

March 2018
18-PB 22

What Can We Learn about U.S.-China Trade Disputes from China's Past Trade Retaliations?

by Minghao Li, Wendong Zhang, and Chad Hart

Published by the Center for Agricultural and Rural Development, 578 Heady Hall, Iowa State University, Ames, Iowa 50011-1070; Phone: (515) 294-1183; Fax: (515) 294-6336; Web site: www.card.iastate.edu.

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INTRODUCTION

As of the writing of this article, trade issues are brewing between the United States and China. At the beginning of 2018, the United States imposed tariffs on imported solar panels and washing machines, and China responded by initiating an anti-dumping investigation into U.S. sorghum. On March 8th, President Trump announced steel and aluminum tariffs with China being one of the primary targets. The tariffs affect \$2.8 billion worth of Chinese imports, based on Census USA Trade Data. Within two weeks, China responded by announcing a list of 128 U.S. products that are the targets of retaliatory tariffs and of about \$3 billion trade value (The Chinese Ministry of Commerce, 2018).¹ The list notably included pork products and ethanol, which are of critical importance to the U.S. Midwest. China's announcement came right after President Trump's proposal of further tariffs on up to \$60 billion worth of Chinese imports, investment restrictions, student visa restrictions, and bringing disputes over China's trade practices to attention of the World Trade Organization (WTO) (Rueters, 2018; Wall Street Journal, 2018).

The United States exports over \$24.1 billion worth of agricultural AND AG-RELATED products to China every year (USDA FAS GATS) and has an approximate \$13.6 billion trade surplus, thus it is difficult to overestimate the importance of the trade relationship. Stakeholders in the U.S. agricultural industry are nervously speculating China's next move, fearing that other agricultural products, as was true for sorghum, will be the target for retaliatory measures. The most feared outcome is that China will erect prohibitive trade barriers against U.S. soybeans, which currently account for 66% of the total U.S. agricultural exports to China (USDA FAS GATS). While speculation is abundant, there is a scarcity of data-driven analysis and insights to help understand and anticipate China's actions during these trade tensions. While no one can predict the future, we hope to shed light on some key guiding principles of China's potential actions in the future by analyzing previous agricultural trade retaliations involving the United States and other countries.

¹ China's proposed list of products has two parts. The first part of the list (containing fruits and nuts, wines, ethanol, ginseng, and steel pipes) will be effective if agreements are not reached within an unspecified deadline. The second part of this list, containing pork products and recycled aluminum, will be effective after China "further evaluates the impacts of U.S. measures." In terms of targeted trade flow, the first part of the list targets \$0.98 billion of U.S. products annually, while the second part targets \$2.0 billion of U.S. products annually (The Chinese Ministry of Commerce, 2018). Together, about \$2 billion dollars of U.S. agricultural exports could be affected (USDA, 2018). As we show later in the article, such proportional response is typical for China in trade spats with the United States.

China's Previous Agricultural Trade Retaliations

Tires vs. Chicken 2009

In April 2009, the United Steel, Paper and Forestry, Rubber, Manufacturing, Energy, Allied Industrial and Service Workers International Union filed a complaint against China with the United States International Trade Commission (USITC). The USITC determined that some tires from China were being imported in quantities or under conditions that were causing market disruption for domestic producers (USITC, 2009). In September 2009, President Obama announced a tariff increase—35% the first year, 30% the second year, and 25% the third year—on tires from China, which at the time were valued at \$2.1 billion annually (New York Times, 2009).

China filed a WTO complaint, which it ultimately lost, and initiated its own anti-dumping investigations into U.S. broiler chicken products (The Chinese Ministry of Commerce, 2009). China's Ministry of Commerce (MOC) began their investigation days after the U.S. announcement, and a year later announced that China would impose an anti-dumping tariff of 50.3%–105.4% on U.S. broiler products (CBS News, 2010). The value of broiler products exported from the United States to China was \$800 million in the previous year, which constitutes a smaller, but somewhat comparable, trade flow to the Chinese tires targeted by the United States.

