. China's domestic support policies include, *inter alia*, support prices, procurement, stock accumulation and drawdowns, direct payments, and input subsidies (OECD 2016b; WTO 2016d).

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concerning support prices for wheat, corn and rice. The subsequent request for the establishment of a Panel lists 46 measures (WTO 2016c).

China has said, with regard to the US claim, that it exercised its legitimate right to support its agricultural producers as the fast growth of China's economy required and as provided by WTO rules (WTO 2016e). China said it always respected WTO rules and stood ready to defend its rights. China's still outstanding notifications for the years 2012-2015 are not likely to show any excesses – China is likely to assert that its interpretation of the AA justifies its notified classification of policies and measurement of support below its AMS limits.

To claim excessive support the United States therefore needs to prepare its own calculations, in line with its own interpretation of the AA.¹⁰ The United States claims in its request for consultations (WTO 2016a) that China's domestic support in every year in the 2012-2015 period exceeded the respective WTO commitments for wheat, corn, Indica rice and Japonica rice. While not providing its calculations, the United States alleges in a related news release (USDA 2016a) that the total amount of excess market price support China provided in 2015 for wheat, corn and rice, above its WTO limits, amounted to nearly USD 100 billion. The limits apply individually to each one of the three grains (four when treating Indica and Japonica separately). Summing them gives a sum of limits in 2015 on the order of USD 19 billion (authors' estimate based on values of production reported by OECD (2016a)). Thus the United States is asserting that China provided market price support for wheat, corn and rice totalling almost USD 120 billion in 2015.

Discussion of China's market price support in the WTO Committee on Agriculture

The United States has been particularly active in the WTO Committee on Agriculture posing questions to China on its market price support calculations, but other members, such as Australia, Canada, the European Union and Japan, have also questioned China's notified information on market price support for grains and the absence of notifications for any year after 2010 (WTO 2016i). The questions have focused on four major issues.

¹⁰ Since the US calculations may use the format of the yearly notifications, the US submission on this point might be seen as the model for a counter-notification under Article 18.7. However, any US submission in the dispute under the rules of the DSU is not a notification to the Committee on Agriculture.

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Under the AA market price support is measured by multiplying a price gap – specifically the gap between the current year applied administered price and a fixed external reference price (FERP) – by the quantity of production eligible to receive the applied administered price. This quantity is often referred to as eligible production in line with the vocabulary of the notification formats of the Committee on Agriculture. One of the issues raised in the Committee has been China’s use of only a minor share of total production, or nil, as the production eligible to receive the applied administered price. For eligible production of wheat and rice in its 2009 and 2010 notifications, China uses only the quantity apparently procured by the State Administration of Grains under its Minimum Procurement Price Scheme (MPPS), which obliges the state-owned China Grain Reserves Corporation (Sinograin) to make intervention purchases if the market price falls below the established support level.¹¹ China has explained that eligible production consists of quantities purchased at administered prices and that such purchases are limited to certain months and certain regions, which makes eligible production less than total production.

A second issue concerns whether there is any limit on the quantity of production that may be procured in a given year, regardless of what actual procurement turns out to be. China has argued that, because procurements are limited to certain months and certain regions and, importantly, that significant amounts of grains are used on-farm, procurements are effectively subject to limits. Moreover, China has explained that some of the grain offered for sale to the government does not meet its quality standards and is therefore not fit to be purchased at the administered price, which also reduces the possible maximum eligible production.

A third issue raised in the Committee on Agriculture concerns China’s calculation in its annual domestic support notifications of a price gap for rice using an administered price of unmilled rice (i.e., an unprocessed product) and an external reference price of milled rice (i.e., a value-added product). Regarding the notifications for 2005-2010, the United States asked China

¹¹ China notified procurement of wheat of about 40 and 23 million tonnes for 2009 and 2010, respectively (WTO 2015a). Total annual production of wheat was around 115 million tonnes. China notified procurement of rice (unmilled) of 8 million tonnes in 2009 and none in 2010, with annual production of the order of 195 million tonnes. For corn, China notified no market price support for 2009 and 2010.

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to revise its calculation to make the administered price comparable to the reference price. Converting the administered price from unmilled to milled rice with a coefficient of, say, 0.68 (conversion rates of 0.65 to 0.70 are common in the industry) would raise it by 47 percent and make the price gap used to calculate market price support much larger. China responded that it is not possible to use a single conversion coefficient because of the great variety of rice and the absence of a fixed relationship between unmilled and milled quantities. China also said only milled rice was supported in 2007 and 2008 and the calculation method is on a comparable basis.

A fourth issue is the absence of domestic support notifications by China to the Committee on Agriculture for years after 2010. China is not alone in being so many years behind in its notification record, but the absence gains prominence in a situation where support has been raised over a number of recent years, as in the case of China. Many countries have expressed great frustration about the lack of up-to-date WTO domestic support information from the world's major agricultural producers and traders.

China's grain price support programs

The measures cited in the US requests for consultations and a Panel mainly concern China's grain procurement at minimum support prices. The NDRC has set support prices under the MPPS for wheat (since 2006) and rice (since 2004) (Gale 2013). It is not clear whether or how any limits are set on the quantities procured at these prices, other than China's explanations in the Committee on Agriculture that several considerations effectively impose limits.

The Temporary Reserve Program (TRP) for corn, implemented since 2008, operates differently from the procurement of wheat and rice under the MPPS. Reviewing the history of these support programs, Carter et al. (2012) indicate the procurement program for wheat was designed to operate in six provinces and for rice in 13 provinces, while the TRP was designed mainly to procure corn in the northeast. They consider that the wheat and rice program has been institutionalized more strongly in terms of the stability of coverage, while the TRP sees quantities procured and area covered varying from year to year. Such changes, more prevalent

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for the TRP, are sometimes announced after farmers have sold their crop, making it hard to estimate the support actually received by farmers (Carter et al. 2012). Likewise, OECD (2016b) distinguishes between the MPPS for wheat and rice and “ad hoc interventions at pre-determined prices” for corn. The TRP support prices applied in certain provinces in 2012-2015. However China stated in March 2016 that this program will be replaced by a new mechanism of so-called “marketized” purchases (USDA 2016b; 2016f).

Differences between MPPS and TRP both in their legal provisions and in their operation could have consequences for what China considers to be the correct calculation of market price support during 2012-2015. China may, for example, see some of Sinograin’s procurement of wheat and rice as being eligible for an applied administered price such that support is provided in favour of agricultural producers in terms of the AA, but the possibly less direct and less certain purchases of corn as not subject to WTO support limits.

A related question concerns the distinction between an administered price and an applied administered price. China has stated that the purchase of grain reserves is carried out by appointed enterprises at market prices or at the minimum procurement prices set by the government (WTO 2016d). Market prices above the administered price could be offered as a rationale that no grain was procured at an applied administered price – an argument China has made in the Committee on Agriculture and in some of its early support notifications. Alternatively, if the NDRC announces a support price but producers sell to traders at a lower price, it may be possible to argue that the announced, or administered, price is not applied.¹² This would go counter to an argument that such marketing intermediation nevertheless maintains prices for producers at the administered price level. The calculations presented below suggest that the United States is claiming not only that total production of wheat, corn and rice was eligible for procurement at announced administered prices during 2012-2015 but also that the announced support prices are applied administered prices.

