

Theme Overview: Economic Consequences of the Tariff War

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On April 2, 2025, President Trump announced several sweeping tariffs (referred to as the Liberation Day Tariffs) on nearly all countries in the world. The goals of these tariff policies are to reach a trade deal more favorable to the United States, reduce the bilateral trade deficit, and bring manufacturing and production back to the United States (Jeyeretnam, 2025). Since the inception of the General Agreement on Tariffs and Trade (GATT) in 1947, successful rounds of trade negotiations have lowered tariffs. President Trump's unilateral imposition and trade agreements deviate from this multilateral or regional trade negotiation.

Tariff Timelines

Back-and-forth and frequent changes in tariffs make it difficult to keep track of all of the Trump administration's tariff policies. However, a few sources are available to keep track of various tariffs and offer a detailed chronological timeline of tariff announcements, withdrawals, backtracking, pauses, rollbacks, restructuring, and agreements (see Bown, 2025; Reuters, 2025; Hammond and Burkhart, 2025). Zurita and Steinbach (2025) also present a timeline of President Trump's tariff policies and pauses for the period covering February 1 to July 31, 2025.

Trade Agreements

On April 9, 2025, President Trump paused the "Liberation Day" tariffs until July 2, 2025, to complete trade negotiations with 90 countries in 90 days; however, the United States did not complete a single trade agreement during these 90 days (Marquez and Kopack, 2025). As of the end of October 2025, trade agreements have been reached with only eight countries or regions: the European Union, Indonesia, Japan, Pakistan, the Philippines, South Korea, the United Kingdom, and Vietnam.

The Trump administration argues that the goal of imposing tariffs on foreign countries is to persuade trade partners to negotiate trade agreements favorable to the

Articles in this Theme:

- [Power-Based Bargaining Redux: Risks to Agricultural Exports and Global Governance of Trade](#)
Ian Sheldon
- [Consequences of Trump's Bilateral Trade Policies for Agriculture](#)
Jeff Luckstead and Stephen Devadoss
- [A New Vision for US Trade Policy: What Recent Trade Deals Could Mean for US Agricultural Exports](#)
Jason H. Grant, Shawn Arita, and Yunus Emre Karagulle
- [2025 US Trade Policy Shifts and Agricultural Exports: Mapping Retaliation Exposure and Assessing Potential Market Access Offsets in the UK and Japan](#)
Carlos Zurita and Sandro Steinbach
- [Economic Consequences of Recent US Tariff Changes](#)
Angel Aguiar and Stephen Devadoss

United States and thus economic leverage to achieve its trade objectives. However, these unilateral tariffs violate GATT's key principles: reciprocity, nondiscrimination (Most Favored Nation Principle), and the dispute settlement process. The reciprocity principle states that if a country offers to reduce trade barriers, it expects other countries to reciprocate by reducing their trade restrictions as well. In contrast to the reciprocity principle, the Trump administration has unilaterally hiked tariffs on many countries. The Most Favored Nation Principle requires that all WTO member countries treat

each other equally in trade agreements, meaning that if a country has a particular tariff level against another country, this tariff should apply to all other countries. President Trump's policies do not align with the Most Favored Nation Principle. The dispute settlement resolution under the WTO provides a mechanism for credible enforcement, as offending parties can be punished by high retaliatory tariffs by the affected countries. However, the WTO dispute settlement process has been paralyzed by President Trump's policy and the United States' blocking of the appointments to the appellate body, which does not have a quorum to adjudicate trade policies. Consequently, the dispute settlement policy has not been functioning. Without the functioning of the appropriate body, the dispute settlement process cannot be completed. Hetzner (2025) notes that President Trump, with little incentive to play by the rules, may change any agreements in the future.

In this theme issue of Choices, Ian Sheldon provides a detailed discussion of the noncompliance of US tariff policies with WTO principles and the implications of power-based bargaining on the future of the WTO's multilateral trade negotiations and dispute settlement resolutions. Sheldon observes that President Trump's unilateral targeting of tariffs undermines the WTO's reciprocity and nondiscrimination principles and is detrimental to multilateral trade dispute resolution. Sheldon also discusses an alternative approach that the United States could use a GATT article to renegotiate its existing market access commitments.

Grant, Arita, and Karagulle review the various bilateral trade frameworks announced by the United States and existing tariff rates in major US trade partners. These authors note that more aggressive US policy pursuits have generated a wave of new bilateral trade deals. These authors assess the implications of these trade deals for US agricultural exports and bilateral trade complementarity between the United States and trade agreement partners in major agricultural commodities. They observe that US trade policies aim to rebalance bilateral trade relationships, lower foreign tariff and nontariff barriers, and bring back domestic manufacturing.

Uncertainty and Unpredictability

President Trump's frequent changes of tariff policies bring a great deal of uncertainty to businesses in their investment, production, purchase, and sales decisions, which makes it harder for businesses to plan. Because of the unpredictability, many businesses have laid off workers (Pettypiece, 2025). The article by Luckstead and Devadoss highlights these uncertainties, particularly for farmers in their production and marketing decisions.

