

Agri-Food Trade: Is the US Really a Victim of NAFTA?



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The Issue

The new US presidential administration has said it plans to renegotiate NAFTA with Canada and the Mexico, consistent with a pledge made by Donald J. Trump as a presidential candidate during his campaign. The motivation for this policy direction is a concern that the outcomes from NAFTA have not been fair, and that the US has been economically disadvantaged as a result of participating in NAFTA. The sense is that US manufacturing has been a victim of NAFTA, and the remedy is to either remake the agreement to benefit the US through increased economic activity and jobs in the US economy, or to withdraw from the agreement.

What are the implications for US agri-food? It is often noted that the agri-food industry broadly operates at a North American level. This is certainly the view from Canadian agri-food, in which access to the US market and collaboration with American food companies in value chains is fundamental. In turn, the prospect of a strong protectionist US position in a renegotiated NAFTA evokes great worry for Canadian agri-food.

This policy note investigates the situation facing the US in agri-food with NAFTA countries, and explores what the US may have to gain or lose in a NAFTA renegotiation with a protectionist posture.

Existing US Agri-Food Trade

Detailed data on agri-food trade is maintained by the US Department of Agriculture (USDA) in its Global Agricultural Trade System. Queries of this data were made to track US exports and imports of agri-food products broken down by BICO categories (Bulk, Intermediate, and Consumer Oriented). The top 10 export trading partners and import trading partners in agri-food for 2016 are presented in Table 1 on the last page of this note. The upper section of the table presents

US agri-food exports by BICO category, and the lower panel presents imports.

The table reveals the following:

- Canada and Mexico are in the top 10 in every category of US agri-food exports
- Canada is the leading foreign source of bulk material for agri-food processing in the US, at about \$US 1.67 billion in 2016
- Canada is the leading imported source of intermediate product for agri-food processing in the US, at about \$US 6.5 billion in 2016
- Canada is the leading foreign market for consumer oriented food products, at almost \$US 16.2 billion in 2016.; Mexico is second at about \$US 8 billion
- Mexico is the top market for US intermediate product exports (\$US 4.07 billion); Canada is second (\$US 3.3 billion)
- Mexico is also a major supplier of intermediate products to the US (valued at \$US 1.52 billion in 2016)
- Mexico and Canada are the top two foreign sources of US consumer oriented products , at \$US 20.8 billion for Mexico and \$US 13.4 billion for Canada

These results, perhaps not well recognized in the US, are indicative of a refined two-way trading relationship that has developed with the US's NAFTA partners in agri-food. To a significant degree, Canada plays the role of supplier of bulk and intermediate products to the US, with the resulting consumer oriented product bought back from the US by Canada. Mexico is both a large market and supplier to the US in consumer oriented products, with Mexico largely a supplier of fruits and vegetables and a market for a broader range of US products- grains, meats, dairy products, and prepared foods.

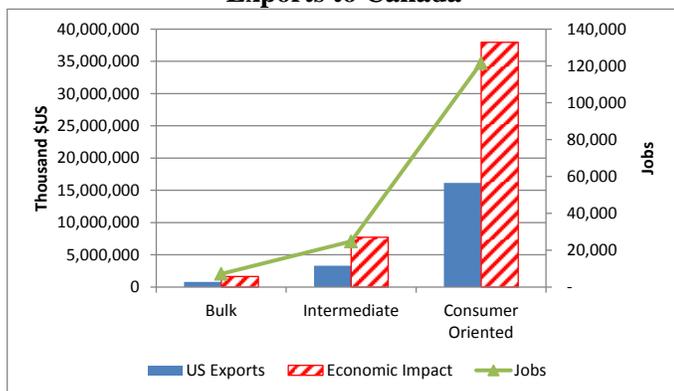
Economic Impact of US Agri-Food Trade with NAFTA Countries

Agri-food trade is critical to the US economy. This was most recently observed in a 2015 USDA study¹ which found that 2015 US agri-food exports \$133.1 billion of agricultural exports had a total economic impact (direct sales, plus indirect and induced economic impact) of \$302.5 billion and just over 1 million jobs.

Using the agri-food trade data in Table 1 and the multipliers from the 2015 USDA study, below we estimate the economic impact to the US of agri-food exports to NAFTA countries in 2016.

Figure 1 presents estimated US economic impact associated with agri-food exports to Canada. The figure shows that 2016 agri-food exports to Canada were associated with total economic impact of about \$US 38 billion in consumer oriented exports, \$US 7.7 billion in intermediate exports, and about \$US 1.7 billion based upon direct exports- or a total of about \$US 47.4 billion. At the same time, US exports of consumer oriented food products to Canada were associated with just over 121,000 US jobs. Exports of intermediate products were created almost 25,000 jobs, and exports of bulk products were associated with about 7,100 jobs.