¹² Carter et al. (2012) and Gale (2013) report that many producers often receive less than the minimum procurement price. Gale (2013) and Deuss (2015) refer to a study by Xu et al. (2010) that reports that farmers, instead of selling at the minimum price to Sinograin, prefer to sell corn below the minimum price to traders so as to avoid the cost and inconvenience of transporting and marketing the grain. The traders may then sell the corn to appointed enterprises at the minimum price.

Key definitional issues in the dispute *China – Domestic Support*

As the *China – Domestic Support* case proceeds, with the Panel having been established, once it is also composed the United States and China will detail their arguments in their submissions to the Panel. Supporting material will be submitted as exhibits in the submissions and third party submissions may also be made. Unless any of the parties, contrary to usual practice, makes its submissions public during the process, their contents may become known in public only when the Panel issues its report. Without access to the submissions lodged by the United States, China and other parties, it is only possible to conjecture what arguments they may raise and how the Panel may assess them. The following discussion is therefore the assessment of outside observers of the situation. Once and if the submissions and Panel findings are public, it will be possible to gauge to what extent this discussion covers the relevant points and what is shown to be missing.

“Taking into account” or “in accordance with”

An important element in interpreting the AA is “the constituent data and methodology incorporated by reference in Part IV of the Member’s Schedule”, mentioned in Article 1(a)(ii). The constituent data and methodology in China’s case are in the document of 1996-98 base data for its WTO accession (WTO 2001; hereafter CHN/38/R3). China’s WTO Schedule refers to it in Part IV, Section I, i.e., the Schedule incorporates it.

One argument that may come to the fore in this case is the meaning of the words “taking into account”. Article 1(a)(ii) of the AA stipulates that a Current AMS be calculated “taking into account the constituent data and methodology”. In other words, the calculation of a Current AMS must take into account how it was done in the supporting tables for 1996-98 in CHN/38/R3. Article 1(a)(ii) also requires a Current AMS to be “calculated in accordance with the provisions of Annex 3” of the AA.

In *Korea – Beef* the AB explained that taking into account is defined as “taking into consideration, noticing” (WTO 2000b). The constituent data and methodology in the Schedule must be considered. The AB contrasted this meaning against the phrase “in accordance with the provisions of Annex 3”, i.e., in conformity with those provisions. The AB stated that “in

accordance with” reflects a more rigorous standard than “taking into account”. While in *Korea – Beef* the AB did not need to apply these two standards in a hierarchical fashion (there was no constituent data and methodology to take into account), the AB’s hierarchy may still be valid.

Eligible production and applied administered prices

Annex 3 of the AA requires that the determined price gap be “multiplied by the quantity of production eligible to receive the applied administered price” to calculate market price support. CHN/38/R3 states that “Eligible Production for State Procurement Price refers to the amount purchased by state-owned enterprises from farmers at state procurement price for the food security purpose”. The quantity of wheat and rice procured at support prices under the grain programs as they have evolved since 1996-98 is often only a minor share of total production. Thus, China has calculated no or only a modest amount of positive market price support for a given price difference in its annual notifications.¹³ China may also argue, as it has in the Committee on Agriculture, that procurement takes place only in designated regions and only for part of the year, and that significant grain production is consumed on-farm and not marketed, each of which reduces the quantity potentially procured at the support price. For corn, as discussed above, China may argue as well that certain purchases are no longer made “by state-owned enterprises from farmers at state procurement price” as described in CHN/38/R3. This could result in China asserting that there was no eligible production, or no application of the administered price, or both.

The United States, on the other hand, might invoke the AB’s hierarchy and argue that conforming with Annex 3 (“in accordance with”) overrides what was done in the constituent data and methodology (“taking into account”) with respect to the determination of eligible production. The United States may argue that, in the absence of a pre-announced limit on the quantity to be bought, all production is eligible to receive the applied administered price. In other words, total production, in the country or in selected provinces, whether bought or not, whether consumed on-farm or not, would be the appropriate quantity in the market price

¹³ China has provided notifications for its years as a member from 2002 to 2010. Stating it was “for transparency purposes”, in 2006 China also provided a notification for three years prior to its membership (1999-2001) (WTO 2006). For most of the years 1999-2010 China has calculated negative price gaps for wheat and rice. For years when corn calculations are made, some corn price gaps are also negative.

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support calculation, and that the administered prices for wheat, corn and rice apply to these production quantities.

In *Korea – Beef* the Panel examined the views of Korea and the complainants, the United States and Australia, regarding "production eligible to receive the applied administered price" (WTO 2000a). Korea had announced a specific quantity that it would purchase. Korea argued that the eligible production should be the smaller quantity actually procured by the government. The United States and Australia argued that all production or at least the announced quantity eligible for procurement was the appropriate measurement. The Panel seemed to side with the complainants when it considered that "... eligible production ... should comprise the total marketable production of all producers which is eligible to benefit from the market price support, even though the proportion of production which is actually purchased by a governmental agency may be relatively small or even nil" (WTO 2000a, paragraph 827). However, the Panel qualified this by saying that eligible production could be less than total marketable production if the price support was only available in certain disadvantaged regions or if there was "a legislatively predetermined, non-discretionary, limitation on the quantity of marketable production that a governmental agency could take off the market". The latter seems to have applied in Korea's case.

The AB agreed with the Panel's view that the phrase eligible production has a different meaning than "production *actually purchased*" (emphasis in original) (WTO 2000b, paragraph 120). The AB held that "production eligible" refers to production that is "fit or entitled" to be purchased rather than production that was actually purchased. The AB also stated that "a government is able to define and to limit 'eligible' production. Production actually purchased may often be less than eligible production." The AB explained that, since Korea had declared the quantity it would purchase, this was the quantity of "eligible production", even though Korea actually purchased a lesser quantity. The AB did not conclude, however, that eligible production should equal total production.

The implication of *Korea – Beef* for the *China – Domestic Support* case seems to be this: if China has declared the quantity it would procure, this would be the quantity of "eligible production" even if a lesser quantity is actually procured. This does not, however, clarify a

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situation where the quantity to be procured has not been declared, and the government finds itself at the end of the year having procured altogether this or that much. China might argue something along the lines that each one of its actual procurement activities reveals how much it is willing to procure at the support price and altogether these actual purchases add up to the "production eligible to receive the applied administered price".

Since China has stressed in the Committee that a significant share of total grain production is consumed by households on-farm and not marketed, it may argue that farmers will not even consider selling part of their grain at the support price. This would make eligible production less than total production. The *Korea – Beef* Panel introduced the concept of “total marketable production” – a possible opening for this argument.

Comparability of administered prices and the external reference price for rice

China’s notifications use a FERP for rice calculated from the 1996-98 external reference prices in CHN/38/R3. This is a price of milled rice. China’s support prices are prices for unmilled rice (it is unclear how to interpret China’s statement in the Committee on Agriculture that support in 2007 and 2008 was provided for milled rice). Comparability would seem to be achieved by expressing the administered price in the price gap on a milled rice basis, as the United States has requested China to do in the Committee on Agriculture. While a conversion would be carried out by means of a technical conversion coefficient, it is unclear to what extent any intermediary costs between unmilled and milled rice would or should enter the calculation.

