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The 2018 US-China trade conflict after forty years of special protection

Chad P. Bown

Peterson Institute for International Economics & CEPR, Washington, DC, USA

ABSTRACT

In 2018, the United States suddenly increased tariffs on nearly 50 percent of its imports from China. China immediately responded with tariff retaliation covering more than 70 percent of imports from the United States. This article assesses what happened in 2018 and attempts to explain why. It first constructs new measure of special tariff protection to put the sheer scope and coverage of the 2018 actions into historical context. It then uses the lens provided by the 2018 special tariffs to explain the key sources of economic and policy friction between the two countries. This includes whether China's state-owned enterprises (SOEs) and industrial subsidies, as well as China's development strategy and system of forcibly acquiring foreign technology, were imposing increasingly large costs on trading partners. Finally, it also examines whether the US strategy to provoke a crisis – which may result in a severely weakened World Trade Organization (WTO) – was deliberate and out of frustration with the institution itself.

KEYWORDS

Trade war; tariffs; United States; China; retaliation

In 2018, the United States suddenly increased tariffs on nearly 50 percent of its imports from China. The new 'special tariffs' raised the average US tariff on imports from China from 3 percent to over 12 percent. China immediately responded in kind with tariff retaliation. By the end of 2018, China's new special tariffs covered more than 70 percent of imports from the United States. China's average tariff applied to US exports jumped from less than 10 percent to over 18 percent.

The US-China tariff events of 2018 have drawn attention to what seemed a suddenly fractious trade relationship.[1] Yet, while the tariffs were sudden, the underlying economic policy concerns were not. The continuing buildup of frictions between the two large economies had become increasingly hard to diffuse.

Some conflicts have been painted as simple, others ranged toward the intractable. Most straightforward seemed the US accusation of nonreciprocal trade policies – China charging higher tariffs on US imports than visa-versa.[2] More complicated was concern over China's failure to reform, as its economic evolution had turned increasingly away from markets and involved subsidies that drove global overcapacity in old industrial sectors like steel and aluminum. But the most complex was a newly surfacing concern about China's economic model. American multinational companies complained more

CONTACT Chad P. Bown cbown@piie.com www.chadpbown.com Peterson Institute for International Economics 1750 Massachusetts Avenue NW, Washington, DC 20036, USA

and more about being mistreated in China. They alleged that they were being forced to transfer their technology to Chinese firms on noncommercial grounds – or, in some cases, even having it stolen in state-sponsored actions – in order to assist China's economic development strategy.

US attempts to address problems through the WTO mostly ground to a halt. With the breakdown of the Doha Round, the rules-making function had long ceased to provide a useful forum for negotiations. And the United States put fewer and fewer of its grievances forward to formal WTO dispute settlement, the mechanism tasked with preventing bilateral trade spats from escalating into trade wars. The US actions in 2018 not only brought trade frictions with China to a head, but its strategy also deliberately pushed the multilateral trading system to its breaking point.

This article assesses what happened in 2018 and attempts to explain why.

It begins by constructing new measure of special tariff protection to put the sheer scope and coverage of the 2018 actions into historical context. New US special tariffs of 2018 covered an even larger share of imports from China than the peak levels of US special protection arising during the 'managed trade' era of the 1980s that included the Multi-Fiber Arrangement and other voluntary export restraints.[3] And, China's 2018 retaliation was itself unprecedented for the WTO period.

More broadly, the process of trade opening that both countries had undertaken since the 1980s is much more complicated than the simple headline result that each made major cuts and improved the legal certainty associated with its 'normal' tariffs. Not captured by that headline are the ebb and flow during this period of various forms of 'special' protection. For the United States, there was a spectacular decline in some forms of special protection, including the elimination of trade restrictions on textiles and clothing that had been in place for decades. But since China's 2001 WTO accession, the United States had also begun to apply considerable new protection in a different form, increasingly through the unfair trade laws of antidumping (AD) and countervailing duties (CVDs). For its part, China had begun to use these same special protection policies against the United States, and, by the early 2010s, it seemed to deploy them as a tool for retaliation.

Thus, even the initial accusation that the US and China trade policies were 'nonreciprocal' turns out not as simple as the Trump administration had characterized it. By 2017, each country had built up a considerable amount of other trade barriers beyond normal tariffs.

Next, what were the key sources of trade friction triggering the 2018 crisis of protection? Some US tariffs were imposed due to concerns over the rising importance of SOEs, industrial subsidies, and China's failure to reform and become more market-oriented. As such, tariffs imposed on steel, aluminum, and even solar panels can be viewed as simply an escalation of a pre-2018 trend of US special protection arising through AD and CVDs.

But the other US tariffs of 2018 were different. Tariffs imposed on $250 billion of imports resulted from a policy decision to confront China's development strategy that the United States argued was too costly for trading partners to continue to accommodate.

Lastly, the change in US approach toward China in 2018 also shows three important areas of American frustration with the WTO. First, US resort to 'national security' tariffs may be an example of what happens when WTO legal rulings overly constrain the use of more traditional and acceptable forms of special tariffs. Second, imposing unilateral tariffs on China in lieu of going through formal WTO dispute channels also made clear the US view that litigation over existing rules was insufficient as a means of tackling the systemic

problems that the Chinese economic approach created for trading partners. Third, the WTO's failure to facilitate US-China negotiation of any new disciplines or tradeoffs – through the Doha Round or elsewhere – pushed the United States to act unilaterally and break with the old rules governing the procedural responses.

Before continuing, a few final points are in order. This article is an attempt to put a rational framework around the trade policy actions of 2018. By design, there is little focus on the Trump administration's misguided rhetoric and tactics. This is admittedly a major limitation, as such issues are important. Another is the decision not to address the considerable costs associated with the 2018 actions. Indeed, there is a mounting body of evidence that the US approach resulted in both short-term economic costs, as well as long-term costs to the global trading system.

While not unimportant, because these have been addressed elsewhere at length, including by the author, the focus here is to clarify some of the underlying US political-economic concern with China, as well as the WTO, that triggered the events of 2018.[4]

1. US-China normal tariffs and trade before 2018

The United States was a founding contracting party to the General Agreement on Tariffs and Trade (GATT) in 1948. The dominant US trade policy strategy since has been to apply nondiscriminatory tariffs on imports from all countries participating in the GATT and its 1995 successor, the World Trade Organization (WTO).[5] Over time and through bargaining in the context of numerous multilateral negotiating rounds, the United States reduced its nondiscriminatory tariffs in exchange for other major economies lowering their tariffs on imports from others, including from the United States.

China was not involved in this reciprocal, multilateral negotiating framework for most of the twentieth century. Though it was a founding contracting party of the GATT, it exited the agreement in 1949 during its revolution. In 1986, China began the process of seeking a re-entry into the agreement, but it took fifteen years of negotiations to accede as a formal WTO member in 2001. Yet, despite not yet being a member of the GATT, beginning in 1980 China was offered the same US most-favored nation (MFN) tariff as the United States granted to imports from most other major economies, including the countries of Europe, Japan, and more.[6]

Figure 1 summarizes the baseline tariffs that the United States and China applied toward each other during 1989–2017. For each country, the figure presents two series. The first is the simple average applied tariff and the second is the trade-weighted average applied tariff, where the weights are the trading partner's product-level exports to the world.[7] Throughout the analysis, I refer to these as the 'normal' tariffs.

As of the late 1980s, US tariffs applied toward imports from China averaged between 5 (simple average) and 7 (trade-weighted average) percent. The US agreed to further reduce its tariffs multilaterally beginning in 1995 as part of the outcome of the Uruguay Round of GATT negotiations, which ushered in the WTO. These tariff reductions were thus extended to imports from China as well. The United States then made some additional multilateral tariff cuts when implementing the two information technology agreements that were concluded in 1997 and 2015, respectively. By 2017, normal US applied tariffs toward imports from China were at roughly 3 percent.

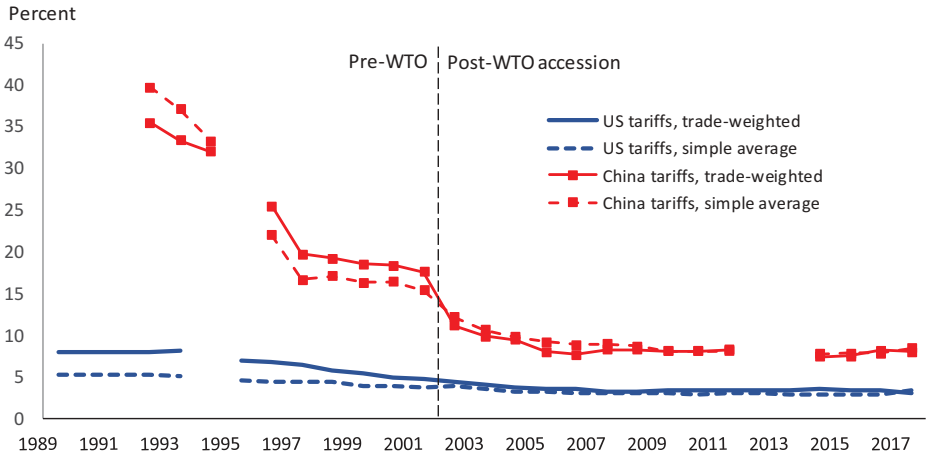

Figure 1. US and China bilateral applied tariffs, 1989–2017.

Source: Constructed by the author with applied MFN tariff and export data at the 6-digit Harmonized System level made available from World Integrated Trade Solutions.