The U.S. tariff against Chinese tires was effective in limiting Chinese exports—the trade value of tires exported from China to the United States decreased 23% from 2008 to 2010 (UN Comtrade). However, China's tariff on U.S. broiler chicken was even more effective—the value of U.S. broiler chicken exports to China dropped 83% from 2009 to 2010 (\$660 million). Before the tariff, U.S. broiler chickens were the third-most valuable agriculture-related commodity exported to China (USDA FAS GATS), after the tariff they fell to thirteenth. Soon after, a further round of sanctions would decrease U.S. broiler chicken exports to China to almost zero. While China only accounted for 18% of total U.S. chicken exports in 2009, it was crucial for U.S. producers. About half of the chicken exported to China was in the form of chicken feet, which has a near-zero value for U.S. consumers, but is considered a delicacy in China. Selling chicken feet to China had been an important source of profit for a U.S. industry with thin profit margins.

All this is done with little cost to China. Although popular, chicken feet are a snack food and far from an essential product for China's consumers. Furthermore, China was able to shift imports from the United States to other countries. Figure 1 shows that the \$511 million decrease in imports from the United States was accompanied by a \$636 million increase in imports from other countries.

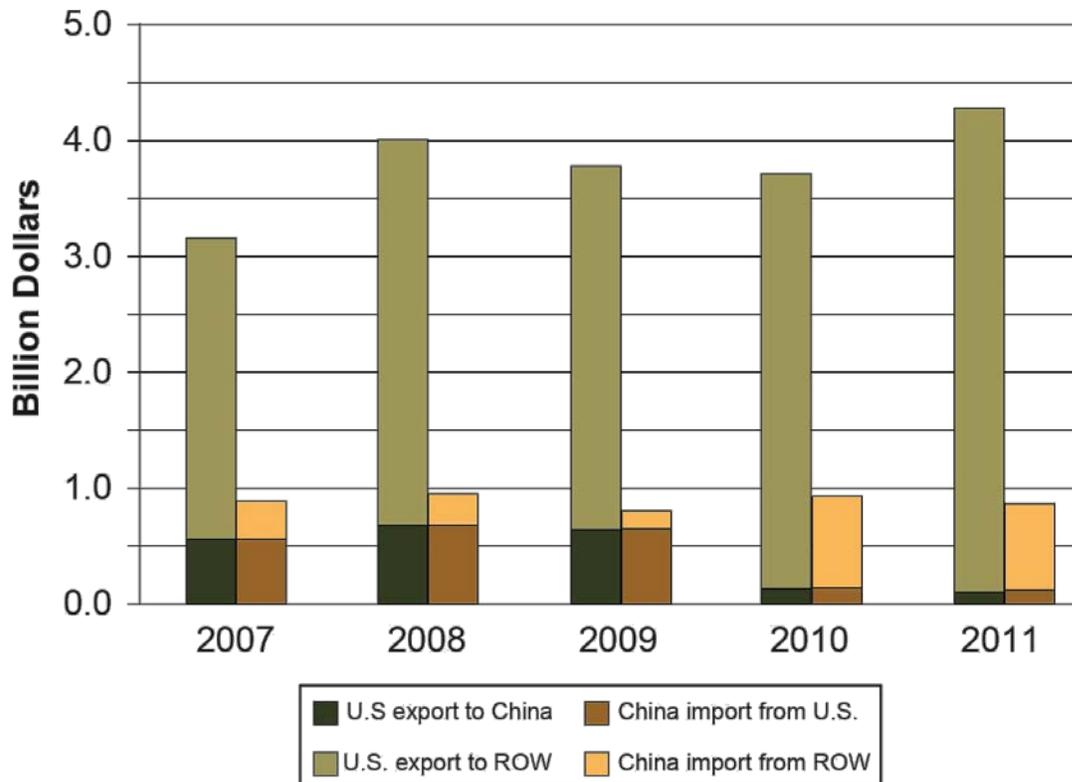


Figure 1. Chicken trade between the U.S., China, and the rest of the world (ROW)

Source: USDA FAS GATS, FAS U.S. Trade Data, and UN Comtrade Data.