The US request that China convert its administered prices for unmilled rice into their equivalent for milled rice may rest on the observation that China’s constituent data and methodology in CHN/38/R3 appears to use administered prices on a milled basis. Although CHN/38/R3 is not explicit on this issue, some simple price comparisons lend support to the hypothesis that China used administered prices on a milled rice basis for the 1996-98 constituent data and methodology but has used administered prices on an unmilled rice basis in its support notifications from 1999 to 2010.¹⁴

¹⁴ We are indebted to Fred Gale (2017) for drawing our attention to this issue. For each year in the 1996-98 period China’s accession document CHN/38/R3 (WTO 2001a) shows different support prices for Indica and Japonica rice,

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Market price support is calculated from three components: administered price, FERP and eligible production. When the administered price and the FERP are expressed on the same basis the production quantity by which the price gap is multiplied must of course be expressed correspondingly (it is hard to conceive of a rationale for expressing the price gap and the quantity on different bases). It is unclear from CHN/38/R3 whether the eligible production is expressed on a milled rice basis, as seems the case for the price gap. If China were to adjust its administered prices as requested by the United States, the use of the corresponding quantity of milled rice would need to be confirmed. Not expressing all three components on the same basis can make a large difference in the calculated market price support. In the calculations of market price support presented below, expressing the administered price on the same basis as the FERP makes the difference between finding that support for rice from 2012-2015 has or has not been excessive.

If the hypothesis that CHN/38/R3 for 1996-98 uses administered prices on a milled rice basis is valid, the United States may use the “taking into account the constituent data and methodology” provision of Article 1(a)(ii) to argue that correctly calculating price gaps for rice in 2012-2015 requires using administered prices converted from unmilled to milled rice. This may also be in line with the Article 1(a)(ii) requirement that AMSs be “calculated in accordance with the provisions of Annex 3”, which does not rule out adjusting the administered price. China might argue, in line with the AB finding in *Korea – Beef*, that the requirement to calculate support “in accordance with the provisions of Annex 3” overrides the “taking into account the constituent data and methodology”. On this basis China might invoke the need for support to

which are also differentiated by two support programs in 1997 and 1998. The weighted average support prices under the “protective price” program (weights 2:1 for Indica and Japonica as in China’s notifications for later years) in 1997 and 1998 were 1,914 and 1,794 RMB/tonne, respectively. USDA (1999) reports protected prices (most likely unmilled) in 1997 and 1998 of 1,424 and 1,238 RMB/tonne, respectively. These are only 74 and 69 percent of the weighted support prices from CHN/38/R3. China’s calculations for 1999 (WTO 2006) show a protective price (weighted Indica and Japonica 2:1) of 1,152 RMB/tonne. This is only 64 percent of the 1998 weighted average of 1,794 RMB/tonne. The authors have not found references to such a large drop in the protective price from 1998 to 1999. Moreover, for 1996-98 the weighted average support prices are nearly 96 percent of one available series (OECD 2016a) of producer prices on a milled rice basis. However, for 1999-2010 the notified support prices are on average only 64 percent of this series of producer prices. Taken together, and allowing for imprecision in the methods, these observations suggest that China reported support prices on a milled rice basis in 1996-98 but on an unmilled rice basis in later years.

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be calculated “as close as possible to the point of first sale of the basic agricultural product” (Annex 3, paragraph 7) and argue that the administered price must be a price for unmilled rice.

If, on the other hand, China’s administered prices in CHN/38/R3 are on an unmilled basis, or if China prevails on the argument that administered prices must be on an unmilled basis in calculating its market price support, a quest for comparability might contemplate adjusting the FERP to its unmilled equivalent. Annex 3 (paragraph 9) seems to allow such an adjustment “for quality differences as necessary”. This is not an Annex 3 requirement, only a possibility. The “as necessary” words may hint at an adjustment being needed if, for example, the price observations relate to different qualities, such as milled and unmilled. However, since the FERP is incorporated by reference in China’s Schedule, it might take unusual legal steps to formally change it. The possibility of making such an adjustment in less formal ways cannot be ruled out. If the FERP and the administered price were both to be on an unmilled basis, it would need to be confirmed that the eligible production is also a quantity of unmilled rice.

Other issues related to price comparisons

In examining administered prices and reference prices, the issue of inflation is possibly relevant. The AA mandates the Committee on Agriculture to give due consideration to the influence of excessive rates of inflation on a country’s ability to meet its commitments (Article 18.4). China has not referred to this clause in the Committee. A dispute settlement Panel operates independently of the review process in the Committee on Agriculture. Whether and to what extent a Panel would see it appropriate to consider inflation or excessive inflation when examining an alleged domestic support violation would depend on whether and how the parties choose to approach the issue in the dispute proceedings.

If a literal reading of Annex 3 were to carry the day, China’s use of 1996-98 reference prices for its constituent data and methodology also might be questioned. The rules for choosing the base period for the constituent data and methodology in accessions to the WTO, such as China’s, have not been formalized but are only the result of convention in the accession processes. The WTO Secretariat advises acceding countries that the required price information is “normally for each of the last three years” (WTO 1996). In accession negotiations that extend

over many years, a rolling series of three-year periods has often been used, with data for the latest one being referred to in the Schedule. However, Annex 3 mentions only 1986-88 as the years on which to base the FERP. This literal reading would thus require using 1986-88 export or import unit values.

While such a finding would have major consequences not just for China but for many of the 35 other countries that have acceded, the probability of the United States raising it should not be overstated. Many countries have calculated current market price support levels in their notifications using the base periods in their accession documentation, even if different from 1986-88 (only one acceding country has based its accession domestic support data on 1986-88). WTO members have not questioned this practice, which could be seen as a tacit acceptance.

Decisions in Bali and later on price support and stock acquisition in developing countries

In its notifications to the Committee on Agriculture, China has from 1996-98 to 2010 followed many countries' practice of exempting expenditures under the green box paragraph "Public stockholding for food security purposes" (paragraph 3, Annex 2), while also reporting market price support as part of its AMSs in line with its reading of Annex 3. The distinction between expenditures and price-gap support is crucial in this respect. In the ongoing negotiations on Doha issues some members proposed that developing countries in certain circumstances be allowed to avoid reporting market price support as part of AMSs in spite of using administered prices for the acquisition of foodstuffs.¹⁵ As a result, Ministers and the WTO General Council took a series of decisions in 2013, 2014 and 2015 under the heading "public stockholding for food security purposes", relating not to stockholding but to stock acquisition in developing countries (WTO 2013; 2014; 2015b).

The 2013 decision in Bali put in place an interim mechanism under which, provided that given conditions are met, WTO members shall not challenge a developing country member's compliance with its AMS commitments in relation to the support it provides for certain food

¹⁵ A 2012 proposal by a group that includes China suggested adding the following sentence to footnote 5 of the AA: "However, acquisition of stocks of foodstuffs by developing country Members with the objective of supporting low-income or resource-poor producers shall not be required to be accounted for in the AMS" (WTO 2012). It was also proposed that there would be no requirement to account in the AMS for the difference between the acquisition price and the external reference price. Diaz-Bonilla (2014) discusses the subsequent decisions.

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crops using administered prices under programs existing as of the date of the Bali decision. Since such immunity against challenge under the WTO dispute settlement rules essentially allows a member to provide unlimited market price support for important crops without fear of legal challenge, it is surrounded by conditions regarding notification and transparency, an anti-circumvention clause and safeguards (such as not distorting trade or adversely affecting the food security of other members), consultations, and monitoring. The 2014 decision confirmed that this interim mechanism would remain in place until a permanent solution is agreed and adopted and the 2015 decision confirmed the rules. The decisions do not, however, promise conditional immunity against challenges under the ASCM, and Ministerial decisions carry lower legal authority than WTO agreements and schedules.