During this same period, China's 'normal' tariffs toward imports from the United States were reduced by considerably more. As Figure 1 illustrates, this is because they began at much higher levels – i.e. China's tariffs in the early 1990s averaged close to 40 percent. By 2003, China had phased in cuts negotiated through the WTO accession process, and its tariffs had dropped to roughly 10 percent. They continued to decline to an average of 8 percent by 2017.

In summary, while both countries had reduced their tariffs over time, as of 2017, the data on normal tariffs provide the impression that the countries' trade policy was nonreciprocal, with China maintaining higher tariffs than the United States. However, this is just the tip of the policy iceberg. The purpose of Sections 2 and 3 is of to document how these tariffs are far from the only policy barrier impacting goods trade between the two countries.

Nevertheless, and before examining such policies in more depth, it is instructive to consider the bilateral trade arising between these two countries. Figure 2 presents these

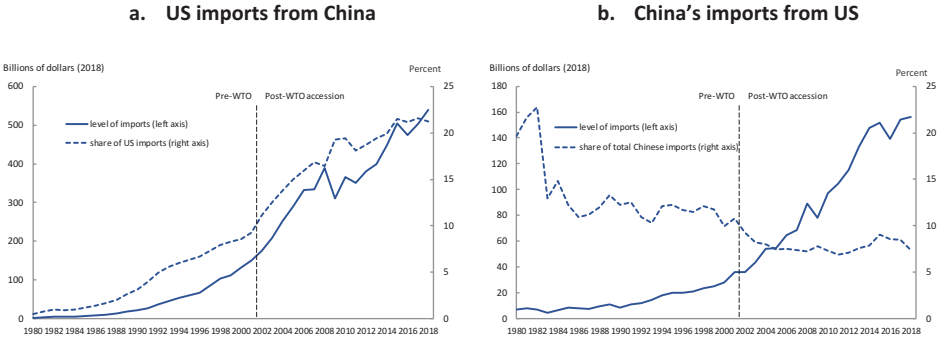

Figure 2. US-China trade in goods, 1980–2018. (a) US imports from China. (b) China's imports from US.

Source: Bilateral trade data derives from the IMF Direction of Trade Statistics. Converted to 2018 constant dollars using import and export price indices from Bureau of Labor Statistics.

data for 1980–2018 both in real terms as well as a share of each country's total goods imports from the world. The figure can be broken into two periods: pre- and post-2001, when China became a member of the WTO.

Panel a documents US imports from China. In 1978, China began its own gradual process of opening to the world. While China's exporters had faced US applied MFN tariffs beginning in 1980, the US Congress undertook yearly votes of whether to continue applying MFN tariffs or revert to higher tariffs. While there is evidence that this policy uncertainty worked to dampen some Chinese exports,[8] US imports from China still increased to nearly 10 percent of total US goods imports – and over $100 billion annually – by 2001. China's WTO accession reduced the uncertainty of whether its exports would continue to receive normal tariff treatment from the United States. Combined with China's own reductions of normal tariffs, including on imported inputs, the result was an escalation of China's exports to the United States as well as other countries. Imports from China reached more than 20 percent of total US imports by 2014 and more than $500 billion annually shortly thereafter.

Panel b documents Chinese imports from the United States. One important similarity with panel a is that, immediately after China's WTO entry, China's imports from the United States increased sharply – from $36 billion per year in 2001 to more than $150 billion by 2017. Nevertheless, two main differences have contributed to political discord. First, the share of US trade in total Chinese goods imports declined from over 10 percent as late as 2001 to under 8.5 percent by 2017. Second, the level of Chinese imports from the United States remained distinctly lower: in 2017, they remained less than a third of the level of US imports from China ($503 billion). The result has been a large US bilateral goods trade deficit that has become an increasing challenge to sustain politically.

Despite its salience with politicians, economists rarely raise policy concerns over bilateral trade imbalances, especially when measured from gross imports and exports (as in Figure 2) and not in value-added terms.[9] However, finding little merit to base a policy decision on Figure 2 does not mean that there were no legitimate sources of concern in the US-China trade relationship.

Yet, the policy problems also cannot be reduced to simple complaints about the nonreciprocal levels of normal tariffs captured by Figure 1. The next sections thus push beyond such measures to other forms of trade protection in order to shed light on areas of systemic concern.

2. US special tariffs and acts of protection, 1980–2018

While the United States was steadily reducing its normal tariffs, it was also providing considerable new trade protection, including on imports from China. When confronted with political-economic shocks and demand for new tariffs, the US approach has been to rely on what I refer to collectively as 'special' protection – as opposed to 'normal' tariffs (Figure 1) – arising through a variety of US trade laws and other ad hoc arrangements.[10]

The United States has applied such special protection to a variety of products, sectors and countries, and it has remained in place for different lengths of time. Sometimes, the protection was applied as a tariff, in other instances as a quantitative limit on imports or negotiated as a voluntary restraint on a trading partner's exports. But overall, special protection has been the general US policy approach toward troublesome imports arising

from various quarters – whether Japan or Europe beginning in the 1960s and 1970s, or other emerging economies in Asia, such as South Korea, in the 1980s. The traditional US government response was no different when confronted with demands to change the level of protection toward imports from China.

How much US special protection toward China has there been? Rather than relying on average tariff measures, I construct a new set of import coverage ratios to allow for inter-temporal comparisons between actions arising under different laws and policies. The approach builds from Bown (2011) and defines the coverage ratios as the share of US imports from China in each year affected by one or more of the many forms of US special protection described in more detail below.[11] Specifically, it matches US policy actions to imports defined at the product- and trading partner- level, and it fixes the coverage ratio from the year prior to the action at that import market share level for the entire period that the trade restriction is in effect.

This approach goes beyond the initial measurement of special tariff protection over 1989–2009 provided by Bown (2011), which focused only on antidumping (AD), countervailing duty (CVD), and safeguard policies. I have constructed a new database that expands the time coverage and detail of those policies while also introducing a number of *other* policies described below. Extending policy coverage is particularly important for any comparison with the 1980s, a period when the United States frequently imposed special protection under other laws or via voluntary export restraints and orderly marketing arrangements.

Figure 3 illustrates the full range of US imports from China covered by US special acts of protection implemented over 1980–2018. In 1980, when the US first granted China normal MFN tariffs, over one third of total US imports from China were covered by some *other* form of special protection. This special protection peaked at 39 percent of US imports from China in 1986, at which point it started a steady decline downward. The special protection reached a low in 2005 – when only 4.3 percent of US imports from China were subject to special protection – before beginning a slow increase and ultimately hitting 8.1 percent again by 2017.

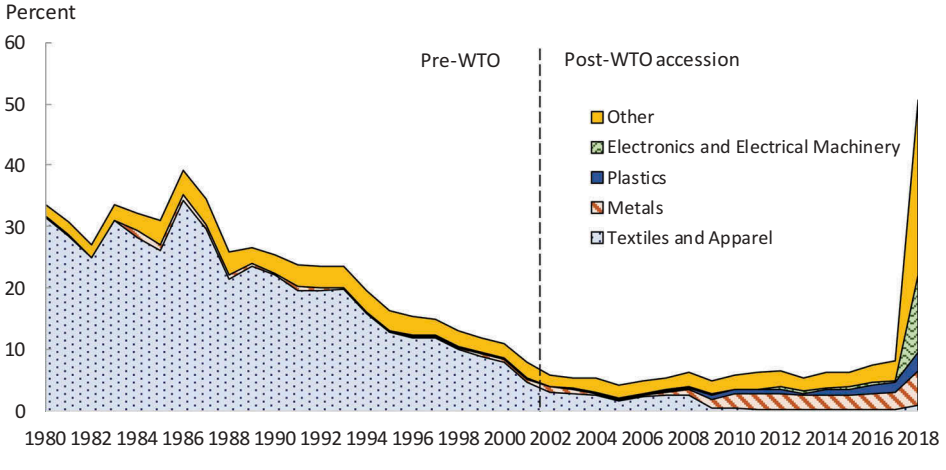

Figure 3. US imports from China covered by special protection by sector, 1980–2018.

Source: Share of US goods imports from China covered by special forms of protection in effect each year. Computed by the author from product-level import data based on methodology described in the text. Sectors defined as in Bown and Crowley (2016).

But as Figure 3 also documents and as is described in more detail below, the Trump administration's special tariffs of 2018 increased that import coverage considerably. In 2018, over 50 percent of US imports from China suddenly found themselves subject to special forms of protection. This was higher than peak levels from the 1980s, when China was not a member of the GATT/WTO. Another important distinction is the difference in the value of trade being affected (see again Figure 2). During the height of the US special protection in the 1980s, US imports from China were less than $10 billion per year. US imports from China in 2018 were more than 50 times that; the 50 percent of imports covered by special tariffs in 2018 thus impacted more than $250 billion of trade.

The rest of this section explores the details behind Figure 3 by describing the changing nature of the 'special' forms of US protection applied toward imports from China over 1980–2018.

