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China's Retaliatory Tariffs and California Agriculture

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Agricultural exports from California have been caught up in the more general trade dispute with China. China retaliated against U.S. steel and aluminum tariffs by imposing its own tariffs on some agricultural goods from California. The financial impact of China's tariffs on California farmers will vary by commodity, but most products will only be bruised.

"Greater damage may come from China's 15% tariff on American fruits, nuts, and sparkling wine."

Wall Street Journal, April 2, 2018

Fear of a growing trade war between the U.S. and China has increased volatility in commodity and equity markets and sent commodity prices and the stock market down. Manufacturers and the agribusiness industries are vulnerable because China is an important market for many products. The financial markets are also exposed because China owns more U.S. government bonds than any other country.

In January 2018, the U.S. began its trade actions against China by imposing import duties on washing machines and solar panels. Less

than a week later, China launched an anti-dumping and anti-subsidy investigation into imports of sorghum from the United States. The U.S. then escalated the conflict by imposing import tariffs on steel (25%) and aluminum (10%) under Section 232 of U.S. trade law, claiming national security reasons. Subsequently, the U.S. announced possible import tariffs on as much as \$100 billion worth of Chinese imports, as a challenge of China's technology licensing under U.S. trade law Section 301.

China responded to the U.S. Section 232 tariffs by announcing its own tariffs on 128 U.S.-origin products. Agricultural products account for a

large share of China's imports from the United States, and therefore China included a number of agricultural products on the retaliation list, including pork, fruits, wine, and nuts. Some of the targeted products are very important California exports, including almonds, walnuts, pistachios, wine, oranges, and table grapes.

There was also a response to the U.S. Section 301 threat that could lead to 25% import duties on Chinese imports of products such as soybeans, cars, aircraft, and whiskey. China's official statements justified the retaliation in order to balance the damage caused by the 232 and 301 actions.

Table 1. China Import Tariffs Announced in Response to U.S. Section 232 Tariffs

HS Code	Commodity	Former Tariff (%)	New Applied Tariff (%)
080211	Almonds, in shell	10	25
080212	Almonds, shelled	10	25
080231	Walnuts, in shell	25	40
080232	Walnuts, shelled	20	35
080251	Pistachios, in shell	5	20
080252	Pistachios, shelled	5	20
080510	Oranges, fresh or dried	11	26
080610	Grapes, fresh	13	28
220410	Sparkling Wine	14	29
220421	Wine	14	29

Source: FAS GAIN Report CH18017, 4/2/2018

Table 2. Summary Trade Statistics, 2017 Calendar Year (\$1,000 US)

	<i>a</i>	<i>b</i>	<i>c</i>	<i>d</i>	<i>e</i>	<i>f</i>
Commodity	U.S. Exports to all Markets	PRC Imports from all Sources	U.S. Reported Exports to PRC	PRC Reported Imports from U.S.	% U.S. Exports to PRC	% PRC Imports from U.S.
Almonds	\$4,343,890	\$95,528	\$99,239	\$92,893	2.1%	97.2%
Table Grapes	\$779,911	\$588,026	\$22,167	\$51,895	6.7%	8.8%
Oranges	\$630,399	\$381,825	\$48,460	\$86,627	13.7%	22.7%
Walnuts	\$1,369,023	\$33,811	\$32,253	\$29,829	2.2%	88.2%
Pistachios	\$1,415,635	\$183,794	\$39,783	\$177,580	12.5%	96.6%
Sparkling Wine	\$25,019	\$75,517	\$526	\$237	0.9%	0.3%
Wine	\$1,166,974	\$2,553,576	\$67,566	\$75,555	6%	3.0%

Notes: PRC: People’s Republic of China; Column a, c U.S. customs data. Column b, d PRC customs data. Column e = d/a. Column f = d/b.

Source: Compiled from *Trade Data Monitor*

The purpose of this article is to discuss the likely impact of China’s response to the Section 232 U.S. tariffs, focusing on a small subset of the 128 targeted products (see Table 1). I address the claim in *The Wall Street Journal (WSJ)* quote above that significant damage (to the U.S.) may come from China’s 15% tariff on American fruits, nuts, and sparkling wine. I find that China’s retaliation will not have the depth of impact on California farmers that the *WSJ* implies.