Zurita and Steinbach discuss how US trade policies could reshape agricultural trade, creating both risks and opportunities. They note certain agricultural commodities may endure high retaliation risk: soybeans from China;

corn, dairy, and pork from Mexico; fresh vegetables from Canada; and tree nuts and distilled spirits from the European Union. Their study finds that under Chinese retaliatory tariffs as of July 2025, US agricultural exports to China could decline by \$18 billion, and this loss could increase to \$22 billion if China ends Section 301 exemptions. They also observe that new trade agreements can potentially offset some of these losses. For example, they find that the US-UK agreement could increase US exports to the United Kingdom by \$19.4 billion, mainly through processed vegetable exports. Similarly, the US agreement with Japan could also expand US exports by \$12.5 billion, mostly from pork and beef.

Economic Impacts

President Trump's on-again, off-again tariff policies have put global economies on a roller coaster (Jeyeretnam, 2025). Many studies have predicted that President Trump's tariffs could endanger the US and global economies by triggering a recession. For instance, the International Monetary Fund has lowered the economic growth forecast for the world. Federal Reserve Chair Jerome Powell indicated on several occasions that President Trump's tariffs and resulting higher prices led to delays in interest rate cuts (Pettypiece and Kopack, 2025). Despite these predictions of economic doom for many countries, the United States and other countries have not plunged into recession, and the US stock market actually reached a record high (Lynn, 2025), even though the 2025 second quarter employment figures in the United States were well below market expectations. The adverse effects of US tariff policies could take several months to ripple through the economy. For instance, McKibbin et al. (2025a) predict that President Trump's tariff policies will slow economic growth in the United States and in other major economies. This study also finds that retaliatory policies by trade partners will harm US agriculture. McKibbin et al. (2025b) also observe that high US tariffs will lower US GDP and that retaliation by other countries will only intensify GDP losses.

Aguiar and Devadoss analyze the effects of recent US tariff changes on the USMCA (United States-Mexico-Canada Agreement) countries, China, and the rest of the world. They find that these tariffs cause world trade to decline, and the US share of world trade is lower than that under pre-tariff announcements. The United States remains one of the preferred destinations of foreign exports, but its share of world imports declines by 11% after tariff changes and is equal to China's import share, which increases to 11%. The US trade deficit decreases, but it is still large. Further reductions in the trade deficit would diminish its effectiveness, as the United States will become less relevant as the main trading partner with other countries in the world.

In their article, Luckstead and Devadoss estimate that high US tariffs will reduce agrifood imports by \$1,089.7 million from Brazil, \$541.86 million from Mexico, and

\$352.65 million from Canada. Furthermore, because of trade diversion effects, US exports will decline by \$590.83 million to China, \$226.60 million to Canada, and \$201.29 million to Mexico.

Inefficiencies

Luckstead and Devadoss highlight that President Trump's aim of negotiating a favorable trade deal for the United States does not amount to improved welfare gains for the United States and other countries. The United States' imposition of higher tariffs on import-competing goods will raise prices, benefiting US producers but harming US consumers. Such policies, even after accounting for tariff revenues, will most likely cause total welfare loss to the United States. The threats and agreements of higher tariffs move global trade to the protectionism of the Smoot-Hawley Tariff era of the 1930s. Such protectionist trade barriers are welfare-reducing for all countries involved in these trade environments.

Exporting countries that face higher tariffs from the United States will also incur welfare loss as they will experience a lower price, and any consumer surplus gain will be outweighed by producer surplus loss in these countries. Furthermore, these countries may seek to sell to other countries, and such trade reallocations can lead to a permanent shift in trade.

Unintended Consequences

Tariff policies spark uncertainty and volatility in the stock market. For instance, US stocks tumbled, with the S&P 500 alone losing \$5 trillion (one of its fastest 20% drops) right after the "Liberation Day" tariffs were announced (Pettypiece and Kopack, 2025; Marquez and Kopack, 2025). This type of volatility is likely to continue until all the tariff policies are finalized and resolved. Such

uncertainty curtails foreign investments in the US stock market, leading to reduced demand for the US dollar and depreciation of the US currency (Martin and Guevara, 2025). Foreign countries have been encouraging their customers to buy their domestic goods because of President Trump's unreasonably high tariffs (Soni, 2025). For example, Indian Prime Minister Modi is urging Indians to buy Indian-made products (Cameron, 2025).

Should President Trump Be Targeting the Trade Deficit?

Using the International Emergency Economic Powers Act of 1977, President Trump cited high bilateral trade deficits with many countries as a national emergency, and it is one of the reasons for invoking the president's power to justify the imposition of high tariffs. But such a goal can harm the US economy (McKibbin et al., 2025a) because, by definition, the balance of payments, which is the sum of the current account and the capital account, is equal to zero; if tariffs lower imports and make the current account surplus, then the capital account will be negative, indicating that foreign inflow of capital is likely to decline. If that happens, foreign investment may fall, which could cause an economic recession (see also Bayoumi and Gagnon, 2025).

Conclusions

President Trump's unilateral tariff policies are dismantling the world trade system, and these policies seriously impair the global trade order. Though the adverse economic impacts of US tariff policies have not been felt yet, many studies predict that these policies can have long-term economic repercussions both in the United States and in foreign countries. Furthermore, US policies can cause mistrust between the United States and its trading partners and erode trading relationships.