2.1 Bilateral agreements, the multi-fiber arrangement, and agreement on textiles and clothing

Figure 3 also illustrates US special protection toward imports from China by sector. For 1980–2005, most US special protection covered imports of textiles and clothing. In 1980, the United States had negotiated a bilateral arrangement limiting such imports before China became a signatory of the Multi-Fiber Arrangement (MFA) in 1984. The MFA was a system of quotas and voluntary export restraints that governed the bulk of US imports from the world of clothing and textile products over 1974–1994. In 1995, the WTO's Agreement on Textiles and Clothing (ATC) went into effect to replace the MFA and slowly phase out volume limits on those products. China's entry into the WTO in 2001 also brought it into the ATC.[12]

As the ATC ended in 2005, the United States negotiated an agreement with China to voluntarily restrain its exports of textile and apparel products until 2008.[13] Under the terms of China's accession to the WTO in 2001, WTO members (including the United States) had negotiated access to a number of special safeguards – described in Section 2.2 – over which they could impose higher tariffs with relatively few institutional constraints. By voluntarily agreeing to restrain those exports, China retained some of the economic welfare – i.e. that associated with the rents of the trade restriction accruing through higher-received export prices. If the restriction had been applied as a US special safeguard tariff instead, then that welfare would have accrued to the United States Treasury in the form of tariff revenue.

Since 2008 and perhaps somewhat remarkably, the United States applied very little special protection to textiles and apparel. This included the 2018 special tariffs that mostly stayed away from such items, despite the considerable US imports from China in those product categories.

2.2 Used and unused tools of US special protection 2001–2017

As US imports from China escalated after 2001, the US government had several other laws at its disposal under which to limit potentially injurious imports.[14] Most use of these laws through 2017 were triggered when the US private sector – a group of firms,

an industry association, or even a labor union – filed a petition requesting new trade barriers and claiming they were injured due to import competition.

The first two such policies were 'safeguards' and were specific to imports from China. One was a special safeguard administered by the Office of Textiles and Apparel (OTEXA) in the Department of Commerce that could be used to restrain imports of clothing and textile products. The United States utilized the safeguard to restrict imports from China 14 times before its availability expired at the end of 2008 (Table 1).

The second safeguard that the US could have applied to imports from China of any product was available under Section 421 of the Trade Act of 1974 through December 2013. Somewhat surprisingly, the United States only imposed trade restrictions under Section 421 one time – in 2009, at the height of the global financial crisis – on imports of Chinese tires. As described below, China quickly retaliated in response. The United States had conducted six other Section 421 investigations between 2001 and 2009; in some cases, the US International Trade Commission found evidence of injury to the US import-competing industry and recommended protection, but in each instance the President declined to impose it.

Nevertheless, a contributing explanation for the relatively few requests to impose protection under Section 421 was because US policymakers had relatively easy access to other laws to restrict imports from China. This protection arose after requests brought forward under the US unfair trade laws, first beginning with AD and then, after a landmark decision in 2006, by complementing those with CVDs.[15] In addition to showing injury, access to AD required evidence of Chinese firms selling at unfairly low prices in the US market, whereas CVDs required evidence that Chinese firms benefited from receipt of illegal subsidies.

Between 2001 and 2017, the United States launched 130 AD and 69 CVD investigations of imports from China, resulting in 103 and 55 restrictions imposed, respectively (see again Table 1). The AD and CVDs that the United States imposed against China were typically quite high. As Table 2 indicates, the average US AD duty in force against China in 2018 was 151.5 percent, and the average US CVD was 72.4 percent.

Figure 4 illustrates the share of US imports from China covered by AD and CVDs in effect over 1980–2018. For AD, the share of covered imports hovered between 1 and 2 percent

Table 1. US and China use of special trade protection toward each other, 2001–2017.

Number of...	Antidumping (Section 731)	Countervailing duty (Section 701)	China-specific safeguards (Section 421)	OTEXA safeguard
US investigations of China	130	69	7	38
US trade restrictions imposed on China	103	55	1	14
China's investigations of US	44	5	–	–
China's trade restrictions imposed on US	36	5	–	–

Source: Constructed by the author.

Table 2. US and Chinese average bilateral antidumping and countervailing duties in effect in 2018.

	Number of cases	Average duty, percent
US antidumping duties imposed on China	123	151.5
US countervailing duties imposed on China	52	72.4
China's antidumping duties imposed on US	23	31.4
China's countervailing duties imposed on US	3	21.3

Source: Constructed by the author.

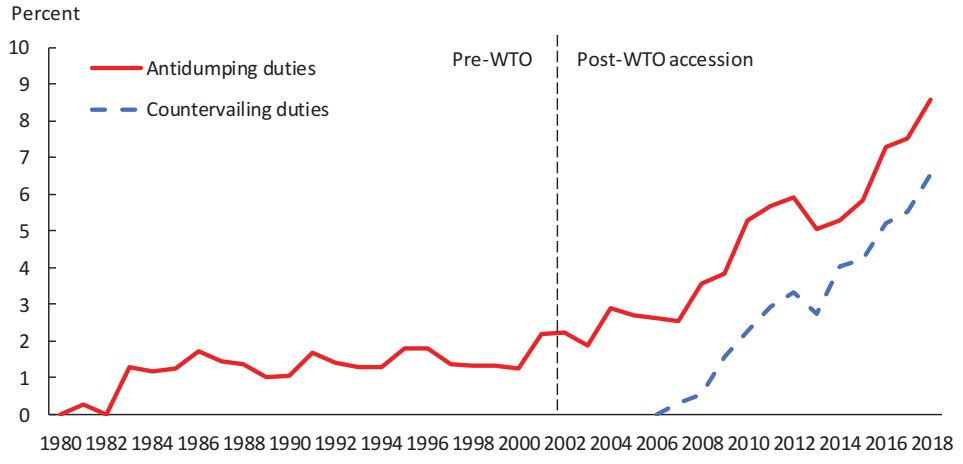

Figure 4. US imports from China covered by antidumping and countervailing duties, 1980–2018.

Source: Share of US goods imports from China covered by antidumping or countervailing duties in effect each year. Computed by the author from product-level import data based on methodology described in the text.

between 1983 and 2000; it then sharply increased after China's WTO accession to cover 7.5 percent of bilateral imports by 2017. After the 2006 US regulatory change that allowed imports from China to become subject to CVDs, the trade covered by CVDs increased and it reached 5.5 percent of bilateral imports by 2017. However, one item worth noting is the redundancy of the AD and CVD cases against China. That is, virtually all US CVDs applied toward imports from China have been accompanied by a simultaneously-imposed AD duty.[16]

The main industries covered by AD and CVDs during the heavy period of US use against China of 2008–2017 were metals (see again Figure 3) – i.e. steel and aluminum – as well as plastics. The US steel industry has a long history of receiving special protection under a variety of US laws and ad hoc arrangements. These date back to the 1960s and thus predate China becoming a major global producer and exporter of steel products and stoking the contemporary challenges described below.

Section 4 provides greater detail on how and why the United States and other countries had special procedures for applying trade restrictions under these laws toward imports from China during this period. It also explores why that conflict remained an important contributor to the events of 2018.

2.3 The US special protection introduced in 2018

The United States increased the special protection it applied toward China considerably in 2018, albeit not through the laws through which most of the protection arose between 2001 and 2017. As Figure 3 again illustrates, the share of bilateral imports covered by US special tariffs increased from 7.5 percent in 2017 to over 50 percent in 2018. Table 3 summarizes the timeline of the key events that culminated in the imposition of new types of special tariffs, under mostly different laws, in 2018.

The first two laws involved the United States applying trade restrictions on a relatively nondiscriminatory basis and thus were not limited to imports from China. In January 2018, under Section 201 of the Trade Act of 1974, the United

Table 3. Timeline of key events for US and China special tariffs arising in 2018.

Date	Event
20 April 2017	US self-initiates Section 232 investigation into steel (Presidential memorandum)
27 April 2017	US self-initiates Section 232 investigation into aluminum (Presidential memorandum)
23 May 2017	US initiates Section 201 investigation into solar panels
5 June 2017	US initiates Section 201 investigation into washing machines
18 August 2017	US self-initiates Section 301 investigation into Chinese unfair trade practices
22 January 2018	US announces Section 201 tariffs on washing machines
22 January 2018	US announces Section 201 tariffs on solar panels
1 March 2018	Trump announces he will impose Section 232 tariffs on imports of steel and aluminum
22 March 2018	Trump indicates forthcoming Section 301 tariffs on up to $60 billion of imports from China, USTR releases Section 301 report
23 March 2018	US imposes Section 232 tariffs of 25 percent on imports from China of steel
23 March 2018	US imposes Section 232 tariffs of 10 percent on imports from China of aluminum
2 April 2018	China imposes tariffs of 15 to 25 percent on $2.4 billion of imports in from US retaliation to US steel and aluminum tariffs
3 April 2018	US announces list of products over which it will impose Section 301 tariffs of 25 percent on $50 billion of imports from China
4 April 2018	China announces list of products over which it will impose retaliatory tariffs of 25 percent on $50 billion of imports from US due to Section 301 tariffs
5 April 2018	Trump instructs USTR to consider whether an additional $100 billion of imports from China should be subject to Section 301 tariffs, instructs USDA Secretary to examine possibility of subsidizing US farmers hurt by tariff retaliation
18 June 2018	Trump instructs USTR to identify an additional $200 billion of imports from China that would be subject to a 10 percent tariff under Section 301
6 July 2018	US imposes Section 301 tariffs of 25 percent on revised list of $34 billion of imports from China
6 July 2018	China imposes tariffs of 25 percent on revised list of $34 billion of imports from US in retaliation to US Section 301 tariffs of July 6
10 July 2018	US announces list of products over which it will impose Section 301 tariffs of 10 percent on $200 billion of imports from China
3 August 2018	China announces list of products over which it will impose tariffs of 5 to 25 percent on $60 billion of US imports if US imposes Section 301 tariffs on $200 billion of imports from China
23 August 2018	US imposes Section 301 tariffs of 25 percent on revised list of $16 billion of imports from China. Combined with July 6 action, this completes the first $50 billion list
23 August 2018	China imposes tariffs of 25 percent on revised list of $16 billion of imports from US in retaliation to Section 301 tariffs of August 23.
24 September 2018	US imposes Section 301 tariffs of 10 percent on $200 billion of imports from China. Tariffs will increase to 25 percent on 1 January 2019.
24 September 2018	China imposes tariffs of 5 to 10 percent on $60 billion of imports from US in retaliation to US Section 301 tariffs of September 24
1 December 2018	Trump and Xi announce commencement of negotiations. Scheduled US tariff increase from 10 to 25 percent on $200 billion of imports from China put on hold for 90 days.
24 February 2019	Trump Tweets he will delay the tariff increase from 10 percent to 25 percent scheduled to go into effect on 1 March 2019 and is planning a summit with Xi.