Figure 1 Economic Impact from US Agri-Food Exports to Canada

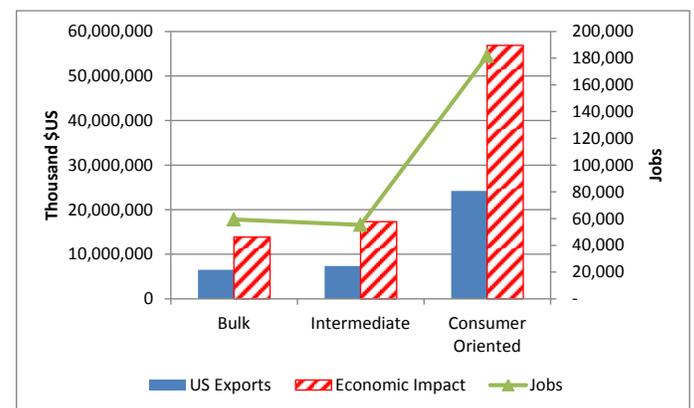


Source: USDA GATS and USDA ERS

¹ <https://www.ers.usda.gov/data-products/agricultural-trade-multipliers/effects-of-trade-on-the-us-economy-2015/>

Figure 2 presents the equivalent US economic impact resulting from exports to Canada and Mexico combined as NAFTA trading partners. NAFTA countries represented \$US 13.8 billion, \$US 17.3 billion, and \$US 56.9 billion in US economic impact associated with exports of bulk, intermediate, and consumer oriented exports, respectively. At these levels, US agri-food exports to NAFTA countries in 2016 represented about \$US 88 billion in 2016- well over 25% of the total economic impact of US agri-food exports estimated by the USDA for 2015 (\$302 billion).

Figure 2 Economic Impact from US Agri-Food Exports to NAFTA Partners



Source: USDA GATS and USDA ERS

Employment multipliers associated with NAFTA exports indicate that bulk US exports to NAFTA countries are associated with about 59,000 jobs, intermediate exports are associated with about 55,000 jobs, and exports of consumer oriented products are associated with about 182,000 jobs. Of the just-over 1 million jobs associated with US agri-food exports in 2015, based on 2016 data, almost 297,000 (or almost 30%) can be attributed to exports to NAFTA countries.

These results help interpret how significant exports to NAFTA have become to the US agri-food; conversely they provide metrics of the value at risk to interruptions in that trade. There are also other aspects. The largest proportion of US trade with NAFTA countries is in the consumer oriented category (especially Canada). Without NAFTA countries as markets for its consumer-

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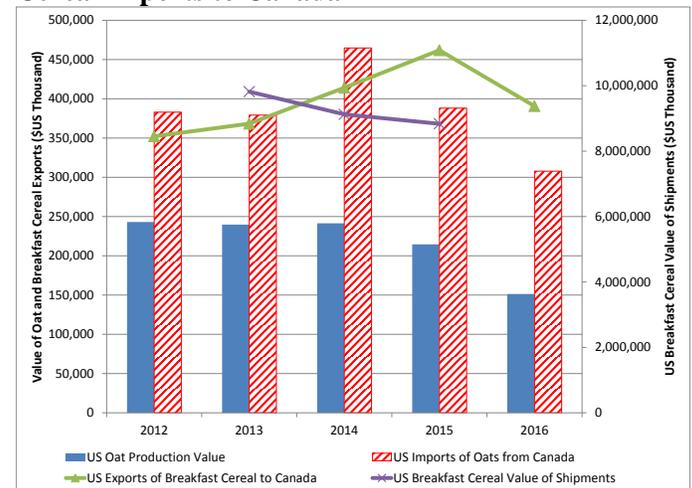
oriented products, it is unclear what alternative markets the US would have for this product; to a large extent, US food processing would simply shrink without Canada and Mexico- to the tune of \$US 181 billion in lost sales.

Economic impact metrics are used with sales (in this case, export sales) rather than purchases. However, this obscures the benefits of aligned international supply chains with associated imports facilitated through trade agreements. For example, the US imports more bulk and intermediate products from Canada than it exports to Canada (trade deficit) and the US is trade surplus with Canada in consumer oriented products. It is precisely the fact that the US has access to bulk and intermediate products imported from Canada for processing that allows it to export consumer oriented product to Canada. Thus, the imports from Canada represent an economic benefit to the US, in an indirect manner. The same case exists with Mexico. This is despite the fact that the US was overall trade deficit in agri-food with NAFTA countries- by about \$US 6.4 billion in 2016.