The United States challenges excessive support in China in 2012-2015, i.e., a period that includes years following the 2013 Ministerial decision. The US request for consultations does not mention the 2013 and subsequent decisions. China has not submitted notifications for the years in question, so it is unknown whether China would attempt to invoke the 2013 and subsequent decisions to fend off the US legal challenge. China has not, as far as is known, taken steps to meet the conditions attached to the decisions, such as notifying the Committee on Agriculture that it is exceeding or at risk of exceeding its AMS limits, providing annual notifications to the Committee, or providing additional and statistical information as specified in the 2013 decision. It is not clear to what extent China has ensured that the stocks it has procured do not distort trade. Other members are not known to have requested consultations on the operation of the programs as outlined in the 2013 decision. The US challenge is thus launched independently of the contents of the 2013 and subsequent decisions and any future steps China might take under those decisions.

A key issue that may arise in looking at the US challenge in the context of the Ministerial and General Council decisions is that they provide the immunity against challenge only to developing countries. The WTO does not identify members as developing countries or not. China's commitments in domestic support in agriculture differ from the standard developing country commitments: its *de minimis* percentage is 8.5 percent, not 10 percent, and it is precluded from exempting certain subsidies under Article 6.2. If China were to seek immunity

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against the US challenge under the 2013 and subsequent decisions, the United States could argue that China is not a developing country for the purpose of those decisions. However, this would amount to a major change in the US stance in the WTO, given its past practice of not raising China's status as an issue. When acceding to the WTO, China claimed developing country status, which WTO members did not counter other than by taking what was called a "pragmatic approach" (WTO 2001b).

Summary of the definitional issues

Establishing what is the "quantity of production eligible to receive the applied administered price" may be a critical task of a Panel in *China – Domestic Support*. The decision may depend on, and would clarify, the combined interpretation of the provisions on "taking into account the constituent data and methodology" and "in accordance with the provisions of Annex 3" as set out in Article 1(a)(ii) of the AA and the hierarchy between them. Eligible production can be as large as total production, possibly to be contended by the United States, or a much smaller or nil quantity as used by China in its constituent data and methodology from 1996-98 and its notifications through 2010. The outcome of this decision will make a large difference in the calculation of market price support for all three grains, wheat, corn and rice. Clarifying the circumstances under which an administered price is an applied administered price may be a second key task. A third, but less likely, task may concern the proper base period for FERPs for countries that have acceded to the WTO after 1995.

Whether to adjust the administered price of rice from unmilled to milled, as the United States may argue is the correct thing to do, or not to adjust it, which has been China's practice, would have implications only for rice, not for wheat and corn. The outcome would matter for understanding the roles of "taking into account the constituent data and methodology" and determining the "applied administered price" and the "quantity of production eligible to receive" that price when measuring market price support. This could clarify whether administered price, FERP and eligible quantity have to be evaluated on the same basis, either milled or unmilled, in these calculations. The outcome might also clarify the applicability of the "may be adjusted for quality differences as necessary" provision of Annex 3 with regard to the fixed reference price, which could have important implications.

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These decisions would be of great importance to the measurement of market price support not only in China but also in many other countries – the measured market price support could be much larger than currently measured by many countries. This would have implications for the kinds of policies countries choose to use while staying within the limits of the AA, subject to the decisions eventually agreed and adopted by WTO members about market price support and food stock acquisition in developing countries.

Finally, the issues on which the findings of a Panel may shed light culminate at the level of overall interpretation of the AA. It may be significant in this regard that the definition of terms in Article 1, most of which relate to domestic support, is not absolute (WTO 1999a). The phrase “unless the context otherwise requires” included in the first line of Article 1’s definition of terms might be interpreted to lean more towards flexibility than literalness in understanding how the provisions of the AA apply. In this regard there appears to be a role for developing up to date information on key aspects of China’s grain policies and their implementation as well as on the structure and conduct of the grain sector, in order to correctly interpret such AA concepts as basic agricultural product, point of first sale, value of production, the application of administered prices, and the quantities of production eligible to receive these prices.

A calculation of China’s market price support levels

This section calculates market price support (hereafter in this section MPS) for wheat, corn and rice in China in the contested years 2012-2015 under one interpretation of the WTO rules in Annex 3 of the AA. It compares these levels to the corresponding limits on AMSs, along lines similar to what the United States might do to motivate and argue its case against China in the WTO. For perspective, corresponding MPS calculations are also provided for the four preceding years 2008-2011. This is followed by a comparison of the calculated MPS (referred to as a WTO MPS) to an economic measurement of MPS as computed by the OECD (2016a) in its Producer Support Estimates for these eight years. Box 1 provides a conceptual overview of the two MPS measurements. The results for these measurements are shown in Table 1.

The calculations of WTO MPSs for China’s wheat, corn and rice during 2008-2015 presented herein presume that the total production of each grain constitutes eligible

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production, as the US may argue, rather than any smaller or nil quantities that China may see as eligible production. The calculations also assume that China's administered prices are applied administered prices for this eligible production. A single combined support is calculated for Indica rice and Japonica rice based on the fixed weights used in China's annual notifications. Two sets of WTO MPS calculations are presented for rice. In the first calculations, China's administered prices are adjusted to a milled basis by dividing those prices for unmilled rice by a conversion coefficient (in these calculations 0.68), similar to what appears to have been done in the constituent data and methodology for 1996-98.¹⁶ In the second calculations, the administered prices for unmilled rice are retained. These administered prices and the FERP are therefore not on a comparable basis, as seems to be the case in China's notifications for 1999-2010. The data for the MPS calculations is drawn from public sources, primarily from the OECD PSE database and USDA (Annex A provides data sources and methods). The calculations are for illustrative purposes – more thorough calculations, for example separately for Indica and Japonica rice, require greater familiarity with the official data sources of China's government.

¹⁶ DTB Associates (2014), which may have provided some background for the US complaint, makes a corresponding adjustment for rice but does not explain this as a conversion to align the administered and reference prices (in their calculations, by adjusting the FERP from milled to unmilled instead of adjusting the AAPs to milled). The DTB report makes MPS calculations for a single year (2014/15 for wheat and rice and 2013/14 for corn) based on total production and also on production only in the provinces in which the support programs were designated to operate by the central government. DTB calculates that the designated provinces account for 77 percent of wheat and rice production (six provinces) and 37 percent of corn production (four provinces). DTB also calculates the farm subsidy expenditures it argues could be assessed as product-specific support that should be included in China's AMSs.

Box 1. Comparison of WTO MPS and economic MPS

Market price support (MPS) as an indicator of policy support in agriculture is measured in different ways depending on the context. An MPS calculated under a country’s interpretation of the WTO rules in Annex 3 (herein called a WTO MPS) and an economic MPS calculated by, for example, the OECD have different meanings. The two measurements for a given year can be summarized as:

- $WTO\ MPS_t = (AAP_t - FERP) \times Eligible\ production_t$
- $Economic\ MPS_t = (Domestic\ price_t - Border\ price_t) \times Total\ production_t$

where t indicates the current year and each term is described as follows:

	Variable	Unit	WTO MPS	Economic MPS
a	Domestic price	CU/tonne	Applied administered price (AAP)	Domestic market price
b	International price	CU/tonne	Fixed external reference price (FERP)	Border price
c	Price gap	CU/tonne	$c = a - b$	$c = a - b$
d	Production	Tonnes	Production eligible to receive applied administered price (eligible production)	Total production
e	Market price support (MPS)	CU	$e = c * d$	$e = c * d$

This is a schematic representation that abstracts from the actual technical requirements – see WTO (1999a) and OECD (2016c). CU stands for currency units, such as USD or CNY (RMB), of the country. Annex 3 stipulates 1986-88 as the base years for the FERP. Countries that have acceded to the WTO after 1995 use a more recent period in notifications.