Source: Constructed by the author. See also Bown and Kolb (2019).

States announced restrictions on imports of solar panels and washing machines.[17] In March 2018, under Section 232 of the Trade Expansion Act of 1962, the United States imposed trade restrictions on steel and aluminum, arguing imports of each were a threat to national security.[18]

The third law under which the United States imposed special tariffs in 2018 was Section 301 of the Trade Act of 1974. Under this law, the United States imposed tariffs on roughly $250 billion of imports from China.

Figure 5 uses a Venn diagram to illustrate the full panoply of US imports from China subject to special protection in 2018 by policy category. Collectively, special tariffs applied under these laws – as well as the AD and CVD laws described earlier – covered more than 50 percent of US imports from China. This estimate accounts for the redundancies inherent in some products being hit with multiple special protection policies. For example, the

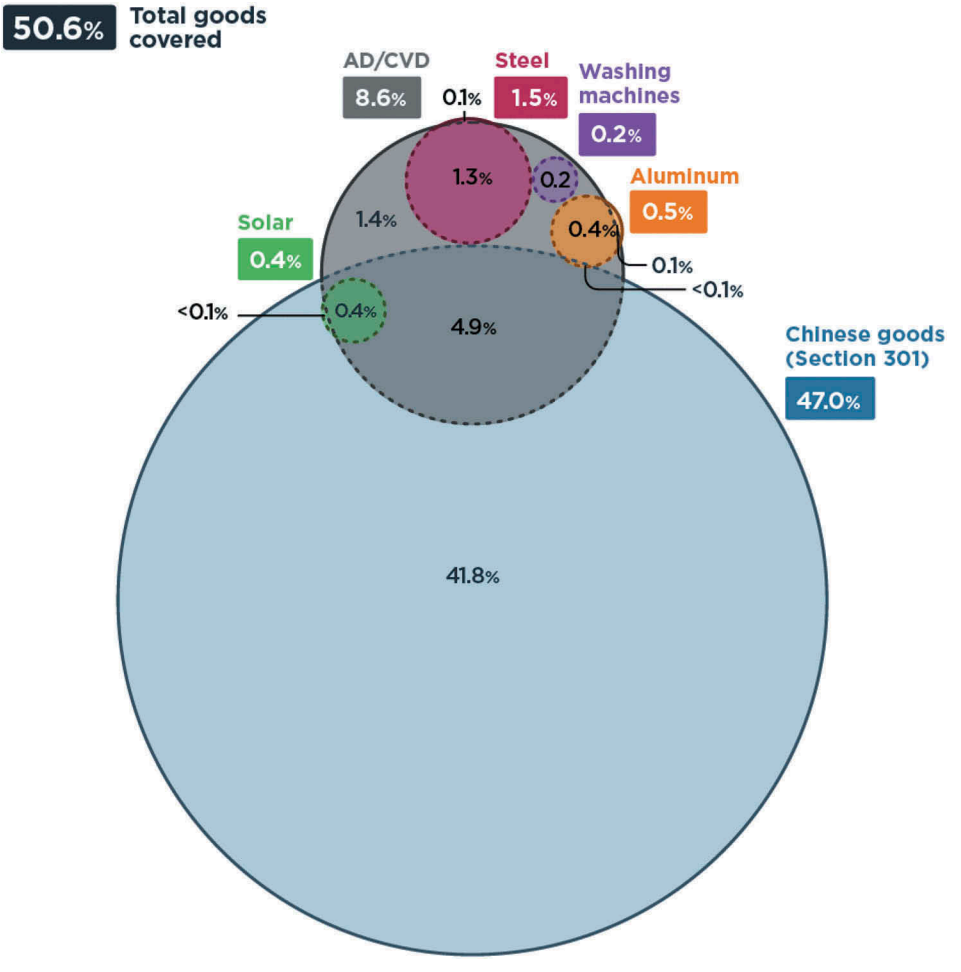

Figure 5. US imports from China covered by special tariffs in effect in 2018, percent.

Source: Share of US goods imports from China covered by special forms of protection in effect in 2018. Computed by the author from product-level import data based on methodology described in the text. Special tariffs refer to antidumping/countervailing duties (AD/CVD) and President Trump's five tariff actions of 2018 on: Chinese goods (Section 301), steel (Section 232), aluminum (Section 232), solar (Section 201), and washing machines (Section 201). AD/CVD includes duties in effect in 2018. Totals for each tariff group and all goods covered are based on unrounded data.

Section 232 tariffs on steel imposed on March 23 covered 1.5 percent of US imports from China. However, almost all (1.3 percent of total) of those steel products were already covered by other US special tariffs in the form of AD or CVDs. Other products, like solar (0.4 percent of total US imports) found themselves covered by three different forms of special tariffs in 2018 – the tariffs imposed under Section 201, the tariffs imposed under Section 301, and earlier AD and CVDs. Products subject to multiple special tariffs are less likely to see trade flows resume if all of the tariffs were not removed.

Figure 6 further breaks out the US special protection imposed in 2018 by sector (panel a) and product type (panel b). More than 50 percent of US imports from China across almost every sector were subject to special tariffs in 2018. The exceptions were electronics and electrical machinery, minerals, footwear, textiles and clothing, and toys. Much of the

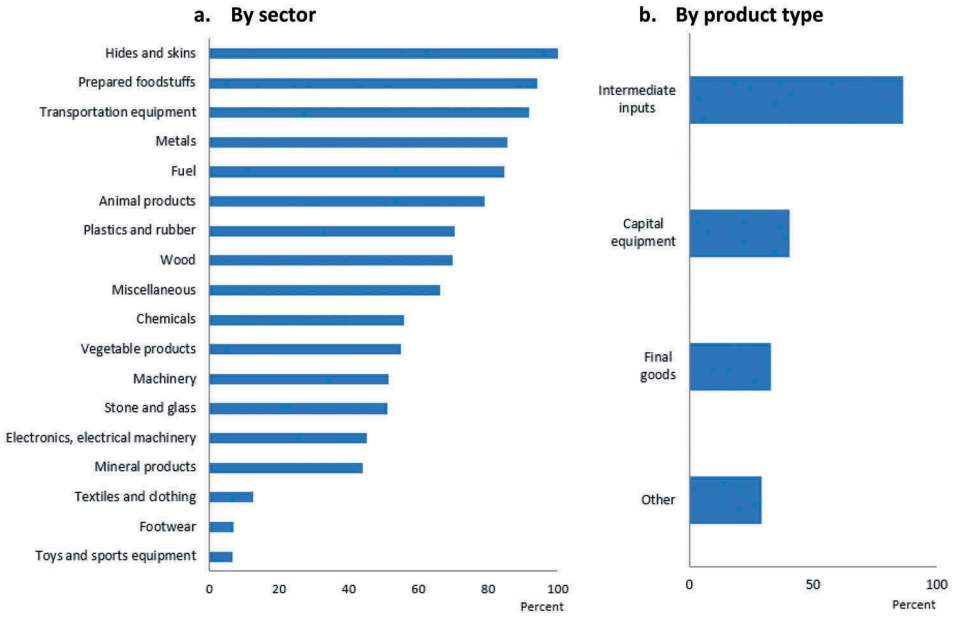

Figure 6. US imports from China covered by special tariffs in 2018, by sector and by product type. (a) By sector. (b) By product type.

Source: Share of US goods imports from China, by sector and product, covered by special forms of protection in effect in 2018. Computed by the author from product-level import data based on methodology described in the text. Sectors defined as in Bown and Crowley (2016), product types defined by UN Broad Economic Categories.

nontargeted products were final consumer goods, as illustrated by panel b. One important exception was minerals – in that special case, the United States has historically had the opposite concern with China's exports. Out of a worry that China was shipping too little abroad, the United States had earlier filed three formal WTO disputes against China's policy of export restrictions on rare earth metals and other raw materials.[19]

Figure 6(b) illustrates one other striking feature of the Trump administration's special protection. The accumulation of tariffs resulted in nearly 90 percent of US imports of intermediate inputs from China being subject to special protection in 2018, threatening American producers' continued integration with international supply chains. Governments have traditionally shied away from applying protection to imports of intermediate inputs, as this provides their domestic firms access to inputs at lower cost to help their global competitiveness (Bown and Crowley 2016).