Solar panels and washing machines vs. sorghum 2017

In January 2018, after a three-month anti-dumping investigation, President Trump approved a 30% tariff on solar panels, most of which come from China, and a 20% tariff on washing machines. Within two weeks, China responded by initiating an anti-dumping investigation on U.S. sorghum (The Chinese Ministry of Commerce, 2018). As with broiler chickens, China responded proportionally by choosing a commodity with a smaller, yet comparable, trade value (\$837 million) relative to the U.S. targets (\$1.4 billion for solar panels and \$0.2 billion for washing machines) (UN Comtrade) (see Table 1). If China does impose an import tariff on U.S. sorghum, it is expected to be significant—38% of the sorghum produced in the United States and 81% of total U.S. sorghum exports go to China. Although China heavily relies on U.S. sorghum (82% of imports and 51% of domestic consumption), it is mainly used for livestock feed, so there are plenty of substitutes such as other coarse grains and corn (World-Grain.com, 2018). Therefore, the domestic cost to China is likely to be small.

Table 1. Summary of two Chinese retaliations on U.S. agricultural exports

	Case 1	Case 2
U.S. target products	Solar panels, Washing machines	Certain tires
U.S. target trade value	\$1.6 billion	\$2.19 billion
U.S. investigation start date	09/19/2017	04/29/2009
U.S. decision announcement date	01/22/2018	09/17/2009
China's target products	Sorghum	Broiler products
China's target trade value	\$0.84 billion	\$0.79 billion
China announcement date	02/04/2018	09/27/2009
US % in China's import (quantity)	82%	69%
US% in China's consumption (quantity)	52%	7%
China's import in world's total export (quantity)	72%	11%
China's import in world's total production (quantity)	10%	1%

Data sources: USDA FAS GATS, UN Comtrade data, and authors' calculations.

This sorghum retaliation is especially useful in shedding light on China's intentions, due to the striking similarity between sorghum and soybeans. China imported minuscule amounts of sorghum from the United States before 2013. However, as China's price support policies for corn significantly drove up corn prices for feed, and corn shipments from the United States were found to have an unapproved genetic trait, China's demand for feed grains was directed to sorghum (Wu and Zhang, 2016). China immediately became the dominant importer and the driver for U.S. sorghum production growth. At its peak in 2015, U.S. sorghum production reached 2.4 times the 2012 level, mostly due to China's import demand (USDA PSD Data), as shown in Figure 2. It is fair to say that China's market and policy developments have wildly swung the U.S. sorghum industry. The rise of U.S. soybean production due to China's import demand is an exaggerated version of the sorghum story, raising concerns that soybeans could be used in possible trade retaliation.