Both the WTO MPS and the economic MPS result from multiplying a price gap by a quantity. Divergence between the two MPS measurements can occur from either term. The price gap is the difference between a domestic price and a border (international) price. The WTO MPS uses the applied administered price determined under the AA as the domestic price, as described in the text of this note. This is compared to a fixed external reference price (FERP) from a base period (FOB for exports; CIF for imports), also discussed in the text. In contrast, the economic MPS compares the current domestic market price to a concurrent border (international) price for that year. The WTO MPS uses eligible production as defined by the AA as the quantity, which can be less than the country’s production quantity. The economic MPS uses production quantity, under the supposition that all output is affected by the expressed price gap whether procured by the government or not. The calculated MPS amount can be expressed in different ways. Dividing it by a value of production, for example, gives a percentage expression.

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The analysis is limited to calculating MPS and does not include any product-specific budgetary AMS components. In other words, MPS is treated as being the whole AMS that is compared to its limit. Including also the amount of any product-specific budgetary payments subject to the AMS limit would reduce the MPS that would cause an AMS to exceed its limit.

MPS and other domestic support are measured in the WTO in nominal value terms (RMB for China) and are compared with amounts resulting from multiplying the value of production by the *de minimis* percentage (8.5 percent for China) to ascertain compliance. Nevertheless, for exposition in Table 1, the calculated levels of MPS are reported as a percentage of value of production in each year. Reporting in percentage terms makes it easier to see when the limits, which vary from year to year, are exceeded and relatively by how much.

Table 1. China's market price support for wheat, corn and rice, percent of value of production, 2008-2015

	Year							
	2008	2009	2010	2011	2012	2013	2014	2015
	Percent				Percent			
WTO MPS								
Wheat	-12.6	0.1	3.1	12.6	15.8	23.0	27.4	27.7
Corn	21.5	19.9	33.9	37.1	40.6	48.1	47.9	49.6
Rice (milled AAPs)	-12.3	-1.3	5.6	15.1	26.3	34.9	36.5	35.9
Rice (unmilled AAPs)	-57.1	-41.7	-30.4	-16.6	4.6	3.7	6.2	6.1
Economic MPS								
Wheat	34.7	30.6	28.2	12.3	28.0	26.7	31.9	35.6
Corn	-15.5	16.3	15.9	1.6	13.8	23.3	26.5	36.2
Rice (milled)	-65.8	-43.6	-0.5	-9.4	29.7	32.6	32.8	39.1

Sources: WTO MPS: Authors' calculations, with eligible production assumed equal to total production and administered prices assumed to apply to this quantity; Economic MPS: OECD (2016a); Value of production in both cases: OECD (2016a). See text and Annex A for discussion of data sources.

Note: AAPs are applied administered prices.

For the period 2012-2015, the WTO MPSs for wheat exceed 15 percent of value of production in all years and for corn they exceed 40 percent in all years, as shown in Table 1. Thus, it appears that a key factor in arriving at the excessive AMS levels claimed by the United States is the use of total production as eligible production instead of smaller or nil procured quantities, with administered prices applied to this total quantity. An additional critical factor

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for rice is the adjustment of the administered prices to a milled basis, which increases the price gap significantly. The WTO MPSs for rice exceeds 25 percent of value of production in all years 2012-2015 when the administered prices are increased to a milled basis, but are less than the limit of 8.5 percent in all of these years using the unmilled rice administered prices. By way of comparison, for the preceding period 2008-2011, WTO MPSs for corn are well above the limit in all years. The WTO MPSs for wheat and rice (with milled administered prices) turn from negative to positive, but exceed their limits only in 2011, while the WTO MPSs for rice with unmilled administered prices are negative in all four years.

The nominal values calculated for WTO MPS in 2015 for wheat, corn and rice – under the chosen interpretation that eligible production is the total production quantity and administered prices apply to this level of production – are shown in Table 2. The calculated WTO MPS amounts in 2015, when converted at an exchange rate of 6.2 RMB/USD for that year, are USD 13.9 billion, USD 38.1 billion and USD 34.4 billion, respectively. Summing the three 2015 WTO MPS amounts

Table 2. China’s 2015 WTO MPS estimated under certain assumptions

Crop	Administered price	FERP	Price gap	Production	MPS	
	A	b	c = a - b	d	e = c * d	f = e / 6.2
	RMB/tonne			million tonnes	RMB billion	USD billion
Wheat	2,360	1,698	662	130.2	86.2	13.9
Corn	2,250	1,199	1,051	224.6	236.1	38.1
Rice (milled AAP)	4,168	2,659	1,509	141.6	213.7	34.4
Rice (unmilled AAP)	2,834	2,659	175	208.2	36.5	5.9

Source: Authors’ calculations. See text and Annex A for discussion of data sources.

Notes: Eligible production assumed equal to total production and administered price applied to these quantities. FERP is fixed external reference price and AAP is applied administered price. Adjusting the 2015 rice AAP to milled is consistent with China’s apparent constituent data and methodology for 1996-98, while China has used unmilled AAPs in its notified support calculations for years since 1999. With milled AAP the production quantity is milled weight, while with unmilled AAP the chosen quantity in the calculations is unmilled weight (the price gap mixes milled and unmilled data but quantity must be one or the other). Exchange rate of 6.2 RMB/USD assumed for 2015. Dividing MPS in RMB billion by values of production (wheat RMB 311.5 billion; corn RMB 476.1 billion; rice RMB 595.1 billion) gives MPS as percent of value of production shown in Table 1. Multiplying the values of production in RMB billion by 0.085 and dividing by the exchange rate gives limits on China’s AMSs in USD billion.

yields USD 86.4 billion. Likewise, the three individual limits on AMSs at 8.5 percent of value of production (not shown in Table 2) are USD 4.3, USD 6.5 and USD 8.2 billion, for wheat, corn and rice, respectively. These sum to USD 19.0 billion in 2015, with the individual limit exceeded for each crop. Subtracting the USD 19.0 billion from the sum of support gives AMSs in excess of the limits of USD 67.4 billion. This amount and the excess amount of nearly USD 100 billion calculated by the United States (USDA 2016a) are of a similar order of magnitude, with large excesses calculated, even if unequal. Some of the difference between USD 67.4 billion and nearly USD 100 billion may be because the United States likely uses data sourced more directly from China's government statistics, and the United States may be adopting somewhat different interpretations of the AA than assumed herein. Depending on the assumptions used, it is possible to generate a sum of excess market price support that exceeds the nearly USD 100 billion mentioned in USDA (2016a).¹⁷ Moreover, the US calculation may also include support through instruments other than market price support, such as budgetary payments to producers.¹⁸

While the WTO MPSs in Table 1 are based on total production, it is uncertain how a Panel or the AB might establish the proper level of eligible production for calculating China's support. In this regard, it is informative to calculate the share of total production of a crop that would generate an MPS large enough to equal its AMS limit.