3. China's special tariffs and acts of protection, 1998–2018

Like the United States, China has also deployed special tariffs since entering the WTO, including under many of the same legal justifications. However, much of its special tariffs have been more reactive or retaliatory than driven by the same sort of domestic demands for additional protection arising in countries like the United States. This includes not only its 2018 retaliation – when the share of its imports from the United States subject to special tariffs increased from 5 percent to over 70 percent – but in many instances prior to 2018.

3.1 China's special tariffs, 1998–2017

Toward the end of its WTO accession negotiations in the late 1990s, and as it was reducing its 'normal' tariffs toward imports from the United States as well as other countries (see again Figure 1), China implemented and began to use many of the same trade laws that the United States uses to deal with injurious imports, including AD, CVDs, and safeguards. Like the United States, China has used AD most often. And when it imposed CVDs on imports from the United States, they were typically also applied to products hit with AD duties.

Figure 7 provides estimates of the share of China's imports from the United States covered by its acts of special protection under these laws over 1998–2018. Two main features of the data stand out. First, by 2017, roughly 5 percent of China's imports from the United States were covered by these tariffs. Second, trade coverage of these policies peaked in 2011 when China imposed retaliatory duties on imports from the United States of cars, chicken feet, and other products. This was in response to the US imposition of the Section 421 safeguard on tires described earlier, as well as other US policy decisions such as filing formal disputes against China at the WTO.[20]

China's average applied AD and CVDs in effect in 2018 against imports from the United States were 31.4 percent and 21.3 percent, respectively (see again Table 2). They were thus far lower than the average duties the United States applied in its cases against China.

3.2 China's retaliation in 2018

In 2018, China retaliated to the Trump administration's tariffs – on steel, aluminum and $250 billion of imports from China – by imposing higher special tariffs on imports from the United States. Table 3 again documents the timeline of when China imposed its tariffs. By the end of 2018, China's combined retaliation covered roughly $110 billion of US exports, or 70 percent of China's total goods imports from the United States.

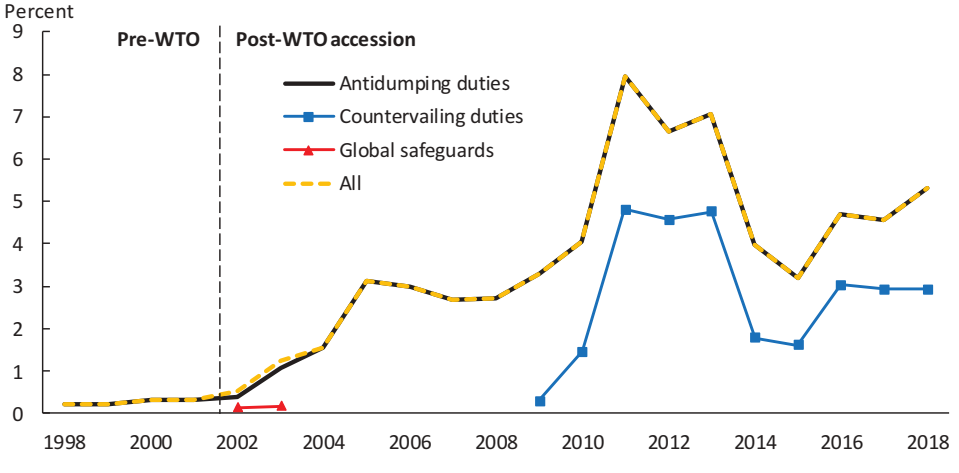

Figure 7. China's imports from US covered by antidumping, countervailing duties and safeguards, 1998–2018.

Source: China's share of product-level imports from US covered by antidumping, countervailing duties or safeguards in effect each year. Computed by the author based on methodology described in the text. 'All' precludes double counting of the same product affected by simultaneously-imposed antidumping and countervailing duties.

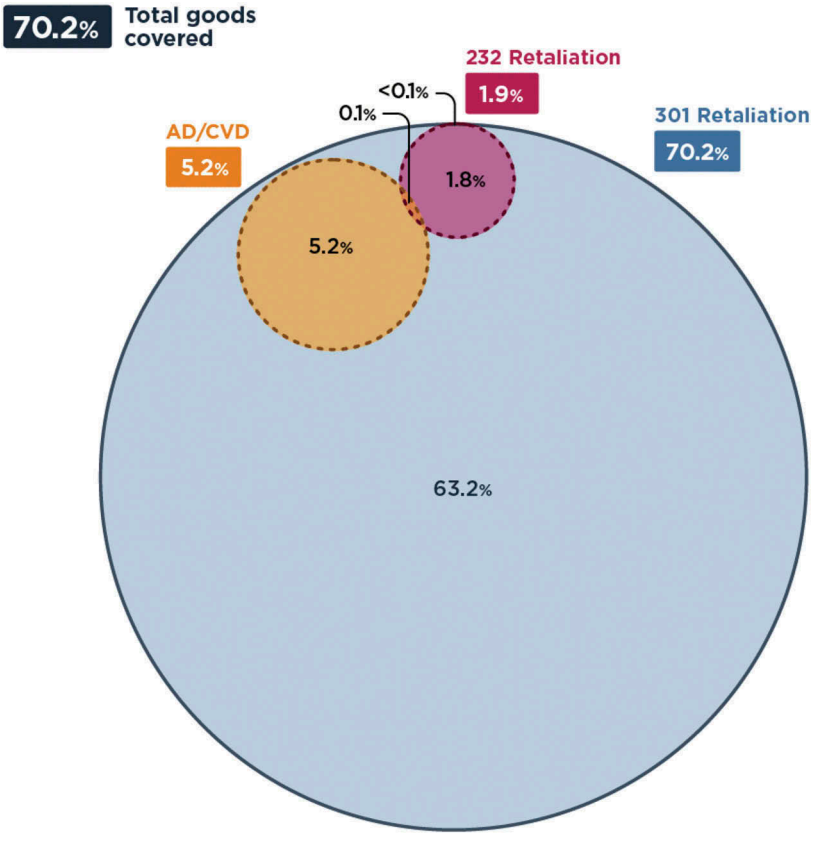

Figure 8. Chinese imports from US covered by special tariffs in effect in 2018, percent.

Source: Share of China's goods imports from the United States covered by special forms of protection in effect in 2018. Computed by the author from product-level import data based on methodology described in the text. Special tariffs refer to antidumping/countervailing duties (AD/CVD) and China's 2018 tariff retaliation against US tariffs on: Chinese goods (Section 301), as well as steel and aluminum (Section 232). AD/CVD includes duties in effect in 2018. Totals for each tariff group and all goods covered are based on unrounded data.

Figure 8 is a Venn diagram illustrating the products covered by China's special tariff protection on imports from the United States in 2018. Most was retaliation to the Trump administration's Section 301 tariffs. Furthermore, some of China's imports from the United States subject to that retaliation were in products *already* subject to China's AD or CVDs or its retaliation to the Trump administration's Section 232 tariffs on steel and aluminum.

4. Tying US special tariffs to specific concern over China's policies

This section uses the lens provided by these tariffs to shed light on the policy frictions between the two countries. The first step is to make a more formal comparison of average tariffs across countries. It then explores how most of the US special tariffs on imports from China in 2018 can be traced to broader concerns about Chinese policy,

the evolution of the Chinese economy, and concerns with the current rules of the existing WTO system.

4.1 The reciprocal tariffs comparison

The cross-country comparison of tariff levels was part of the 2018 political debate, just as in similar historical moments. This includes the 1980s, when the United States was troubled by Japan's rising economic importance, as well as the end of the nineteenth century, when Britain bristled at the end of its hegemonic period (Bhagwati and Irwin 1987). Bagwell and Staiger (2014) characterize contemporary concern over sizeable differences in tariff levels between old (e.g. US) and new (e.g. China) members of the WTO as the 'latecomers' problem.'[21]

Nevertheless, economic theory provides little guidance as to the value of making comparisons of tariff *levels* across countries. The foundational work on the efficiency-enhancing role that reciprocity plays in trade agreements (Bagwell and Staiger 2002) focused on what has been called 'first-difference' reciprocity. As an important principle to guide trade liberalization negotiations, reciprocity involves roughly equivalent *changes* in volumes of trade induced by *changes* in trade policy. But this is not the same as ensuring the equivalence of post-change *levels* of either tariffs (the policy) or trade flows (the outcome).

How nonreciprocal were US and Chinese tariff levels? Table 4 provides estimates to underscore additional complexity beyond that introduced in Figure 1.[22] First, when considering only the basic statutory and 'normal' tariffs that each country applied as of 2017 – and no category of 'special' tariffs – the United States (3 percent) applied considerably lower tariffs on average than China (8–10 percent).

The US special tariffs of 2018 and China's retaliatory tariffs did little to change that relationship. The Trump administration's special protection pushed the US average tariff on imports from China from 3 percent to above 12 percent, but the impact of China's retaliation was to increase its average tariff on imports from the United States to 18–20 percent. Thus, the nonreciprocal relationship was left unaffected, the only difference is that both countries had higher levels of tariffs than before.

What these estimates do not consider, however, are the *other* special tariffs each imposed under AD and CVD laws. Most of the special tariffs under those laws had arisen long prior to 2018. And as Figures 4 and 7 also make apparent, the United States applied these special tariffs to a larger share of its bilateral imports than did China, and its tariffs were also higher on average (see again Table 2). In fact, the nonreciprocal relationship

Table 4. US and China's bilateral tariffs before and after the 2018 acts of protection, percent.