Prior to the Section 232 retaliation, China’s import tariffs on the products in Table 1 ranged from 5% on pistachios to 25% on walnuts in the shell. The new tariffs increase the rate on walnuts to 40%. Walnuts have a higher Chinese tariff than some of the other nuts because China is a large producer of walnuts, with an annual harvest about three times the size of the U.S. harvest. In contrast, China is a relatively small producer of almonds and pistachios.

California Agricultural Exports to China

China ranks in the top five foreign markets for California agriculture and the most important exports to China include almonds, pistachios, walnuts, wine, and dairy. Four of these products were subject to the April 2018 retaliatory tariffs, with dairy an exception. Table 2 reports summary trade statistics for the seven agricultural products

in Table 1, for calendar year 2017. Pistachios exports account for the largest export value to the People’s Republic of China (PRC), equal to \$177.58 million in 2017 (see column d in Table 2).

A number of press reports on the retaliatory tariffs have failed to grasp the importance of the supply and demand elasticities in the export/import market. Furthermore, they have misinterpreted the trade statistics and therefore arrived at wrong conclusions. For instance, in an April 2, 2018 opinion editorial in *The Wall Street Journal* entitled “Two Can Play at Trade War,” it was reported that China is the largest export market for California’s nut farmers. The *WSJ* reported \$530 million in pistachio exports to China and \$518 million in almond exports, totaling \$1.05 billion for 2016. However, China customs statistics report total imports of almonds and pistachios (from all origins) of only \$279 million in that year.

Apparently, the *WSJ* treated Hong Kong and China as one and the same. This is not the case and, in fact, Hong Kong is a much larger destination for California pistachios and almonds than is China. This means that China is not the largest foreign market for California’s nuts because India and Germany are larger, even if we account for some likely black market re-exports to China through Vietnam.

The *WSJ* also singled out sparkling wine as a product that could be significantly damaged. This is doubtful, because the China market accounts for less than 1% of U.S. sparkling wine export sales (column e of Table 2) and even if that market is lost due to the tariffs, the sparkling wine will be sold elsewhere. The sparkling wine price will be unaffected because the U.S.–China trade is only worth about \$237,000 per year (column d in Table 2).

Table 2 shows both reported official U.S. exports numbers to China (column c) and official Chinese import statistics (column d) for each product. These data are from the customs bureaus in each country. It is important to note that the U.S. export and Chinese import numbers do not necessarily match for each commodity, which is not surprising. For example, in 2017 the U.S. reports \$22.167 million in table grape exports to China whereas China reports table grape imports from the U.S. totaling \$51.895 million. In addition to table grapes, China’s reported import value is higher than the corresponding U.S. export figure for oranges, pistachios, and wine (compare columns c and d).

The largest gap appears with the pistachio trade, with PRC imports from the U.S. at \$177.58 million and exports from the U.S. at \$39.783. These differences arise because some of the U.S.

Table 3. Hong Kong Imports and Re-Exports (2017)

	2017 (\$1,000)			
	Almonds	Table Grapes	Pistachios	Walnuts
Imports	\$370,408	\$493,834	\$714,041	\$40,702
Re-Exports				
World	\$215,386	\$363,883	\$302,386	\$29,335
Vietnam	\$98,000	-	\$164,218	\$5,995
United Arab Emirates	\$34,062	-	-	\$7,587
India	\$32,069	-	-	\$6,429
China	\$26,670	\$358,280	\$127,125	\$3,474
Pakistan	\$10,382	-	-	-
Other	\$14,204	\$5,603	\$11,044	\$3,367
Trade Balance	-\$155,022	-\$129,951	-\$411,655	-\$11,367

HS codes: Almonds 080211, 080212, Table Grapes 080610, Walnuts, 080231, 080232, Pistachios 08025
 Source: Compiled from *Trade Data Monitor*

exports of table grapes, oranges, pistachios, and wine destined for China are trans-shipped through Hong Kong and this trade is not picked up by U.S. export statistics. The reason is that the U.S. reports the products as going to Hong Kong, but if Hong Kong does not further process the products and instead ships them to the PRC, then PRC import statistics report the U.S. as country of origin.