¹⁷ For example, calculating China's MPS amounts with hypothetical FERPs for wheat, corn and rice from 1986-88 raises the amounts by which 2015 estimated MPSs exceed the limits. Between 1986-88 and 1996-98 the world prices of crops in USD rose significantly, and the RMB/USD exchange rate more than doubled. The FERPs in CHN/38/R3 are 1996-98 trade unit values converted from USD/tonne in China's customs statistics. The unit values (USD/tonne) calculated from FAOSTAT trade data for 1996-98 are close to these values. Hypothetical 1986-88 FERPs can therefore plausibly be calculated from FAOSTAT trade data for 1986-88. These hypothetical 1986-88 FERPs generate a sum of excess MPS in 2015 of USD 167 billion, i.e., much more than the nearly USD 100 billion of USDA (2016a). The 1986-88 reference prices from USDA (1994) generate a similar amount of USD 160 billion for 2015. As mentioned, however, no party is likely to argue for using reference prices from 1986-88.

¹⁸ This is possibly the most likely explanation of the difference in the calculated totals of excess support and will be explored in future work. One paragraph of USDA (2016a) alludes to the excess USD 100 billion being MPS, another to it being domestic support. The latter reading is weakened, however, by the listing of support instruments in the US request for a Panel (WTO 2016c), which seems to include only China's No. 1 documents and price support instruments.

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The higher the calculated WTO MPS as a percentage of the crop's value of production, the lower would be the critical share of the crop's total production.¹⁹ For example, the highest MPS percentage (49.6 percent of value of production) is calculated for corn in 2015. For that year, an eligible production of more than 17.1 percent of total production would result in MPS exceeding the AMS limit of 8.5 percent of value of production. The lowest MPS percentage is 15.8 percent for wheat in 2012. For that year, the eligible production would have to exceed 53.8 percent of total production to result in an MPS exceeding the limit. For rice (with administered prices adjusted to milled), eligible production would have to exceed 32.3 percent of total production in 2012 but only 23.2 percent in 2014 for the rice WTO MPS to exceed the limit. In short, if eligible production is determined not to equal total production, based on these calculations eligible production will need to account for at least a range of 17-54 percent of total production (depending on the year and crop) for the United States to prevail in arguing that China has exceeded its AMS limits, assuming that no other support is included.²⁰

Comparison of WTO MPS and Economic MPS

While the determination of whether China's AMSs have exceeded their limits will be made on technical and legal grounds under WTO rules, an objective of the AA is to reduce agricultural support so as to prevent distortions in world markets. One measurement of the support underlying those distortions through price policy is the economic MPS as calculated by the OECD (see Box 1). Economic calculations utilize the differences (support if positive, disprotection if negative) between annual observed domestic market prices and contemporaneous border (international) prices that arise from a myriad of underlying policies – not only domestic policy instruments but also border instruments such as tariffs, including high over-quota tariffs, and non-tariff measures, e.g., SPS regulations or export subsidies or

¹⁹ Dividing 8.5 (the AMS limit as a percentage of value of production) by the percentage MPS for a given crop and year in Table 1 gives the share of total production that generates an MPS at the limit.

²⁰ Without consistent data series for procurement of wheat, corn and rice during 2012-2015 it is not possible to calculate MPSs using procured quantities as eligible production. For 2015, Sinograin purchased 20.8 million tonnes of wheat (USDA 2016b), which is about 16 percent of production, while MPS remains below the limit as long as eligible production is below 30.3 percent of production. For rice, Sinograin purchased 32 million tonnes (USDA 2016b), which is about 15 percent of production (assuming procurement is tonnes of unmilled rice), while MPS remains below the limit as long as eligible production is below 23.6 percent (assuming administered price is adjusted to milled basis).

restrictions. This observed difference, whatever its causes, applies to total output. The economic measurement contrasts with using the applied administered price, the FERP, and the eligible production in the WTO calculations. While fraught with its own measurement issues, such as adjusting the contemporaneous price comparison accurately for equivalent quality and location, the annual economic MPS has a direct interpretation as measuring the full support received by producers through policies affecting output prices. The difficulties in comparing the two measurements of MPS and in misinterpreting the WTO MPS as an economic MPS are well known. The two measurements and their differences are evaluated in depth over 1995-2008 with projections through the 2010s for four developed countries (United States, European Union, Japan and Norway) and four developing countries (Brazil, India, China and the Philippines) in Orden et al. (2011).

In this context, it is opportune to assess whether the outcomes have aligned with respect to China's WTO MPSs and economic MPSs for wheat, corn and rice such that each one of the two indicators shows that market price support, as measured, has exceeded 8.5 percent of value of production during 2012-2015. The economic MPS as calculated by the OECD is reported in the lower section of Table 1.²¹ Economic MPS is not subject to WTO limits, but China's limit of 8.5 percent of value of production is used herein as an indicator of whether economic MPS is relatively high or low.

While the specific annual values differ, an alignment has occurred during 2012-2015 in the sense that for wheat, corn and rice both the WTO MPS (except rice with unmilled AAPs) and the economic MPS exceed the level corresponding to 8.5 percent of value of production in all four years. The economic MPS percentages are larger than the WTO MPS percentages for wheat, while they are smaller for corn. The percentage WTO MPS for rice (milled administered prices) and the economic MPS percentages for rice are the closest ones in 2012-2015.

If the relatively high levels of China's economic MPSs since 2012 is the underlying US policy concern, the coincidence of this situation with the possibility of China's WTO MPSs having exceeded their limits in these years raises the prospect that, in this and possibly some

²¹ For rice the economic MPS is for milled (see Annex A), but the calculation is essentially equivalent on an unmilled rice basis.

other cases, the WTO rules on domestic support may have an effect in reining in certain economic support. To meet its WTO commitments a country would in these circumstances need to limit the amount of economic support, or at least resort to different policy instruments than applied administered prices. If the United States were to prevail in the *China – Domestic Support* dispute, one implication would be that, if similar circumstances arise in the future, a country's need to comply with the WTO rules could result in its economic MPS being smaller than otherwise. In other words, adjusting to the legal requirements could have real economic effects in line with the AA's broad objective of reducing agricultural support and market distortions. However, some caution is in order. Reducing the amount of market price support as measured under WTO rules does not automatically reduce economic support. A case in point is Japan's elimination in 1998 of the administered price used to calculate its WTO MPS for rice, without significantly reducing its economic MPS for rice as high over-quota tariffs and domestic supply controls continued to be applied (Godo and Takahashi 2011).