Consider US imports of oats from Canada. A major value-added use of oats is in breakfast cereal manufacturing. US production of oats is limited as land capable of producing oats in the US is used for other crops. As a result, Canadian oats are imported to the US, in part to supply the breakfast cereal manufacturing industry. In turn, the US can supply its domestic market for breakfast cereal, and exports breakfast cereals to Canada and elsewhere.

This is illustrated in Figure 3. The sales of the US breakfast cereal industry in 2015 were about \$US 9 billion. These sales are built upon raw product supplies, oats among the principal raw inputs. The value of US oat supplies has ranged well over \$US 200 million, and recently has fallen to about \$US 150 million. To supplement domestic availability of raw product, the US imports oats- typically \$US 300-400 million in value- from Canada. This supports the \$US 9 billion in sales by US breakfast cereal manufacturers, which includes around \$US 400 million in exports to Canada- or 4-5% of total sales by US breakfast cereal manufacturers.

Figure 3 Value of US Breakfast Cereal Sales and Oat Output, Oat Imports from Canada, and Breakfast Cereal Exports to Canada



Source: USDA-GATS, USDA-NASS, and US Census Bureau

Risks to the US From NAFTA Renegotiation

The example above highlights the risks to US agri-food in a NAFTA renegotiation. In aggregate, the US has benefited from access to supplies of Canadian and Mexican agri-food imports, as well as to consumer markets for US exports. In the case of Canada, US food manufacturers have been beneficiaries of Canadian bulk and intermediate products that they can process in their plants, with ready access for the resulting consumer oriented products in the Canadian market. This has provided for an extension of US food processing beyond its natural scale based on domestic farm production, and in many categories of packaged foods, US brands dominate the Canadian market.

Canadian agri-food exports to the US in more raw form, and Canadian imports from the US in more consumer-ready form are a contemporary topic in Canadian agri-food policy discussions. How to expand and retain value-added processing of farm products in Canada, and encouraging new investment along with retention of existing operations is seen as an important challenge, actively engaged in current policy discussions.

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The threat to the US in NAFTA renegotiation from Canada is thus two-fold. Its food processing industry is vulnerable to the prospect of any change that would reduce or limit its access to Canadian bulk or intermediate product imports and/or the Canadian consumer market for its outputs. Conversely, it should anticipate that Canada is actively and aggressively working to expand the processing of Canadian farm products in Canada and compete both for inputs to processing and in finished product markets.

In the case of Mexico, its import supplies to the US are both as raw products used in US processing but also consumer-ready products in fresh fruits and vegetables. These build upon US supplies that are limited by US labour constraints in the fruit and vegetable industry. The threat to the US from Mexico in NAFTA is thus a reduction in access to food products that benefit from Mexican labour, as this workforce is scarce in the US and poised to become further limited due to proposed changes in US immigration policy.

Moreover, NAFTA renegotiation cannot be considered in isolation from proposed US tax reform and the impact on taxation of imports². Under what amounts to a 20% border tax on imports, Canada and Mexico would have a strong incentive to look for alternative markets for exports currently bound for the US. With the Canada-EU CETA deal all but in place, Canada already has an enhanced prospect of doing so. The direct impact on the US would be to restrict the availability of imports to US food processing and consequently restrict its output versus historical levels. A secondary impact that can be anticipated is a decrease in US agri-food exports to NAFTA countries as the value of the US dollar increases relative to currency values in other NAFTA countries-anticipated due to changes in investment flows following the proposed US tax policy change.

Conclusion

The evidence above does not support the notion that the US is somehow a victim of NAFTA. US agri-food has built remarkable economic activity and employment in agri-food on trade with NAFTA countries. On almost any decomposed trade metric, Canada and Mexico are the main trading partners of the US in agri-food. Others may receive more attention as markets for US products (notably China) but they are primarily customers of bulk products for the US, and broadly speaking not integrated supply chain partners the way that Canada and Mexico are.

Agri-food is an important barometer for the US in NAFTA more broadly. President Trump has expressed specific concerns about NAFTA and its impact on US manufacturing in laying out his agenda for renegotiation. According to the US Bureau of Economic Analysis, in 2015 Food, Beverage, and Tobacco Product manufacturing was 12% of US manufacturing GDP-falling only behind chemical products (17%) and computer and electronic manufacturing (13%). Thus, agri-food should be seen as a critical economic indicator holding heavy sway, and its risks perceived more broadly.