This means the most reliable estimate of the value of trade between the U.S. and China for these commodities appears in column d of Table 2, PRC imports from U.S. This is the trade value that has been targeted by the April 2 retaliatory tariffs. There is not \$1.05 billion in annual almonds and pistachio trade at risk. Rather the number is $\$92.893 + \$177.58 = \$270.493$ million for these nuts in 2017. In other words, the market for these two nuts is about one-third of the size implied by the *WSJ*, and so the tariff impacts will be much smaller than suggested by this leading newspaper.

Further explanation of the actual value of trade at risk due to the trade dispute comes with examination of Hong Kong re-exports. As shown in Table 3, Hong Kong, a major port, receives a

large volume of California agricultural exports that are actually destined for other countries. Hong Kong operates its own customs and tariff regime separate from China. Therefore, agricultural products shipped to Hong Kong and consumed there or shipped to places other than China will not be subject to the new tariffs.

From Table 3, we see that most of the table grapes imported into Hong Kong are re-exported to China. Imports of table grapes in 2017 totaled \$493.8 million, and re-exports were valued at \$363.8 million (74%), mostly to China. The largest suppliers of table grapes to Hong Kong are Chile, Australia, and Peru, in that order.

Hong Kong's trade balance (re-exports minus imports) is rather large for almonds and pistachios, given that Hong Kong's population is only 7.4 million. The large negative trade balances are likely due to further processing of almonds and pistachios in Hong Kong and some smuggling of products into China.

Vietnam is a major destination for Hong Kong re-exports of almonds (\$98 million) and pistachios (\$164.2 million). In all likelihood, a significant share of these nuts is either processed

in Vietnam and/or sent to China via the black market. There are no reliable trade export statistics from Vietnam so the smuggling cannot be easily measured. In any case, none of the unofficial re-exports ending up in China will be subject to the new tariffs.

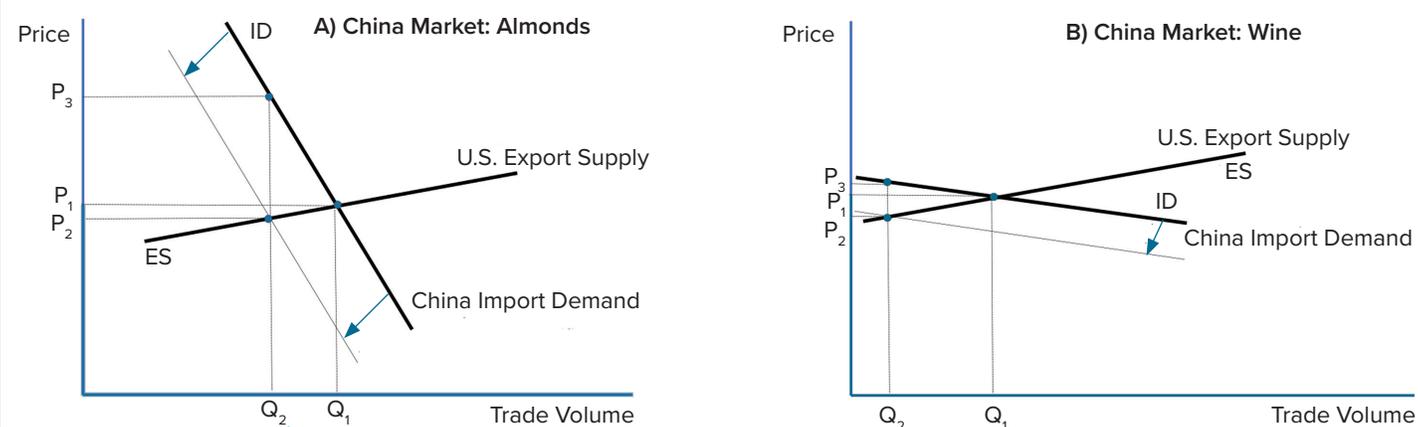
Incidence of Import Tariffs

The imposition of these import tariffs means that prices in China will be elevated and, at the same time, prices in the U.S. will be under downward pressure. Export volume from the U.S. to China will decline, holding all other factors constant. The extent of the "damage" to U.S. suppliers will depend on a number of considerations, including the relative importance of the Chinese market to U.S. suppliers, the U.S. share of China's imports, the availability of substitute products from other exporters, and the shapes of the U.S. export supply and China import demand curves.