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Power-Based Bargaining Redux: Risks to Agricultural Exports and Global Governance of Trade

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US Trade Policy and Power-Based Bargaining

Power-Based Bargaining and Reciprocal Tariffs

The approach to trade policy adopted by both the current and previous Trump administrations has been characterized as being “power-based” (Mattoo and Staiger, 2020; Sheldon, 2022). The approach essentially consists of the United States seeking to revise its previous trade commitments by unilaterally increasing the set of tariffs it applies to its trading partners, with a view to getting them to provide greater market access to US exporters. The underlying presumption of this approach is that the persistent bilateral trade deficits the United States has with a given trade partner are due to the latter applying tariffs and non-tariff barriers that prevent US trade balancing. This rationale is very clear when looking at how so-called “reciprocal” tariffs were actually calculated by the Office of the US Trade Representative (USTR). The published formula defines the rate of reciprocal tariffs applied to a trading partner as being equal to their bilateral trade surplus with the United States, weighted by their exports to the United States (USTR, 2025). Critically, the larger the bilateral trade deficit, the greater the level of reciprocal tariffs imposed on a specific trading partner.

Rules-Based vs. Power-Based Approaches to Trade Negotiations

To place the shift to power-based bargaining in context, it is key to see how a rules-based approach worked following the formation of the General Agreement on Tariffs and Trade (GATT) in 1947, and its successor, the World Trade Organization (WTO). Starting from a high average tariff equilibrium, successive rounds of trade liberalization moved the international trading system towards an equilibrium with lower average tariffs.

Fundamental to the process of tariff-cutting under GATT rules have been the principles of reciprocity and

nondiscrimination, captured in GATT Articles II and XXVII and Article I, respectively, the latter referring to most-favored-nation (MFN) treatment (Baldwin, 2025). The GATT/WTO has consistently applied first-difference reciprocity, where trade negotiations focus on balancing concessions on tariff reduction, tariffs being cut overall by an agreed formula, taking account of domestic political constraints. Specifically, in any deal, there will be some set of politically sensitive sectors subject to differential tariffs across countries. Under MFN, the principle of nondiscrimination requires that agreed tariff cuts by any country(ies) should be extended to all members of GATT/WTO.

The lower average tariff equilibrium under GATT/WTO has also been supported by a credible enforcement mechanism embodied in the dispute settlement system. In theory, countries have an incentive to deviate from the low average tariff equilibrium, the punishment for such deviation being reversion to the high average tariff equilibrium (Sheldon, 2022). In practice, the rules of GATT/WTO have sought to maintain the balance of tariff concessions and avoid the use of punitive and therefore economically destructive actions.

If one country were to unilaterally raise its tariff(s), this would imply a loss of previously negotiated market access for another country. Under GATT/WTO rules, specifically GATT Article XXIII, subject to a ruling by the dispute settlement mechanism, the other country can withdraw an equivalent amount of market access, assuming the action is not “abusive.” However, if one country chooses to implement a significant violation of tariff commitments honored for some time, the affected country can revert to the high average tariff equilibrium. In other words, the objective of GATT/WTO rules has been to ensure agreed retaliation by one country against the unilateral action of another is proportionate, thereby minimizing the chances of a trade war.

The United States has targeted power-based bargaining in a discriminatory fashion at a wide range of countries, separated into two subgroups: first, developed countries involved in trade negotiations with the United States from 1947 onwards, whose average tariffs have been reduced to or close to those at the low tariff equilibrium, and, second, developing countries whose average tariffs are currently higher. However, under MFN, all countries in this second group face the lower average tariffs set by the first group. Clearly, there is a lack of symmetry between the average tariffs set by the United States and the countries in the second group, but there can also be asymmetry due to variation around the average for countries in the first group.

Countries in both groups are being targeted with reciprocal and discriminatory tariffs by the United States, based on the presumption that their asymmetric tariffs are the major cause of bilateral trade imbalances with the United States, and the administration is seeking full reciprocity in trade negotiations. For example, if the United States has been applying a 2.5% tariff on a specific good, while the European Union (EU) and China have been applying 10% and 25% tariffs, respectively, to that same good, this is considered discriminatory, and, therefore, both the EU and China should reduce their tariffs to the same level as the United States. It would appear that the current administration believes that reciprocal tariffs are the only way in which the United States can achieve a new tariff outcome where the range of tariffs applied by the United States is equal to the range of tariffs applied by each of its trading partners. Also, while unilateral application of tariffs has the benefit of being immediate, with the potential of securing bilateral trade deals, it also invites targeted retaliation by affected trading partners.