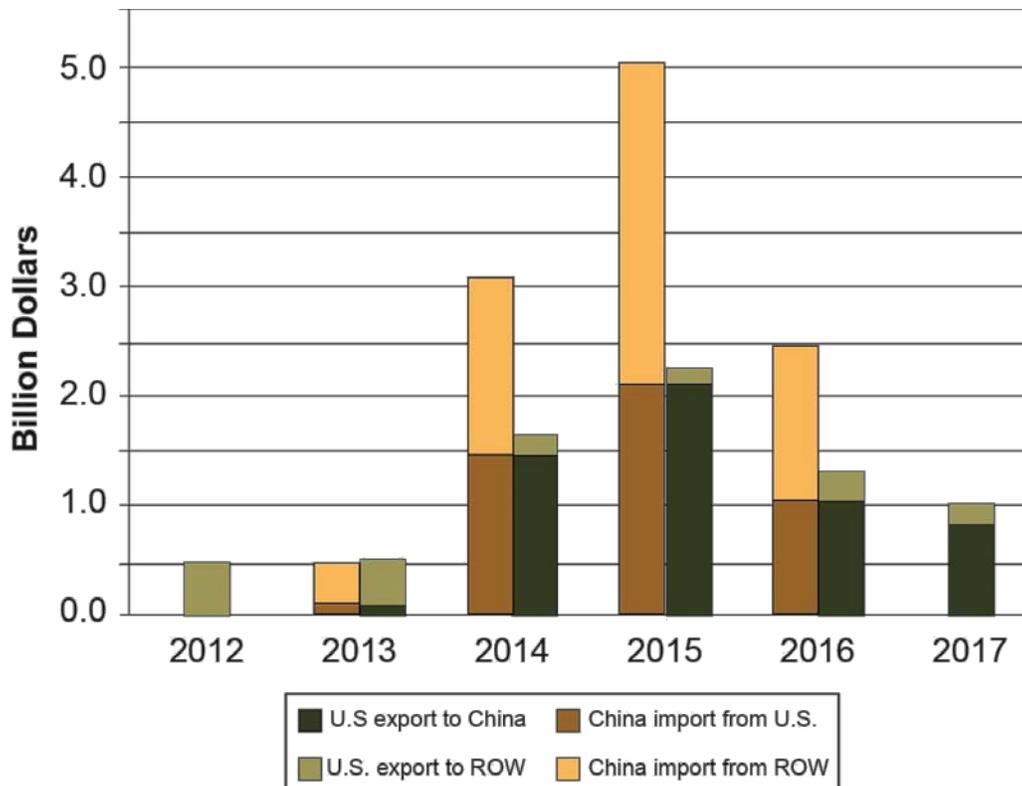


Figure 2 Sorghum trade between the U.S., China, and the rest of the world (ROW)

Source: USDA FAS GATS, FAS U.S. Trade Data, and UN Comtrade data.

Being the world’s second-largest importer of agricultural and related products after the United States, China wields significant power in trade. Beyond the two retaliations on the United States, China has also used agricultural trade as a weapon against other countries, often for political rather than economic reasons. For example, China refused bananas from the Philippines amid the territorial dispute over Scarborough Shoal Islands in 2012 (New York Times, 2012), and blocked salmon from Norway in 2010 after a Nobel Peace Prize was given to Chinese dissident Xiaobo Liu (Quartz, 2017). In both cases, health concerns were cited. Salmon and bananas accounted for 21% and 34% of the total agricultural and related product exports to China by Norway and the Philippines, respectively, before the restrictions (USDA FAS GATS). By choosing these products, China exhibited more assertiveness in trade disputes with smaller countries. China has used non-tariff measures on the United States (although not clear cases of retaliations), and their domestic regulations such as the new 2015 China Food Safety Law offers more apparatus in those regards. For example, China banned all U.S. poultry and related product imports in 2015 due to avian influenza (Reuters, 2015). More recently, China imposed more stringent phytosanitary standards such as restricting the allowable foreign material on imported soybeans from 2% to 1%, causing trouble for some soybean exporters

from the United States (Reuters, 2017). Therefore, in trade disputes, the United States should expect China to use both tariff and non-tariff tools.

What Lessons Can Be Learned from China's Previous Retaliations?

Proportional, restrained response

Currently, China has a huge overall trade surplus with the United States, and thus naturally wants to maintain the status quo and avoid dispute escalations. As the two cases above demonstrate, China tends to target agricultural commodities with trade flows comparable to U.S. targets in order to send a clear message. At the same time, China has carefully avoided escalation by choosing targets with a smaller trade value. The two previous cases also showed that China is willing to target the U.S. agricultural sector, which now holds a trade surplus with China.

Target products that are substitutable

In these two cases, China chose commodities that are easily substitutable across products and across sources. Regarding cross-product substitutability: half of the broiler chicken products from the United States were chicken feet, which is a substitutable snack food; sorghum is commonly used for feed that can be substituted by corn and other coarse grains. In terms of substitutability across sources, chicken has large domestic and international production bases, and the same is true for sorghum if we consider its close substitutes. The Chinese government actively pursues substitutability across sources by import diversification. For example, China allowed sorghum imports from Argentina in 2014 after imports from the United States soared in the previous year.

Inflict economic and political cost

The ultimate goal of retaliatory tariffs from the perspective of China's government is inflicting economic loss on politically influential interest groups in the United States and turning them into lobbyists for easing trade restrictions. Thus, China's market as an export destination for the targeted commodities has to be important for U.S. producers, as is the case for broiler chicken products and sorghum. Furthermore, the affected U.S. producers have to be politically powerful, which might be why China chose agricultural products in these two cases.