	MFN tariffs		MFN + 2018 special tariffs**		MFN + antidumping duties		MFN + antidumping duties + 2018 special tariffs	
	Simple average	Trade-weighted*	Simple average	Trade-weighted*	Simple average	Trade-weighted*	Simple average	Trade-weighted*
US	3.4	3.1	12.5	12.4	10.4	13.6	19.5	22.9
China	9.6	8.0	18.1	19.6	9.8	8.5	18.3	20.1

Source: Constructed by the author. *Trade-weighted average tariffs are weighted by partner's exports to the world in 2017. **Not including antidumping.

disappears when the comparison considers both countries' AD tariffs in effect in 2018. The United States applied slightly higher tariffs on average toward imports from China (20-23 percent) than did China toward the United States (18–20 percent).[23]

Of course, one important political-economic question is whether it is appropriate to include AD (or CVDs) in such average tariff calculations. The United States, for example, might argue that its AD tariffs should not be included because they are 'corrective' and imposed only because of market-distorting behavior in China. Furthermore, it might also point to WTO rulings that indicate China's AD tariffs have not been applied to market-distorting US behavior and were simply done for retaliatory purposes.

Given its empirical and policy relevance, Section 4.2 explains the underlying sources of concern hidden behind the escalating use of these policies.

4.2 China as a nonmarket economy, US special tariffs, and the WTO

The 2018 US tariffs on steel and aluminum punctuate the first major American concern with China. After its 2001 WTO accession, China did not fully transform into a market economy. And because of its size, China's system of explicit and implicit subsidies imposed political-economic costs on trading partners.

But imposing steel and aluminum protection under the national security exception also arose because of problems with the WTO. The WTO had proven incapable of negotiating any new rules that might constrain the Chinese policies that were the underlying source of some of the US problems. Furthermore, the WTO had also issued several dispute settlement rulings that constrained how the United States was legally able to respond to injurious imports.

4.2.1 Aluminum as an example

First consider a stylized explanation of how the Chinese economic system operates in nonmarket ways. The basic argument is that, while some domestic Chinese firms compete – perhaps ferociously – with one another, they may all be subsidized relative to foreign firms. Some subsidies are direct transfers from the government, others arise implicitly. Some industries may have state-owned enterprises (SOEs) that face soft budget constraints and thus are not profit-maximizers.[24] Some firms have Chinese Communist Party officials as part of their leadership (Wu 2016) who thus allocate resources or make production decisions based on state-directed industrial policy goals, such as Made in China 2025, but that are in conflict with market incentives. Furthermore, downstream producers need not be SOEs or state-directed firms; their receipt of subsidized inputs from upstream firms that fit those criteria may be enough to distort their own output prices. Finally, implicit subsidies are generated by other Chinese government policies, including export taxes and subsidies, as well as the discriminatory and discretionary rebate of value-added taxes.

Aluminum provides an illustrative example. It was not only the focus of US special tariffs in 2018, but also a recent OECD report (OECD 2019a).[25] First, according to data from the US Geological Survey (2019), world production of primary aluminum nearly doubled between 2005 and 2017. China was the source of most of that expansion, as its share of global production increased from less than 25 percent to more than 54 percent during that period. Second, and paradoxically, China's expansion took place during an

extended period in which price signals would have been expected to push its production in the *opposite* direction. World prices for output – as reported by the London Metals Exchange – trended downward over 2011–2015. And Chinese coal prices – the key input cost for energy-intensive primary aluminum production – were elevated during this period. Combined, this suggests that Chinese production was responding to government support and not market signals.

However, the exact form of Chinese government intervention has become increasingly challenging for foreign policymakers to identify and potentially target with existing WTO rules. The OECD (2019a) shows this through an investigation of firm-level disclosures in annual reports, financial statements, sustainability assessments, and bond offerings. In a cross-country study of firms in the aluminum industry, it finds Chinese firms are among the top recipients of benefits of direct and indirect government support, including through energy subsidies, below market-rate loans (concessional finance), and tax concessions provided by local authorities. These implicit subsidies are particularly prominent in primary aluminum production. And subsidizing such upstream production is important, given estimates that primary aluminum makes up 75–86 percent of the costs of downstream, semifinished aluminum products that were the problem facing most of the US aluminum industry.[26]

However, the OECD report also identifies how other Chinese policies – including its discretionary regime for selectively rebating value-added taxes for different products across the aluminum value chain – provide implicit subsidies to the downstream segment of semifinished aluminum. First, for primary aluminum, China imposes export taxes that serve to encourage domestic relative to international sales. Thus, while China produced more than 50 percent of world primary aluminum output, it exported only 2 percent of that in 2016. Second, China has not typically rebated value-added taxes for exports of primary aluminum products. In comparison, downstream and refined aluminum products faced no export taxes and were offered considerable VAT rebates, thereby incentivizing both their production and export.[27] The locally inexpensive primary aluminum has thus provided an implicit subsidy for downstream semifinished aluminum products.

The OECD report makes it clear that China is not the only country with considerable government involvement in the aluminum sector. However, the estimated magnitudes for subsidies received by Chinese firms are large. And because China is such a large supplier and trader in global markets, its policies likely spilled over and imposed externalities on economic activity in other countries.

4.2.2 Political-economic concern with Chinese subsidies

If markets were competitive and frictionless, economics would likely find the negative US reaction to such Chinese subsidies misplaced, at least on the grounds of aggregate welfare implications. The Chinese subsidies result in lower-priced US goods with benefits to American consumers that were larger than the costs to US producers, with China bearing the fiscal expense. Putting aside distributional implications, the typical economic model suggests the Chinese subsidies confer a net benefit to the US and other aluminum importing countries.

However, there are several political-economic caveats motivating why the traditional economic response may be incomplete in the case of China.

The first is if markets were not frictionless and the resulting adjustment costs were sizeable. Take, again, the example of aluminum production, and assume a negative shock to global demand. If China's nonmarket system did not respond to price signals, China's production would fail to absorb 'its share' of the reduction of global demand; the result is that a disproportionately large share of the adjustment burden would be put onto workers (unemployment) and firms (bankruptcy) in other countries, including the United States. There is increasing evidence of larger-than-expected costs to the US economy of the failure to adjust when confronted by these kinds of shocks.[28]

A second concern involves whether markets are, or would remain, competitive considering China's actions. China had already shown a willingness to exercise market power to its economic advantage. Its export policies for primary aluminum – relative to downstream, refined aluminum – described above were one example. Another was its imposition of WTO-illegal export restrictions on raw materials and rare earth metals – sectors in which it dominated global production. China's export restraints on key inputs ended up imposing costs on foreign consumers and provided implicit subsidies to domestic Chinese downstream producers.

There were other concerns that fit less well into basic economic models.

One involved the notion of fairness in the trading system. Workers and firms in one country forced to operate under different rules than those in another country may make it difficult to sustain openness and international cooperation.

A second, and more existential, issue starts to bleed into the broader concern of the future of markets. The growing economic importance of the Chinese system has generated political arguments elsewhere for more state intervention, including in the United States and Germany, to remain competitive with China.[29]

A final concern involves how to overcome the coordination problem of addressing China in a world in which adjustment costs may not be uniform across countries. The 2018 aluminum case – as well as steel and solar panels – provides telling examples.

As Figure 5 again illustrates, the 2018 US tariffs on aluminum, steel, and solar panels were largely redundant. Because the United States had already imposed special tariffs on imports from China under its AD and CVD laws, it had mostly arrested import growth of those products from China. However, not surprisingly, imports from other countries continued to flow into the United States. This raises the important question: to what extent did China's subsidization and increased exports to third markets shift other countries' exports to the US market? Evidence of arbitrage of this sort via trade deflection (Chinese exports to third markets increasing) and trade diversion (US imports from third markets increasing) has been found in other settings.[30]

American policymakers certainly perceived that this is what happened. Recognizing that tariffs on China alone were insufficient to halt the economic impact of Chinese subsidies on the US economy, let alone fix the underlying problems in China, the 2018 US policy response was to raise tariffs on imports of aluminum, steel, and solar panels from all countries. This led Canada, the European Union, and others to retaliate against the United States, thus creating a new source of global trade tension. Other countries followed the US action on steel with their own protection to prevent the deflection of trade from entering their markets. This introduced yet another source of friction – e.g. European tariffs on steel from India or Brazil – between countries quite far removed from the initial conflict (China and the United States).

Thus, another important worry is that Chinese subsidies trigger not only one round of protection, but also follow-on policies that destabilize international cooperation. This could even include countries with an otherwise common political-economic concern with the Chinese system.

4.2.3 The US-China conflict over subsidies, AD, and CVDs at the WTO

Even before the Trump administration had imposed tariffs on imports from China of aluminum and steel in March 2018, or of solar panels in January 2018, more than 90 percent of US imports from China of such products had already been covered by US AD and CVD import restrictions.

These tariffs were mostly permitted under the rules of the WTO. Upon China's accession in 2001, the existing WTO membership was granted the right to treat China as a nonmarket economy (NME) in its AD investigations. In practice, this has meant that government authorities have considerable discretion to find evidence of dumping. Because data on Chinese firm costs are unreliable indicators of how their 'true' costs would compare to costs of US firms (due to the explicit and implicit subsidies described above), other data are needed to identify whether there is unfair pricing. Treating China as a NME under US law allowed investigators the discretion to rely on the costs of a firm in a 'surrogate country' – say a higher cost country like India – to estimate the costs of aluminum, steel, or solar panel firms in China.