Retaliation to Power-Based Bargaining

While economic theory predicts that US trading partners would respond with their own tariff increases, virtually none have done so. There have been announcements of targeted retaliation by both Canada and the EU with respect to the tariffs affecting steel, aluminum, and automobile imports, but as yet there has been no across-the-board retaliation by either country; the EU paused its retaliation threat in early April 2025 (Bown, 2025a). In principle, the EU could have applied its 2023 Anti-Coercion Instrument (ACI), which provides the means to act in situations where a non-EU country, such as the United States, threatens the EU or its member states through measures affecting trade or investment (Sheldon and Chow, 2025). However, with the completion of a trade deal between the United States and the EU, the latter being faced with a 15% tariff on all exports, the threat of retaliation has clearly receded. Overall, multiple countries, including Japan, the UK, Vietnam, Indonesia, and the Philippines, appear to be willing to sign trade deals with the United States in order to avoid even higher tariffs being applied (Reklaitis, 2025).

So far, the exception to targeted retaliation is China, which first retaliated during the 2018–2019 trade war, its tariff increases moving the US-China tariff equilibrium to one with higher average tariffs. Under the current administration, the United States and China initially engaged in a tit-for-tat escalation of tariffs against each other, the implied equilibrium being considerably higher than that observed pre-GATT, and one that can be characterized as a two-sided trade embargo. Although both countries subsequently backed off and are seeking a trade deal, China has again shown its willingness to retaliate against the United States, even if the tariff choices would result in what would be close to a prohibitively costly autarky equilibrium.

Status of US Trade Policy

Across-the-Board Tariffs

Compared to the 2018–2019 trade war, the use of tariffs by the current administration has intensified. On April 2, 2025, across-the-board tariffs of 10% were applied to virtually all US trading partners, along with discriminatory tariffs ranging from 11% to 50% targeted at countries with whom the United States has a bilateral trade deficit (Bown, 2025a). The latter tariffs were suspended on April 9, 2025, for a period of 90 days, followed on July 7, 2025, by the announcement of a new set of reciprocal tariffs ranging from 10% to 41%, a range maintained on July 31, 2025 (Bown, 2025a). At the same time, the trade war with China has been reopened, average US tariffs on all Chinese exports initially being raised to 125%, average Chinese tariffs applied to all US exports being raised to 147%, albeit temporarily reduced by both sides to 51.8% and 32.6% respectively, on May 14, 2025 (Bown, 2025b). Based on the tariffs in place, it is estimated that the average effective tariff rate for the United States is 16.8%, the highest level since 1935 (Yale Budget Lab, November 17, 2025).

Motivation for Across-the-Board Tariffs

This increase in tariffs signals a return to restrictive trade policy not seen since the Smoot-Hawley Tariff Act of 1930. However, it is a mistake to argue that the current protectionism is similar to what occurred after World War I. While the Smoot-Hawley tariffs were driven by special interests and logrolling in Congress, the trade restrictions imposed by other countries after the gold standard collapsed had more of a mercantilist than a protectionist flavor. The focus of current US trade policy appears to be a return to mercantilism, but with a fundamental difference: Tariffs are not being used to affect gold flows due to a balance of payments crisis; instead, they are being used by the United States to target the trade deficit, with potential retaliation from trading partners (Chow and Sheldon, 2025).

Legal Authority for Across-the-Board Tariffs

During the 2018–2019 trade war, tariffs were applied under US trade law on the following grounds: injurious imports of washing machines and solar panels (Section

201 of the Trade Act of 1974), a national security threat from steel and aluminum imports (Section 232 of the Trade Expansion Act of 1962), and China conducting unfair trade practices (Section 301 of the Trade Act of 1974).

In contrast, application of across-the-board tariffs draws on the International Emergency Economic Powers Act (IEEPA) of 1977, which authorizes the president to regulate trade via embargoes and sanctions if a national emergency is declared in response to a significant threat to the United States, President Trump arguing the US trade deficit is evidence for such an emergency. The US Court of International Trade (CIT) has ruled that justification for the use of reciprocal tariffs does not meet the test of “unusual and extraordinary threats” (CIT, 2025, p. 25). Critically, the court argued that under Section 122 of the Trade Act of 1974, significant trade deficits do not “necessitate the use of emergency powers and justify only the President’s imposition of limited remedies” (CIT, 2025, p. 33). Therefore, the CIT ruled reciprocal tariffs be “vacated and their operation permanently enjoined” (CIT, 2025, p. 48). Following this ruling, a federal appeals court (USCA) issued a temporary administrative stay on the CIT decision (USCA, 2025a). Subsequently, the USCA has confirmed in a 7-4 ruling that they, “affirm the CIT’s holding that the... Reciprocal Tariffs imposed by the Challenged Executive Orders exceed the authority delegated to the President by IEEPA’s text” (USCA, 2025b, p. 44). Following the appeal of this decision by the administration, the US Supreme Court is now expected to make a final ruling on the reciprocal tariffs in early 2026 (Geib, 2025).

Potential for Renegotiating WTO Market Access Commitments

The United States is focusing on what it believes to be an imbalance in the trade concessions it made through successive rounds of the GATT/WTO. To address this, it is implementing tariffs across the board against its trading partners, but at the same time seeking bilateral deals with those countries. However, a procedure already exists by which a single country, such as the United States, is permitted to renegotiate its previous tariff concessions under GATT Article XXVIII (Pauwelyn, 2025). Under this provision, any WTO member can unilaterally modify or withdraw its bound tariff commitments, and any affected trading partner is allowed to respond in a reciprocal manner by modifying or withdrawing “substantially equivalent” tariff commitments of their own, subject to any rulings by the DSB on what constitutes substantial equivalence.