What Comes Next?

While we do not have a crystal ball, the three principles discussed above do help shed light on China's potential moves. First, we want to address the elephant in the room: whether China will retaliate against U.S. soybeans. The fact that China did not choose soybeans as the target of retaliation for the steel and aluminum tariff is not surprising in light of the "proportional response" principle: while China exports \$2.8 billion of steel and aluminum products to the United States, it imported more than \$12 billion in soybeans from the United States in 2017, and

more than \$14 billion in 2016. Choosing soybeans at this point would be a dramatic escalation and deviation from China's past strategy.

However, if the trade dispute continues to escalate—for example, if the Trump administration imposes tariffs on \$60 billion of Chinese imports as proposed—a retaliation on soybeans would be on the table as far as proportional response is concerned. In fact, the total value of U.S. agricultural exports to China (including related products) is \$21 billion. Currently, China relies on soybeans from Brazil and the United States to supply about 90% of its soybean consumption, for feed predominately, and the sheer volume of the exports makes it more difficult to displace than other products. However, if needed to, it could shift some significant share of imports to other countries such as Brazil and Argentina, and look to replace soybeans with other products.

Next, reviewing the list of top 10 U.S. agricultural product exports to China, it becomes obvious that products outside of the top 10, unless combined, do not have large enough trade flows to be a major part of a proportional response. China would likely base retaliations on the three principles outlined above, exploring areas where there is a high share of Chinese imports in total U.S. exports, a low percentage of Chinese imports from the United States when compared to other countries, and a low percentage of Chinese imports in world exports.

The data in Table 2 provide information on the importance and substitutability of top agricultural and related products that the United States currently exports to China. To more precisely measure importance, we must take into account the potential impacts on producers' profit margins, political importance (Are producers concentrated in important political districts?), and symbolic importance (Has the commodity received recent media attention or was the commodity recently highlighted in previous trade deals?). The substitutability information in this table is mainly concerned with substitution across source countries for Chinese imports. To better measure substitutability, we also have to consider substitution across products as well as nuances such as China's trade relationship with competing suppliers and the seasonality of products, etc. Table 2 shows that for most of the United States' top export commodities to China, China has the potential to shift to other source countries.

Trade relations worldwide are in a period of flux right now. The steel and aluminum tariff announcement triggered responses by several countries, although most of them were exempted later. As the cases discussed above highlight, China and the United States have worked through trade disputes before, exerting economic and political pressure on each other. The trade-dependent U.S. agriculture system has been dragged into the trade drama before, and unfortunately will likely remain so as we move forward.

Table. 2 The importance and substitutability of top 10 U.S. agricultural product exports to China

	Importance to the U.S.		Substitutability for China		
	China-U.S. trade value in 2017 (\$ billion)	China's share in US exports	U.S. share in China's total import demand	China's share in global total imports	Top exporters other than the U.S.
Soybeans	12.36	57.3%	41.7%	63.1%	Brazil (45%) Argentina (9.5%)
Forest Products	3.20	33.7%	13.0%	15.2%	Russia (18.8%) New Zealand (7.9%)
Fish Products	1.25	18.5%	13.5%	5.7%	Russia (19.6%) Canada (8.8%)
Cotton	0.98	16.7%	33.1%	17.2%	Australia (32.5%) India (12.1%)
Hides & Skins	0.95	50.1%	13.6%	21.9%	Brazil (9.7%) Australia (7.6%)
Coarse Grains (ex. corn)	0.84	78.1%	39.8%	31.8%	Australia (35.3%) Canada (8.5%)
Pork & Pork Products	0.66	10.2%	11.9%	14.5%	Germany (18.2%) Spain (12.5%)
Dairy Products	0.58	10.7%	5.1%	6.8%	New Zealand (33%) Netherlands (17.2%)
Wheat	0.35	5.7%	25.6%	2.4%	Australia (40.4%) Canada (26.9%)
Hay	0.34	27.3%	67.9%	26.5%	Australia (14.0%) Canada (3.2%)

Source: USDA FAS GATS, UN Comtrade data, and authors' calculations.

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