Ironically, if there are concerns with regard to the outcomes of NAFTA in agri-food, it would seem that other parties than the US would have them. Canada has an ongoing concern and focus on food manufacturing and the loss these facilities and associated economic activity. There have been a number of high-profile food processing plant closures, and departures of processing activity to the US. Research undertaken for the Canadian Agri-food Policy Institute in 2012 documented Canada's decline in food processing and a growing trade deficit in processed food with the US³. Canada is loathe to view itself as a "hewer of wood and drawer of water" and its human resources and agri-food sector are inconsistent with this characterization. But the data on trade with the US under NAFTA underscore the challenge.

² For an explanation and analysis of the proposed US "border tax", see <https://www.cdhowe.org/public-policy-research/aftershocks-quantifying-economic-impacts-us-border-adjustment-tax>

³ http://capi-icpa.ca/pdfs/2012/CAPL_Processed-Food_Nov2012.pdf

NAFTA renegotiation has been requested at the behest of the US, under heavy protectionist sentiment. As such, it cannot be assumed that existing assumptions regarding free movement of goods among NAFTA countries will necessarily prevail in the future. Understanding that the US actually has much to lose in a NAFTA renegotiation will condition the negotiating positions of Canada and Mexico in agri-food, and should give pause to the US in its pursuit of NAFTA renegotiation.

Table 1 US Agri-Food Trade Top 10 Countries by Value and 2016 Trade Value

US Agri-Food Exports						
	Bulk ⁴		Intermediate ⁵		Consumer Oriented ⁶	
	Trading Partner	2016 Value (\$US Thousand)	Trading Partner	2016 Value (\$US Thousand)	Trading Partner	2016 Value (\$US Thousand)
1	China	16,388,033	Mexico	4,068,650	Canada	16,160,261
2	Mexico	5,746,573	Canada	3,297,576	Mexico	8,034,608
3	Japan	4,072,126	China	2,857,112	Japan	5,767,394
4	Korea, South	1,693,053	Japan	1,220,821	Hong Kong	3,666,395
5	Indonesia	1,688,430	Korea, South	1,101,495	Korea, South	3,407,001
6	Taiwan	1,479,819	Philippines	900,112	China	2,167,087
7	Vietnam	1,358,999	Thailand	580,524	Taiwan	1,447,890
8	Colombia	1,270,360	Colombia	563,879	Netherlands	1,234,336
9	Netherlands	875,737	Netherlands	557,320	United Kingdom	1,192,246
10	Canada	784,419	Indonesia	537,370	Australia	1,030,373
Imports						
	Bulk		Intermediate		Consumer Oriented	
	Trading Partner	2016 Value (\$US Thousand)	Trading Partner	2016 Value (\$US Thousand)	Trading Partner	2016 Value (\$US Thousand)
1	Canada	1,667,230	Canada	6,505,946	Mexico	20,803,106
2	Brazil	1,538,008	Ireland	2,270,412	Canada	13,405,752
3	Indonesia	1,139,700	Mexico	1,516,726	Italy	3,545,121
4	Colombia	1,120,273	Indonesia	1,346,515	Chile	2,863,324
5	Cote d'Ivoire	902,166	China	1,240,356	China	2,798,722
6	Thailand	692,621	Malaysia	915,178	Australia	2,705,071
7	Mexico	639,408	India	843,619	New Zealand	2,482,469
8	Vietnam	568,600	Italy	714,967	France	2,394,821
9	Guatemala	450,214	Spain	704,311	Netherlands	1,597,243
10	India	405,224	Germany	624,190	Thailand	1,543,231

Source: USDA-FAS Global Agricultural Trade System

⁴ Bulk: wheat, coarse grains, rice, tobacco, rubber and allied products, unroasted coffee, cocoa beans, tea including herbs, raw beet and cane sugar, other bulk commodities

⁵ Intermediate: Tropical oils, other vegetable oils, feed and fodder, live animals, hides and skins, planting seeds, sugars, sweeteners, and beverage bases, essential oils, cocoa paste, cocoa butter, other intermediate products

⁶ Consumer Oriented: Snack foods, red meats (fresh/chilled/frozen/preserved), cheese, other dairy products, bananas and plantains, other fresh fruits, fresh vegetables, processed fruits and vegetables, fruit and vegetable juices, tree nuts, wine and beer, nursery products, roasted and instant coffee, spices, other consumer oriented products

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