Essentially, this is what the current administration is doing, even though it has not chosen to trigger GATT Article XXVIII (i.e., it is seeking to alter its previous tariff commitments, substituting in a new set of concessions consisting of a base tariff and reciprocal tariffs that vary with bilateral trade balances). However, while the United

States is not offering compensation to its affected trading partners, as required under GATT Article XXVIII, it has been argued that any bilateral trade deals it strikes with them could, in principle, be brought under WTO governance (Pauwelyn, 2025). The key point here is that rebalancing of US tariff bindings could occur within the structure of the WTO, especially if other countries, such as the EU, were to lead a broad coordination of such a renegotiation process (Pauwelyn, 2025). This approach is necessarily slower compared to unilateral action, but it does have the advantage of being predictable for both trading partners and other economic entities. However, the demonstrated antipathy of the United States to the WTO suggests it is unlikely it will seek to reframe its reciprocal tariffs in the context of GATT Article XXVIII (Baldwin, 2025).

Implications of Power-Based Bargaining Economic Costs

The economic impact of US trade policy under the first Trump administration has been well-documented, a review of research indicating two main takeaways: US consumers bore the main burden of the tariffs, and aggregate real income fell in the United States (Fajgelbaum and Khandelwal, 2022). Current research is focusing on the expected effects of the tariffs introduced by the current administration. For example, one study projects that a 10% across-the-board tariff will result in a total cost amounting to 1% of GDP, while higher tariffs against and by China would increase costs by an additional 0.8% of GDP (Clausing and Lovely, 2024). Another study calculates that the overall loss to the US economy could be a 1% decline in real income by 2028 (Rodríguez-Clare et al., 2025). A very recent study indicates that higher tariffs could improve US terms of trade as well as reduce the trade deficit, provided there is no retaliation from its trading partners (Ignatenko et al., 2025).

Impact on the US Agricultural Sector

During the 2018–2019 trade war, US agricultural exports were specifically targeted by other countries, including China. Carter and Steinbach (2020) found retaliatory tariffs had a significant impact on agricultural trade, the United States seeing a 55% reduction in its exports to retaliating countries worth -\$15.6 billion, which was only partially offset by a 0.8% increase in exports worth \$1.2 billion to countries that did not implement tariffs. These effects were also very concentrated at the product level, with lost and gained trade being particularly significant for soybeans at -\$7.1 billion and \$3.7 billion, respectively. These findings have been reinforced by Grant et al. (2021), who found that the US agricultural sector suffered annualized trade losses of \$13.5–\$18.7 billion, with China accounting for the majority and severity of the retaliation; second, losses were larger for bulk commodities compared to differentiated products, with damage to soybean exports being estimated at \$10.7 billion.

As of July 31, 2025, the impact of reciprocal tariffs on US agricultural exports is yet to be fully seen, but it will depend very much on which countries eventually choose to retaliate and the extent of that retaliation. One study, utilizing a reciprocal tariff scenario, estimates the total agricultural export loss to be -2.2% (Kim, Steinbach, and Zurita, 2025). In a larger modeling exercise across different reciprocal tariff scenarios, Bouët (2025) reports a real reduction in US agricultural output of between -2.2% and -6.1% by 2040. In a similar exercise, McKibbin, Noland, and Shuetrim (2025) find that by 2035, and depending on the tariff scenario, US agricultural production falls by between -2.5% and -10.46%, while agricultural labor demand falls by between -1.6% and -7.3%.

It is clear that the impact of reciprocal tariffs on the US agricultural sector will be very dependent on whether or not there is retaliation by affected trading partners, who retaliates, and whether or not specific agricultural commodities are targeted. As noted above, the trade war of 2018–2019 was largely driven by Chinese retaliation, with bulk commodities such as soybeans being affected more than differentiated products. Early analysis of what might happen with reciprocal tariffs reinforces such an expectation, soybean exports to China forecast to be most affected, the amount depending on the level of reciprocal tariffs and the degree of retaliation (Steinbach, Yildirim, and Zurita, 2024).

In addition, other factors could come into play. First, the extent to which US tariffs will be passed through into the price of farm inputs such as fertilizers and agricultural chemicals has implications for farm income—for example, the average effective tariff rate applied to imports of pesticides is now 20% or higher (Ward, 2025). Second, where the US dollar eventually settles in equilibrium also matters. The depreciation of the dollar after the announcement of reciprocal tariffs on April 2, 2025, appears to defy conventional economic wisdom, which predicts the dollar should have appreciated, thereby hurting exports (Clausing and Obstfeld, 2025). However, recent analysis suggests actual/expected retaliation can result in depreciation (Corsetti, Lloyd, and Ostry, 2025). Beyond the macroeconomic debate, this matters for the US agricultural sector: If the dollar eventually appreciates, this could have a negative impact on commodity exports, while continued depreciation could benefit commodity exports, but intensify the farm input cost pressures due to import tariffs. Third, the on-again, off-again nature of the announcement of tariffs by the administration has heightened uncertainty for farmers and other agents in the economy, the level of trade policy uncertainty being at its highest level since the 1960s, according to economists at the Federal Reserve Bank of St. Louis (Caldara et al., 2020).