The coincidence for China of both WTO MPS and economic MPS exceeding a level corresponding to 8.5 percent of the value of production for wheat, corn and rice in the four recent years is a specific occurrence. This is demonstrated by comparing the two MPS measurements during 2008-2011. In these four preceding years, wheat appears to be supported in economic terms at levels similar to the subsequent four years, but the WTO MPS only exceeds its limit in 2011. If the presumed US interpretation of the WTO rules were to prevail, they could still not have served in 2008-10 to constrain the economic support for wheat. For corn, just the opposite occurs: economic support is variable and relatively low or negative in two of the four years. The WTO MPS, although not as high as in subsequent years, nonetheless exceeds the limit in all years 2008-2011 – a case overall in which adherence to the presumed US interpretation of the WTO rules could not have reduced economic support with persistent consequence. For rice, similarly to wheat, the WTO MPS exceeds its limit only in 2011 (with milled AAPs). But just the opposite of wheat, this is a case where other countries

need not seek any reduction of (positive) support, since the economic MPS shows rice being disprotected for the four years. Table 3 summarizes these comparisons.²²

Table 3. Economic MPS and WTO MPS for China’s wheat, corn and rice, 2008-2015, in relation to potential legal challenge under WTO domestic support rules

Economic MPS	WTO MPS	
	Exceeds WTO limit	Below WTO limit
Exceeds 8.5 percent of value of production	A. Challenge more merited 2012-15: Wheat, corn, rice (milled AAPs) 2009-10: Corn 2011: Wheat	B. No legal basis for challenge 2008-10: Wheat 2012-15: Rice (unmilled AAPs)
Below 8.5 percent of value of production	C. Challenge less merited 2008; 2011: Corn 2011: Rice (milled AAP)	D. No legal basis for challenge and challenge less merited 2008-10: Rice (milled AAPs) 2008-11: Rice (unmilled AAPs)

Notes: Placement of years and crops in particular cells based on authors’ calculations of WTO MPS under one interpretation of the WTO domestic support rules and economic MPS from OECD (2016a). Economic MPS is not subject to WTO limits, but 8.5 percent of value of production is used herein as an indicator of whether economic MPS is relatively high or low.

Summary and conclusions

This note provides some preliminary observations on the complaint initiated in September 2016 by the United States about China’s agricultural domestic support under the WTO rules for dispute settlement. First, it provides a brief background on the context in which the dispute arises, the WTO domestic support rules and limits to which countries have committed, and the dispute settlement process and timeline of the case so far. A critical point is that the US complaint is about China’s compliance with the AA, not about adverse effects under the ASCM. Second, China’s grain trade and production is summarized with a focus on the eight

²² Economic price support has been estimated not only by the OECD. For example, Carriquiry et al. (2016) calculate price support for wheat in the four years 2008/09 to 2011/12 to average 6.8 percent of the world reference price with zero support in two of the four years, and in 2012/13 to 2014/15 to average 23.7 percent but rising from 1 percent to 51 percent in those three years. These are, except for 2014/15, lower levels than reported by OECD. They also show, in contrast to OECD, a rising trend.

years following the run-up of world grain prices that started in 2007. A key observation is that while China's production rose in the presence of increasing administered prices for wheat, corn and rice, simultaneously its imports of other grains (particularly barley, sorghum and DDGS) have also increased. A consequence has been rising Chinese grain stocks, under the MPPS for wheat and rice and the TRP for corn. The situation has also coincided with a series of administrative trade interventions, including China's 2016 increase of anti-dumping and imposition of countervailing duties on imports of DDGS from the United States. Parallel to these developments, concerns have been raised by China's trading partners about the increasing levels of support to agriculture in China in the post-2007 period. After initiating the *China – Domestic Support* case, the United States in December 2016 also requested consultations with China over its administration of TRQs for wheat, corn and rice.

The note then turns to assessing China's annual levels of certain support and whether they have exceeded China's commitments. The US complaint is described and related discussion of China's market price support in the WTO Committee on Agriculture is summarized, followed by a brief characterization of China's price support programs for wheat, corn and rice. Next, several key definitional issues that arise in the *China – Domestic Support* case are assessed. The first of these issues relates to the hierarchy of "taking into account the constituent data and methodology" of the country's base period support calculations (for China, its 2001 accession document showing 1996-98 calculations) compared to calculations of support being "in accordance with the provisions of Annex 3" of the AA. This hierarchy may matter for the determining the quantity of eligible production. China may assert that its support calculations correctly utilize only procured quantities or other limited quantities as eligible production, consistent with its constituent data and methodology from 1996-98, while the United States may assert that total production of a grain in the country or in selected provinces should be included as eligible production in the absence of a clearly stated limit on the quantity to be procured. In the earlier *Korea – Beef* case (WTO 2000a; 2000b), the Panel argued for the possible full production interpretation, while the AB concluded that the announced quantity potentially to be procured, not the smaller actual procurement, would be the eligible production. Thus, establishing what is the "quantity of production eligible to receive

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the applied administered price” may be the most critical task of a Panel in the *China – Domestic Support* case. A related second issue may be clarifying the distinction between an administered price and an applied administered price.

A second issue concerns the determination of the appropriate expression of the administered price for rice. China has used an administered price for unmilled rice but a FERP for milled rice in calculating market price support after acceding to the WTO. Whether or not to adjust the administered price of rice from unmilled to milled would have implications only for rice in this case. The outcome would matter for understanding the roles of “taking into account the constituent data and methodology” and determining the “applied administered price” and “the quantity of production eligible to receive” that price when measuring market price support. This could clarify whether the administered price, FERP and eligible quantity have to be evaluated on the same basis, either milled or unmilled, in these calculations. The outcome of these decisions might clarify the applicability of the “may be adjusted for quality differences as necessary” provision of Annex 3 with regard to the fixed reference price. Several other issues in calculating support may also be considered.

The calculations underlying the claims of the United States that China has exceeded its limits are not made public. The note therefore constructs rough estimates of China’s market price support for wheat, corn and rice during the years 2012-2015 of the US complaint and also for the previous years 2008-2011. The estimates are based on public data about China’s annual administered prices, reference prices for 1996-98 and levels and values of total production. They presume that China’s total production of each grain constitutes eligible production, as the United States may argue, rather than any smaller or nil quantities that China may see as eligible production. The calculations also assume that China’s administered prices are applied administered prices for this eligible production.

Under this chosen interpretation of the AA, the calculated levels of market price support have exceeded China’s yearly AMS limits in all years 2012-2015 for wheat and corn. Market price support for rice also exceeds the rice AMS limits in all four years if the administered price is adjusted up from an unmilled to milled rice basis. Such an adjustment is assumed to mirror the US calculations of China’s market price support for rice, based on what the United States

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has asserted in the Committee on Agriculture regarding the correct administered price. The limits are not exceeded if the administered price of unmilled rice is retained. The estimates for wheat, corn and rice (using a milled administered price) imply that the excess of China's market price support over the limits for these three crops amounted to USD 67.4 billion in 2015. This is a substantial amount of excess support but is less than the nearly USD 100 billion asserted by the United States (USDA 2016a) in relation to its complaint.

If the United States prevails that total production be included as eligible production in the *China – Domestic Support* case, then constraining market price support as measured under the US interpretation of the AA might also constrain economic market price support. This arises from the situation that for the four years 2012-2015 support measured according to this note's conjecture of the US interpretation of the AA and economic support measured by the OECD both exceed 8.5 percent of the value of production for each of wheat, corn and rice. If the United States were to prevail in DSB rulings, China will need to pay more attention in its policy instruments and settings in order not to exceed its WTO limits on AMSs in the future. China already in 2016 announced the modification of its price support program for corn. If the United States prevails in *China – Domestic Support*, it would be clearer what the consequences could be of restoring a corn administered price at similar or higher levels than during 2012-2015. A lowering or elimination of China's administered prices for wheat or rice could also be a policy response to reduce future vulnerability to challenges such the present one, if found in favour of the United States.

No or lower administered prices would not preclude domestic prices being kept above world levels through tariffs, including high over-quota tariffs, and other policies. That said, tariffs are bound at low levels for grains other than wheat, corn and rice. China has experienced that raising support prices too high above world levels causes stock accumulation and stimulates imports of substitute grains. Thus, China may see merit in an alternative policy direction relying less on administered prices and market price support, as already evinced in the 2016 announcement that its administered price for corn will be replaced with a new pricing mechanism.