Second, after the 2006 regulatory change described earlier, the United States also began to consider petitions that Chinese firms were receiving subsidies and thus could face tariffs under the US CVD statute. In CVD investigations, the US used a 'surrogate input' approach instead of the blunter surrogate country approach under AD. For example, if the subsidy arose due to below-market rate loans from Chinese state-owned banks, investigators relied on average interest rates from countries at comparable levels of development. If coal from Chinese state-dominated energy providers was being subsidized, they relied on energy prices in other countries. For other key subsidized inputs – say primary aluminum or hot rolled steel provided at subsidized rates from an SOE to downstream firms – government investigators might turn to alternative benchmarks, such as world prices.[31] Combining on an input-by-input basis was another way to construct estimates of Chinese firm costs.

However, several formal legal disputes have arisen with the potential to curb the WTO-consistency of the US approach. First, China's interpretation of its protocol of accession was that the US ability to continue to treat it as a NME in AD investigations expired on 11 December 2016. China has thus filed a formal WTO dispute challenging the United States on this issue.

Second, China has also disputed how the United States conducted its CVD investigations. A key legal issue involved the definition of a 'public body' – or who within a country can grant subsidies. While governments obviously fit the criterion, the United States has argued that the definition should be expanded to deal with China. It should include upstream, SOEs such as banks, energy companies, other key input providers, and perhaps even firms with Chinese Communist Party officials in key management positions, as they may be susceptible to instruction from the government. The argument is that such companies implicitly subsidize downstream firms in ways that are economically equivalent to direct government subsidies.

Third, the United States may have also decided against utilizing a formal dispute to convince China to end its subsidy-like policies, the first-best result, out of belief that the WTO was not well-equipped to constrain Chinese-style subsidization.[32] The WTO's subsidy disciplines can easily capture direct payments from a government agency to firms. However, as the aluminum example illustrates, Chinese subsidies arose instead from a nuanced and complex combination of policies that were not necessarily WTO-illegal when viewed in isolation.

Overall, US tariffs against China alone were insufficient to address the larger systemic concerns with Chinese subsidies. Yet, several WTO rulings had constrained – or were on the verge of constraining – the ability of the United States and other WTO members to address the first-order effect of China's policies by restricting access to special tariffs under AD and CVD laws. The WTO had already made a series of legal rulings that had constrained the ability of WTO members to access safeguards and impose tariffs on a nondiscriminatory basis.[33] This was another likely contributor to the United States choosing to resort to the destructive 'national security' justification for tariffs under Section 232 instead.

Thus, the broad US political concern with the WTO involved how it was threatening to further weaken the United States' already limited defenses. The US argument was that its 2018 tariffs arose because something needed to be done, even if it led to a crisis, because resorting to other WTO approaches was not able to address the underlying China subsidy problem.[34]

4.3 Foreign investment in China, the forced transfer of technology, and US special tariffs

The other major 2018 US tariffs concerned unfair treatment of American firms after they had invested to establish production in the Chinese market. This argument formed the core of the Trump administration's tariffs on roughly $250 billion, or 47 percent of US imports from China, under Section 301 of the Trade Act of 1974 (Figure 5).[35]

Consider a stylized explanation of the US concern over investment in China and the forced transfer of technology. First, because of China's relatively high import tariffs (see again Table 4), many foreign companies only found it economically viable to serve the Chinese consumer market by locating production in China, instead of exporting from the United States. However, producing in China also required satisfying various regulatory requirements that created the need for foreign firms to form joint ventures (JVs) with local partners, many of which were Chinese SOEs. The allegation was that, by forcing the JV relationship, the US companies could then be more easily held-up or coerced into turning over their technology involuntarily, or on noncommercial grounds, to maintain access to Chinese consumers.

Concerns over foreign investment and the 'forcible' transfer of technology may have been just as critical as those covering industrial subsidies, SOEs and China's nonmarket evolution. However, there were even more grey areas and informational asymmetries involved, increasing the challenge to any rules-based approach to cooperation.

First, China's tariff commitments were negotiated as part of its WTO accession, of which the United States took part. While China's tariffs were relatively higher than

those imposed by the United States (see again Table 4) and may have helped incentivize foreign investment, they were not a violation of WTO rules.

Second, China had been phasing out its JV requirements, and there were fewer and fewer sectors in which limits on foreign investment remained. And yet, while elimination of most JV requirements could help stem coercion of foreign technology, the remaining sectors with limits – e.g. Internet and e-commerce, artificial intelligence – were likely to be a continued area of conflict. These were sectors of critical economic importance to American and other foreign companies and areas of national security concern to the Chinese government.

The third issue involved the legal question of how, in the presence of informational asymmetries, to define, monitor, and enforce rules around the forcible transfer of technology. Some technology would be transferred due to knowledge spillovers under normal conditions; it is hard to distinguish between what has been forced by policy versus what would have occurred naturally. It is a challenge to distinguish between a legitimate claim from one firm whose technology was stolen and a bogus claim from a second firm that shared technology voluntarily but suffered regret after it underperformed, perhaps due to new competition from rival Chinese firms that naturally improved over time.

Fourth, the conflict would not necessarily be fixed even if the Chinese government lifted *formal* requirements that foreign firms must partner with local firms. Other policies could continue to incentivize JVs, leading to the coerced transfer of technology. As one example, USTR (2018b) pointed to Chinese draft regulations which it suggested would continue to incentivize foreign automakers to partner with Chinese firms to meet requirements involving new energy vehicles in order to remain competitive with established Chinese suppliers.

These form some of the core issues arising from the Trump administration's Section 301 report that it used to justify its imposition of tariffs on $250 billion of imports from China. In addition, the United States initiated one formal WTO dispute challenging Chinese laws that deny foreign patent holders the ability to enforce their rights against a Chinese JV party after termination of a technology transfer contract (USTR 2018c). And the European Union filed a formal WTO dispute against China's practices that force the transfer of technology (European Commission 2018).

4.4 Other US-China trade and investment issues

There were several other important conflict areas in the bilateral trade relationship that, for space constraints, can only be mentioned in passing. For example, the United States has also had longstanding concerns over China being relatively closed to trade in services, including financial and payments services, as well as in the realm of digital trade and e-commerce.

The Section 301 reports (USTR 2018a, 2018b) also detail US concerns about piracy, industrial espionage, and state-sponsored cyber-hacking and cyberattack of American firms' intellectual policy. Furthermore, the United States has made changes to its screening procedures for inbound foreign investment under the Committee on Foreign Investment in the United States arising via the Foreign Investment Risk Review Modernization Act. It is also revising its export control regulations under the

Export Control Reform Act that may significantly impede the ability to send products containing critical and emerging technologies to China.[36]

5. Conclusion

The special tariffs of 2018 have shown a spotlight on the US-China trade conflict. This article has attempted to put the US actions in a rational framework to allow for a more productive discussion of its frustrations with both China and the rules-based trading system.

First, the US view of the overall trend was that China had continually pursued policies that operated in grey areas of the WTO, a system with rules better built to mediate trade cooperation between market economies. China was no longer on a path toward transforming into a market-based economy, and it continued to deploy explicit and implicit subsidies. And in the area of intellectual property, its development strategy was creating conflicts abroad. China would entice foreign firms to invest locally, but it would couple that with other, nontransparent policies to hold up those firms once their investments were sunk. Foreign firms would be coerced to share their technology with local Chinese companies on noncommercial terms or risk losing access to the Chinese market.

While similar policies had undoubtedly arisen unchecked elsewhere in the trading system, China's economic size meant the imposition of unsustainable political-economic costs on trading partners.

Second, the existing WTO system could no longer address the political-economic costs that China's system imposed on others. Increasingly ineffective were the tools that the United States had traditionally deployed to shield its own import-competing firms and workers from the economic effects of Chinese policies. To make matters worse, in its view, WTO dispute settlement was further threatening to take away even the few and inadequate policies that remained available to address unfair imports from state-driven economies. In ongoing WTO disputes, the uncertainty over China's NME status as well as to the US-preferred definition of a 'public body' endangered future access to AD and CVDs.

And the United States deemed the WTO incapable of the first-best solution of providing a forum to directly tackle the conflict areas with China. Dispute settlement was no longer effective. There was considerable uncertainty as to whether one-off disputes were even winnable, given that China's policies did not always seem to clearly violate WTO rules. And even if some disputes were winnable, the long-run strategy risked being ineffective, given that it would have tasked WTO dispute resolution with solving a systemic conflict between China and market-based economies. Finally, and outside of dispute mediation, using the WTO to facilitate direct US-China negotiations had also been ruled out. The lingering failure of the Doha Round meant countries deemed the WTO unable to convene negotiations that could lead to acceptable tradeoffs or add new rules. The WTO's moribund negotiating function was unable to address US concerns or solve the problem of the incompatibility of different economic systems.

Thus, the United States chose policies in 2018 to instigate a crisis.

The interpretation here of the US actions has been, admittedly, quite charitable. But it was motivated out of concern that any future attempt to create new, enforceable, and sustainable rules to re-assert international cooperation meant grappling with where the old rules may have failed. Thus, future research is needed to more critically evaluate

these US arguments as well as its actions. Empirically, how costly were the Chinese policies for the United States? Theoretically, what new rules could address systemic conflicts between market and NMEs? Would such rules be motivated out of efficiency concerns, or were they only motivated for political purposes? How would new rules be sustained? How would enforcement need to be different?