Undermining of WTO Dispute Resolution

The credibility of multilateral tariff bindings also depends

on monitoring and enforcement by the WTO, and the expectation that if a country violates its commitments, the penalties for doing so will be costly enough that violations will either not occur or will be quickly ruled against under the WTO dispute resolution process. Clearly, the US adoption of power-based bargaining threatens the system of multilateral governance, reinforced by the fact that the WTO Dispute Settlement Understanding (DSU) has effectively been paralyzed by the United States' refusal to accept new appointments to its Appellate Body (AB), the latter ceasing to function in December 2019 (Sheldon and Chow, 2025).

With appointments to the WTO's AB being stymied by the United States, what does this mean for dispute resolution in a multilateral setting? A fundamental component of the DSU was the application of a regime, whereby panel decisions have no legal effect until adopted by the WTO's Dispute Settlement Body (DSB), and the DSB cannot adopt a panel decision until any appeal has been completed (WTO, 1994).

Currently, a panel decision cannot be adopted by the DSB until an appeal is completed, but an appeal cannot be completed because the AB is unable to convene (i.e., a member country can express dissatisfaction with a panel decision through appeal), thereby freezing the entire dispute resolution process at the midpoint of the adjudication regime (Sheldon and Chow, 2025). The United States already followed such a strategy in 2020 after a panel ruled it had violated GATT Articles I and II in imposing tariffs on Chinese products under the first Trump administration (WTO, 2020). Likewise, any WTO panel ruling in favor of the United States with respect to China's retaliatory tariffs would probably be "appealed into the void" by China, adding to existing agricultural export marketing risk.

Conclusions

A key characteristic of the current administration's trade policy is across-the-board tariffs aimed at US trade partners with whom it has a bilateral trade deficit. This switch to power-based bargaining has important implications for both trade and governance of the multilateral trading system. During the 2018–2019 trade war, US agricultural exports were targeted for retaliation by several of its trading partners, notably China, and while the extent of retaliation since April 2025 has been somewhat muted, there is still significant potential for agricultural trade to be disrupted.

The governance of global trade is also being seriously affected by the United States' application of tariffs violating the long-standing GATT principles of reciprocity and nondiscrimination and vetoing of new appointments to the WTO's Appellate Body, undermining effective trade dispute settlement. In principle, the United States could seek to renegotiate its existing multilateral tariff commitments via an existing GATT/WTO mechanism, recognizing that affected trading partners would be able

to withdraw equivalent tariff commitments. This would likely be a more orderly but lengthy process underwritten by a body of international trade law, but the current administration appears to have little regard for a rules-based system that the United States helped construct

(Baldwin, 2025). Also, even as the United States raises tariffs unilaterally against its trading partners, with the key exception of China, surprisingly, no countries have retaliated, as would be their right under the GATT/WTO rules.

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Consequences of Trump's Bilateral Trade Policies for Agriculture

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Trump 2.0 trade policies started with targeted tariffs on key trading partners to protect domestic industries, address national security concerns, and trade imbalances. On April 2, 2025, the Trump administration announced import tariffs, known as the "Liberation Day" tariffs, with baseline rates of 10% on imports from most countries in the world and higher tariffs (ranging from 11% to 50%) on 57 countries (The White House, 2025a,b). With an average tariff rate of just 2.2% before April 2, this policy represents the largest increase in US tariffs in nearly a century, undermining decades of negotiation and tariff reductions under the General Agreement on Tariffs and Trade (GATT) and World Trade Organization (WTO) (WTO, 2025; Manak et al., 2025) and many other regional trade agreements. These unpredictable tariff policies have upended the global trading system, making the United States a more unreliable ally for many of our long-standing trading partners, and will likely have significant implications for US consumers and US agricultural production and trade.

Trump has since used the Liberation Day policies to negotiate bilateral agreements to lower foreign tariff levels and increase market access for US goods. As of mid-October 2025, the Trump administration has trade-agreement frameworks with eight regions (the European Union, Japan, the United Kingdom, Vietnam, Indonesia, South Korea, the Philippines, and Pakistan), though details of many of the agreements are unclear and yet to be revealed. However, as of mid-October 2025, the United States has not reached a trade agreement with many major economies, including its neighbors, Canada and Mexico, and other key countries, such as China, Brazil, India, and Australia.

In this article, we discuss (i) President Trump's unconventional and unpredictable tariff policies, (ii) impacts of recent tariffs on aggregate agricultural trade, (iii) inefficiencies arising from the escalating tariffs and bilateral trade agreements, (iv) uncertainty and volatility caused by Trump's on-again, off-again tariff policies, and

(v) the effects of Trump's tariff policies on the trade deficit.

Unconventional Approach to Tariff Policies

Since 1947, most of the trade agreements have been negotiated through multilateral accords under GATT/WTO or regional/preferential trade agreements. Such agreements are usually negotiated over several years. By contrast, Trump 1.0's trade war with China and Trump 2.0's unilateral imposition of sweeping tariffs deviates from such global and regional trade negotiations. Furthermore, the Trump administration's approach of reaching bilateral frameworks within weeks or months without specific details departs from well-negotiated agreements with comprehensive and extensive details.