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While any government's initiation of a WTO dispute is likely driven by the perceived interests of particular groups, the motivation may also contain an element of seeking greater clarity on issues of larger, systemic interest. In *China – Domestic Support* the United States may hope to strengthen the legal basis for using the AA to constrain market-distorting price support for agricultural producers also in other countries than China. This would concern any country operating or contemplating the operation of market price support programs. Whether the *China – Domestic Support* case, initiated by the Obama administration, is an appropriate dispute to pursue at the WTO will be decided by the new leadership in Washington under the Trump administration. There are substantial stakes and not just specifically for China.

A Panel or the AB may find that, when a procurement quantity is not pre-announced, the production eligible to receive the applied administered price equals total production even if the calculations in the country's base period use a smaller quantity. This could strengthen a complaining party's argument that another country's market price support, when measured using total production, makes an AMS exceed its limit. It could also, however, make a government, in anticipation of procuring some quantity, announce that a certain quantity, somewhat larger than expected procurement, is eligible for procurement at the administered price. Even if this announced quantity is well below total production its existence can help support the domestic market price for total production. The actual procurement of even a small quantity can in some situations, where price is sensitive to a change in market supply, have a disproportionately large effect on the price producers receive on all production.

The end result could thus be a policy landscape where more WTO members design price support policies specifically to measure only modest support under the rules of the AA without this limitation on the announced quantity having much effect on the economic market price support being provided. The scope of implications from the present case will also depend on the interim WTO decisions taken since 2013 and those eventually given permanent legal effect for market price support and food stock acquisition in developing countries.

It is often advocated that the legally effective stipulations of the AA need to move closer to economic reality – see, e.g., Matthews (2015) and Orden et al. (2011) for discussions. A dispute settlement outcome that closes the distance between the two could have

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consequences such as strengthening many countries' motivation to engage – offensively or defensively – in further WTO negotiations on the desired rules for domestic support that distorts trade. On the other hand, the United States may not prevail on any of the issues discussed herein. This would further raise many observers' scepticism about the effectiveness of the WTO rules in reining in trade-distorting domestic support. Substantial stakes, indeed.

Annex A:

Data sources for calculation of simplified AMSs for wheat, corn and rice in China

The calculations of AMSs for wheat, corn and rice for 2008-2015 take several shortcuts. For example, a complainant's arguments may be stronger if it relies on public data from the responding government rather than secondary sources, even if in both cases the ultimate source is the responding government itself. This note uses secondary data available to the public from, e.g., the OECD (Producer Support Estimates; OECD 2016a) and the Foreign Agricultural Service of the US Department of Agriculture (such as GAIN reports and its Production, Supply and Distribution database (USDA 2016c)). The currency units are RMB (renminbi), corresponding to the ISO code of CNY.

Government support prices 2008-2015. USDA (2015a). The data are given in RMB/ton but it is obvious from other sources, such as China's 2009 and 2010 notifications (WTO 2015a), that the prices are in RMB/tonne (i.e., RMB per metric ton). Separate prices exist for Indica and Japonica rice, both unmilled. Support prices for 2008, 2009 and 2010 match (nearly but not exactly) the administered prices in China's notification (WTO 2011b, 2015a).

The calculations use a support price for rice formed by weighting Indica and Japonica prices together (Indica weight 2 and Japonica weight 1) as used by China when notifying annual support as a member (e.g., WTO 2015a). It matches the relative quantities of Indica and Japonica shown as "eligible production", i.e., procured, in 1996-98 (Appendix DS 5-1, WTO 2001a).

Alternative administered prices on a milled rice basis were derived by dividing China's administered prices for unmilled rice by 0.68. This common conversion factor is used by, e.g., the OECD. It adjusts for milled vs. unmilled weight but does not necessarily account precisely for such costs as handling, transporting and milling.

Fixed external reference price (FERP). 1996-98 average of FOB and CIF prices given as export and import unit values (WTO 2001a). Separate prices are given for Indica and Japonica rice, although both are for HS 10063000, which is defined in China's tariff schedules as "Semi-milled or wholly milled rice, whether or not polished or glazed".

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Price gap. This is the difference between the support price and the FERP. Two alternative price gaps were calculated for rice: administered prices adjusted to milled rice (as apparently in China's constituent data for 1996-98) and not so adjusted (as in China's notifications for the years 1999-2010).

Procurement. The authors did not find consistent data on procured quantities in 2012-2015. Consistent calculations could therefore not be made for the case of using only China's procured quantities. As seen in China's notifications and in analysis (see text), the procured quantities can correspond to only a minor portion of total production.

Production. The calculations use production data from the OECD (2016a) and USDA (2016c). For rice the USDA reports rough rice production (i.e., unmilled), not broken down by Indica and Japonica. Separate production data for Indica rice and Japonica rice is likely available in China's statistics. The United States may have access to such production data, since it claims that China exceeded its separate limits on Indica and Japonica (USDA 2016a; WTO 2016a). The production quantities of rough rice reported by the USDA match the quantities of paddy rice derived from the OECD (2016a) quantities of milled rice by dividing by the conversion factor of 0.68.

Market price support. WTO MPS: Multiplying total production of a crop by the price gap generates the market price support component of AMS calculated herein. See text for discussion of other possible quantities of production eligible to receive the applied administered price for this calculation. WTO MPS was generated for rice for the two cases of adjusting administered prices to milled rice and not so adjusting. Economic MPS: Tables 3.1-3.3 in OECD (2016a).

Value of production. Tables 3.1-3.3 in OECD (2016a), i.e., values at the farm gate. For 2009 and 2010, the value of production data is close but does not exactly match the values in China's notification (WTO 2015a). The values differ by less than 5 percent, often less. For rice the farm gate value of production results from multiplying the production quantity of milled rice (68% of production quantity of paddy rice) by the farm gate price of milled rice (derived from dividing the farm gate price of paddy rice by 0.68). OECD paddy rice is assumed equivalent to USDA rough rice and to rice as captured in China's statistics on gross output values.

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AMS limits. Generated for 2008-2015 by taking 8.5 percent of the value of production.

Product-specific payments. No attempt was made to estimate non-exempt product-specific payments in 2008-2015 and add them to the market price support to generate complete AMSs. The US description of its case is unclear. One paragraph of USDA (2016a) alludes to the excess USD 100 billion being MPS without mentioning product-specific payments as components of the products' AMSs, another to it being domestic support. The listing of support instruments in the US request for a Panel (WTO 2016c) seems to include only China's No. 1 documents and price support instruments. DTB Associates (2014) calculate payments and Gale (2013) and others identify several programs under which support might be included in the product-specific AMSs. China's notification for 2009 and 2010 includes product-specific budgetary outlays in the AMSs for wheat, corn and rice, as well as for soybeans, cotton, rapeseed, potato, pig, and (for 2010 only) highland barley and peanut. For wheat and corn the payments are subsidies for improved crop strains and seeds, and for rice they are subsidies for improved crop strains and seeds and cost subsidy for transporting Japonica rice out of China's Northeast. The subsidies were of the order USD 1 billion per crop. This is large in relation to the market price support arising from using small or nil procured quantities, but it is small in relation to the market price support amounts estimated herein and by the United States (USDA 2016a).

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