At the time of writing,[37] it was still unknown whether or how US and Chinese policymakers would address these issues. The two countries began negotiations in late 2018 to tackle some of the bilateral concerns. Separately, the European Union, Japan, and the United States had also been engaged since late 2017 in a trilateral process that could develop new multilateral rules in the areas of industrial subsidies and SOEs, as well as the forced transfer of technology.[38] Perhaps, one of these approaches would emerge to put in place a long-run, rules-based, and sustainable resolution to the systemic concerns behind the special tariffs of 2018.

The Trump administration provoked a crisis in 2018, and its destructive tactics have resulted in considerable short-run economic costs. But of greater concern are the long-run implications associated with destroying the rules-based system that had successfully mediated multilateral trade for nearly seventy years. An assessment of those costs will ultimately depend on how the trade war is resolved, as well as an evaluation of any system that arises to replace it.

Notes

1. See 'America and China are in a Proper Trade War.' *The Economist*, 20 September 2018.
2. See President Donald Trump's Tweet of 8 April 2018, 'The United States hasn't had a Trade Surplus with China in 40 years. They must end unfair trade, take down barriers and charge only Reciprocal Tariffs. The U.S. is losing $500 Billion a year, and has been losing Billions of Dollars for decades. Cannot continue!'
3. For a discussion, see Hufbauer, Berliner, and Elliott (1986).
4. Fajgelbaum et al. (2019) and Amiti, Redding, and Weinstein (forthcoming) provide model-based estimates of the economic costs of the 2018 tariffs. For the author's own critiques of the Trump administration's costly approach to trade policy, see the contributions in Bown and Kolb (2019). Other approaches seeking to rationalize the Trump administration's actions in a political-economic framework include Mattoo and Staiger (Forthcoming) and Bown (Forthcoming-a).
5. There are two broad exceptions to this nondiscriminatory tariff treatment. The first is that, since 1986, the United has negotiated and implemented free trade agreements with 20 countries whereby it offers lower than MFN tariffs. Second, since the 1970s, it has offered zero tariffs for certain products to selective developing countries under programs such as the Generalized System of Preferences (GSP).
6. See GAO (1998). The United States did not offer lower-than-MFN tariffs to China, despite its status as an extremely poor country in the period before the 1990s, under the US GSP program. Under US law, communist countries were not permitted to receive benefits under the GSP program.
7. The series begins in 1989 as that is the first year the Harmonized System – that allowed for meaningful cross-country comparisons of simple average tariffs – was in effect. The simple average applied tariff is calculated by weighting equally the applied MFN tariff of each of the roughly 5,000 6-digit products in the Harmonized System. The alternative series trade-weights each of the product-level applied MFN tariffs by the exporting country's product level exports to the world. This is one way to deal with concern over the downward bias of trade-weighting by realized imports – i.e. in the import-weighted approach, products with

high (e.g. prohibitive) tariffs are dropped from the calculation because of a zero-import weight.

8. See Handley and Limão (2017) and Pierce and Schott (2016).
9. For a discussion of imbalances that account for value-added trade, see Johnson and Noguera (2012).
10. The United States could have raised its 'normal' statutory tariffs in a rules-based manner under the WTO system under the GATT's Article XXVIII, albeit this would require compensating trading partners with a principal supplying interest in the products facing higher tariffs. For more on the considerable body of research on these and other forms of special protection, see Bown and Crowley (2016).
11. These estimates are based on a broad database of US acts of special protection implemented over 1974–2018 provided in Bown (Forthcoming-b) that includes the MFA and other various voluntary export restraints. The methodology for construction of the coverage ratios derives from an extension and refinement of Bown (2011) that focused on product-level actions for AD, CVDs and safeguards using data from Bown (2016) at the 6-digit Harmonized System level. The policy data here are matched to product- and trading partner-level import data at the 7-digit TSUSA (1974–1988) and 10-digit HTS (1989–2017) levels for US imports from China and the 6-digit HS level for China's imports from the United States (e.g. Figures 7 and 8 below). In order to address concern of downward bias from using realized imports after the trade restriction is imposed, an assumption is required about what would have been the growth rate of products hit with the trade restriction in its absence. Assuming an unchanged import market share over the life of the policy is equivalent to assuming that targeted imports would have grown at the average (nontargeted) rate of imports, a relatively conservative assumption given that products are frequently targeted because they are growing much more quickly than nontargeted products. The exception to this approach is for products covered under the MFA and ATC, which rely on realized imports.
12. For an analysis on the economic impact of the MFA and its termination, see Dean (1995) and Brambilla, Khandelwal and Schott (2010), respectively.
13. The WTO's Trade Policy Review of China (WTO 2006, 108–109) explicitly describes the voluntary export restraints that China negotiated with both the European Union and United States in 2005, nearing the end of the ATC:On 10 June 2005, China and the European Communities signed a Memorandum of Understanding (MOU), placing export restraints on 10 categories of Chinese textiles and clothing exports to the EC until 31 December 2007. The growth rates of these exports would be limited to between 8 and 12.5% per year. As a quid pro quo, the EC agreed to end its ongoing safeguard investigation on these products and refrain from adopting measures as permitted under Article 242 of China's WTO Working Party Report, in categories not covered by the MOU. . . . . A similar agreement was signed with the United States on 8 November 2005. The restraints on certain categories of textiles and clothing exports from China are effective from 1 January 2006 to 31 December 2008; exports of these products are expected to increase by 8 to 10% in 2006, by 13% in 2007, and 17% in 2008.
14. See the discussions in Bown (2010). See also the dispute coverage of Hufbauer, Wong, and Sheth (2006).
15. In 2006, the United States reversed its position adopted after the 1984 *Georgetown Steel* decision, in which US policy had refused to consider petitions under its CVD law regarding imports from NMEs such as China.
16. There are offset adjustments to the tariffs for the products over which AD and CVDs are simultaneously applied; i.e. the overall tariff is not simply the sum of the two individual duties. However, China did file a formal WTO dispute over the way the United States was applying tariffs – both AD and CVDs or 'double remedies' – in such cases. For a discussion see Prusa (2017).
17. The United States had imposed tariffs on China and other countries under this law on several previous occasions in the 1980s and 1990s. But there had been none since

2001–2003 when the George W. Bush administration had imposed a safeguard on imported steel products.

18. On March 23, the US imposed tariffs on China and all other countries except seven trading partners. Except for Australia, the remaining countries were ultimately also hit with tariffs or quotas by June 1.
19. See WTO disputes over *China – Raw Materials* (DS394), *China – Rare Earths* (DS431) and *China – Raw Materials II* (DS508).
20. See, for example, Elizabeth Williamson and Tom Barkley. 'U.S. Beats China in Tire Fight.' *Wall Street Journal*, 13 December 2010, and John Reed and Alan Beattie. 'China set to tax US-made Car Imports.' *Financial Times*, 14 December 2011. In disputes brought to the WTO, the US-imposed safeguard was broadly found to be WTO-legal and China's retaliatory AD duties on chicken feet and autos were not. For an assessment of the legal rulings in the WTO disputes, see Prusa and Vermulst (2015) on chicken feet, Mitchell and Prusa (2016) on autos, and Charnovitz and Hoekman (2013) on tires.
21. Bagwell and Staiger (2014) note that while the scale of the current latecomer's problem may be new, the challenge itself is not unprecedented, and was even present in some of the early rounds of GATT negotiations in the 1950s as new countries joined negotiations for the first time. See also Mattoo and Staiger (Forthcoming).
22. Anderson and Neary (2005) develop an alternative approach and provide additional arguments for why cross-country comparisons of average tariffs can be misleading when seeking to understand trade restrictiveness.
23. This analysis does not consider imposition of CVDs but focuses solely on AD. Analyzing the application of both requires knowledge of data that are not available in this analysis, are not required to make the basic point of interest here and are unlikely to change the pattern of results given the underlying pattern of CVDs documented in Table 2.
24. Lardy (2019) documents the increasing role of SOEs in the Chinese economy, especially since 2013, a reversal in trend from China's earlier period of reform (Lardy 2014).
25. For an explanation of how this arises in the Chinese steel industry, see the discussion in Bown (Forthcoming-c).
26. See Bown and Keynes (2018).
27. See also Gourdon et al. (2019).
28. See, for example, Autor, Dorn, and Hanson (2016).
29. See Peter Navarro 'America's Military-Industrial Base Is at Risk: And here's what the White House is going to do about it.' *New York Times*, 4 October 2018 and 'German industrial policy comes back to the fore.' *Financial Times* (Editorial Board), 5 February 2019.
30. See Bown and Crowley (2007).
31. However, even world prices may be inaccurate if China is so large that the effect of its subsidies is to impact the world price. Under that scenario, the procedure would need to rely on model-based estimates of a counterfactual world price arising in the absence of the subsidies.
32. The Trump administration has not pursued a WTO dispute against China's aluminum subsidies filed by the Obama administration at the end of 2016.
33. See, for example, the critique of the WTO decisions provided in Sykes (2003).
34. For more on WTO dispute settlement, see also the discussion in Bown (Forthcoming-a).
35. See USTR (2018a, 2018b) as well as Branstetter (2018), OECD (2019b), Andrenelli, Gourdon, and Evdokia (2019), and Jiang et al. (2018). Lovely and Liang (2018) explain how the 2018 tariffs disproportionately affect US imports arising from foreign-owned companies in China, and not Chinese domestic firms.
36. For a discussion see Chorzempa (2019).
37. The time of writing was April 2019.
38. See the 9 January 2019 joint statement (USTR 2019) as well as the discussion in Bown (2018).

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