Historically, sanctions, not tariffs, have been used to punish countries for geopolitical reasons. Examples of these policies include the US sanctions on wheat exports to Russia for Russia's invasion of Afghanistan in the early 1980s, recent sanctions by the United States and the European Union on Russia for the latter's invasion of Ukraine in early 2022, and many sanctions against Cuba, North Korea, and Iran over several decades. However, tariffs have primarily been used as economic tools to protect domestic industries. Trump changed the norms on tariffs by using them as a tool to punish countries for political reasons not related to economics. Examples of this include the tariffs on Mexico and Canada for fentanyl coming into the United States (The White House, 2025c), tariffs on Brazil for the treatment of its former President Jair Bolsonaro (Boak, 2025), tariffs on Mexico and Central American countries over immigration (The White House, 2025c), tariffs on India for its purchase of oil from Russia (Reuters, 2025), tariff threats on goods from countries that import oil from Venezuela (The White House, 2025d), and the threat of scuttling the trade agreement with Canada for its recognition of a Palestinian state (Cole, 2025).

| Country | Percentage Tariff |
|-------------------------------------|--------------------------|
| Canada | 25% |
| Mexico | 25% |
| European Union | 15% |
| China | 30% |
| Brazil | 50% |
| India | 50% |
| Vietnam | 20% |
| Thailand | 19% |
| New Zealand | 15% |
| Baseline Tariff All Other Countries | 10% |

Impact of Tariffs on Aggregate Agricultural Trade

The unilateral tariff policies discussed above can impede US imports and exports. Since US tariff rates on many countries frequently change and these countries continue to negotiate or have not imposed retaliatory tariffs, we examine Trump 2.0's tariffs on major trading partners, as summarized in Table 1. We examine the impacts on the US aggregate agrifood trade in two steps. First, we estimate a structural gravity model for aggregate agricultural trade at the country level for 239

countries. Second, we utilize the model and estimated coefficients to conduct a counterfactual analysis of high tariffs to quantify the impacts on trade flows.

For the gravity model estimation, tariffs are our primary variable of interest, but we also include distance, common language, contiguous border, common colonizer, joint WTO membership, and Free Trade Agreements (FTAs) as control variables and importer-time and exporter-time fixed effects.¹ For the regression, we utilize bilateral trade flows from the US International Trade Commission (USITC) International Trade and

| Variables | Estimates |
|----------------------|--------------------|
| Log tariff | -1.35*** (0.42) |
| Log distance | -1.85*** (0.04) |
| Common language | 0.92*** (0.11) |
| Contiguous border | -0.69*** (0.13) |
| Common colonizer | 1.39*** (0.12) |
| Joint WTO membership | 2.34*** (0.14) |
| FTA | -0.12 (0.09) |

Note: Standard errors, clustered at the country-pair level, are in parentheses. Triple asterisks (***) indicate p-value of 0.001. Fixed effects are export-time and import-time.

¹ We exclude country-pair fixed effects to allow for the full cross-country variation required to identify the tariff elasticity of trade.

Table 3. Impacts of US Tariffs on US Agricultural Imports (\$ million)

| Country Name | Baseline Trade Flow | Difference | Percentage Change |
|--------------|---------------------|------------|-------------------|
| Brazil | 3,037.34 | -1,089.70 | -35.88 |
| Mexico | 3,029.24 | -541.86 | -17.89 |
| Canada | 8,484.22 | -352.65 | -4.16 |
| Chile | 1,910.16 | -87.75 | -4.59 |
| Peru | 2,182.16 | -80.82 | -3.70 |
| Colombia | 2,482.51 | -75.76 | -3.05 |
| India | 191.66 | -70.17 | -36.61 |
| China | 199.83 | -43.02 | -21.53 |
| Costa Rica | 1,409.95 | -41.88 | -2.97 |
| Guatemala | 1,620.38 | -39.68 | -2.45 |

Production Database for Estimation (ITPD-E), friction variables from the USITC Dynamic Gravity Dataset, and trade-weighted average preferential and Most Favored Nation tariffs from World Integrated Trade Solution-Trade Analysis Information System for the years 1997–2019. From the ITPD-E database, we aggregate agricultural commodities 1–26 into a single commodity. The number of observations used for the estimation is 1,101,474.

Table 2 reports the estimated coefficients from the gravity model. The results indicate an estimated tariff elasticity of -1.35, indicating that a 1% increase in the tariff rate will reduce trade by 1.35%. This trade elasticity translates into an Armington elasticity of substitution of 2.35 ($=1+1.35$). The estimated coefficients on distance,

common language, contiguous borders,² and common colonizers are reasonable and consistent with estimates found in the literature. With country-pair fixed effects excluded from the model, the coefficient estimates on joint WTO membership and FTA suffer from known omitted variable bias, and we therefore only include these variables as controls and do not interpret the coefficient estimates.