To help us evaluate the role of these market characteristics, a stylized supply and demand model is shown in Figure 1 on page 4, representing the market for China's imports. Figure 1A could represent the almond market, characterized by a very large import market share held by U.S. exports (see column f in Table 2). The China import demand curve (ID) in Figure 1A is drawn as downward sloping and rather steep (i.e., more inelastic) because China is dependent on the U.S. supply. At the same time, the U.S. export supply curve (ES) is drawn as upward sloping but relatively flat (i.e., more elastic). ES is depicted this way because exports to China account for a very small share of overall U.S. exports (2.1%, see column e in Table 2). In other words, the U.S. is not very dependent on the Chinese market.

Prior to the tariff, the trade price is P_1 and the volume of trade is Q_1 . The tariff is shown as a leftward shift in the Chinese import demand curve (ID),

Figure 1. Impact of China Import Tariffs



with the new demand curve depicted as the lighter line parallel to the original ID. As a result of the tariff, U.S. exports to China decline from Q_1 to Q_2 . There is now a gap between the U.S. landed export price P_2 and the internal price in China P_3 , as the tariff creates a price wedge. The incidence of the tariff is shared by U.S. sellers (who receive a lower price) and Chinese buyers (who pay a higher price). In this case, most of the price impact falls on Chinese consumers. Please note that this figure is not drawn to scale; rather than showing the exact impact of a 15% *ad valorem* tariff, the graph is drawn to represent a simpler specific tariff, with the main purpose to demonstrate the relative size and direction of price and volume effects.

Alternatively, consider Figure 1B, a similar model to Figure 1A but more representative of the wine market. In this case, China is not at all dependent on U.S. export supplies. The large wine suppliers to China are France, Italy, and Chile. Together, those three countries supplied 78% of China wine imports in 2017. As a result, China's import demand for wine is depicted as being rather flat (i.e., more elastic) in Figure 1B. In this market, an import tariff has a relatively large effect on the trade volume and a relatively small effect on the price (just the opposite of Figure 1A). In other words, U.S. wine

exporters could lose a large percentage of their small export share in China without much of a price impact. In the short run, that wine will be sold elsewhere for a slightly lower price. However, in the long run, it may jeopardize the industry's attempt to build market share in a growing market.

We can use the framework in these two figures to gauge the tariff impact on the other commodities. For pistachios the import demand curve (ID) will be similar to that in Figure 1A for almonds because China imports virtually all of its pistachios from the United States. However, Iran supplies about 20% of Hong Kong's pistachio imports and could potentially divert some of this trade to China. The China import market for walnuts and table grapes will look like Figure 1B with both the ES and ID schedules flat. The market for oranges would be most unlike either Figure 1A or 1B, as both the ES and ID schedules would have some slope. California orange exporters would therefore likely experience some drop in export price and some fall in volume due to the tariff.

Conclusion

So far in the 2018 trade dispute, China has imposed tariffs on agricultural products from California that will result in a small economic impact in China and therefore are low-cost tariffs

for the Chinese. The impact of the tariffs on almonds and pistachios will be mostly a higher price in China, and for wine, walnuts, and table grapes there will be little price impact but a loss of market share for California exporters. These products will be sold elsewhere. *The Wall Street Journal* reported the impacts on sparkling wine are likely to be large. Economic logic and the data do not support that conclusion. However, we recognize that the real threat is that the trade war escalates and has long-lasting reputation effects. This will hurt California agriculture because it relies on export markets, and China's imports of farm products are likely to continue to grow unless curtailed by a trade war.

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