We undertake the counterfactual analysis in two stages. First, we use the estimated coefficients and the structural gravity model to predict baseline bilateral trade flows for 2019. Second, we replace the US tariff rates from 2019 with the US tariff rates reported in Table 1, update the exporter-time and importer-time fixed effects to account for any changes in the multilateral resistance terms due to the changes in the US tariff schedule, and predict counterfactual trade flows. We compare the counterfactual trade flows to those of the baseline to quantify the effects of the new US tariffs, *ceteris paribus*.

Table 3 reports the impacts for exporting countries with the largest decline, in terms of differences, in exports to the United States. Given the 50% tariff on Brazil, it is not surprising that the model predicts that US imports from Brazil decline by about \$1.1 billion (36%). Major US imports from Brazil include coffee beans, processed fruit, nuts, vegetables, and meat. These products are major consumer items, and lower imports would increase the prices for US consumers.

With the US tariffs on Mexico and Canada at 25%, despite their contiguous location, US imports from these countries decline by \$541.86 million and \$352.65 million,

Table 4. Impacts of US Tariffs on US Agricultural Exports (\$millions)

| Country Name | Baseline Trade Flow | Difference | Percentage Change |
|----------------|---------------------|------------|-------------------|
| China | 13,297.10 | -590.83 | -4.44 |
| Canada | 4,660.47 | -226.60 | -4.86 |
| Mexico | 2,842.60 | -201.29 | -7.08 |
| Indonesia | 4,913.25 | -194.33 | -3.96 |
| Russia | 2,729.66 | -123.83 | -4.54 |
| Japan | 2,298.25 | -103.98 | -4.52 |
| United Kingdom | 2,175.41 | -97.81 | -4.50 |
| France | 1,761.19 | -83.02 | -4.71 |
| Spain | 1,728.93 | -81.79 | -4.73 |
| Egypt | 1,858.72 | -73.59 | -3.96 |

² While a negative coefficient estimate for the contiguous border may appear counterintuitive, this finding is consistent

with previous studies that conclude that border conflicts can lead to reduced bilateral trade.

respectively. These two countries are the leading trade partners of the United States: with large imports of fruits and vegetables (avocados, tomatoes, barriers, peppers, and cucumbers), meat and animal products, sugar and sweeteners, and processed foods from Mexico; and significant imports of meat and other animal products, grains and feeds, oilseeds and oilseed products from Canada. These products are also important US consumer items, and US tariffs will likely cause higher prices.

Central and South American countries (Chile, Peru, Colombia, Costa Rica, and Guatemala) are large agricultural exporters to the United States because they produce agricultural commodities during the US offseason and export fresh fruits and vegetables to meet the US demand during the winter period. Because of US tariffs, the model predicts that exports from these countries decline by about \$286 million.

India and China have limited exports of agricultural goods to the United States due to their substantial consumer base. Consequently, despite the US imposing large tariffs of 50% and 30% on India and China, US imports fall by only about \$70 million from India and by \$43 million from China.

Because of trade diversion effects, US tariff policies also have ramifications for its exports. Table 4 reports US agrifood export declines to the top 10 importing countries. An important insight from these results is that US exports decline despite these countries not imposing retaliatory tariffs. These trade declines occur because, as the United States imposes high import tariffs, other exporting countries divert their agricultural products from the United States to these importing countries. Consequently, US exporters now have stronger competition for their products in the global markets, leading to a decline in their exports.

Inefficiencies Arising from Tariffs

President Trump's bilateral trade agreements generally call for higher tariffs on US imports and lower tariffs by the trade partner on US exports. We discuss the inefficiencies arising from these differential tariff policies from the perspective of industries that are net importers or net exporters (Houck, 1992). First, we consider imported commodities, such as fruits and vegetables. Trade models show that US tariffs on imported final goods will increase prices, and US producers of import-competing goods will respond to higher prices by producing more. However, this increase in production does not offset the decline in imports, because higher prices lead to a decline in consumption. Consequently, the fall in imports will be larger than the increase in production. Furthermore, production shifts from low-cost foreign suppliers to higher-cost, less efficient domestic producers. In addition, resources must be drawn from other relatively more productive uses to this inefficient

domestic production in the United States, resulting in what is known as production inefficiency. The high cost of production and higher import prices due to tariffs will be passed on to US consumers, who will consume less, leading to what is known as consumption inefficiency. Furthermore, any gains to producers plus tariff revenues will be less than the loss to consumers, leading to a net welfare loss.

If US tariffs are imposed on imported intermediate goods (coffee beans, oranges for processing, car parts, steel, and aluminum), the higher prices of these imports will increase the cost of production of final goods. This can squeeze profit margins, and these final producers may pass on these costs to consumers in the form of higher prices. Thus, higher tariffs, whether on intermediate or final goods, will hurt US consumers. The net impact of this tariff (i.e., losses to consumers) is likely to be higher than any gains to producers plus tariff revenues. Furthermore, because of the US high tariffs, many exporting countries that were exporting to the United States may seek to sell to other destinations, which will make it harder for US importers to source these goods and disrupt the flow of inputs and goods to the United States, hampering production along the supply chain.

Second, we consider US export commodities, which could decline because of trade reallocation and/or tariff retaliation. Due to high US tariffs, exporting countries may sell their displaced commodities (e.g., beef) to other importing countries. With more imports in these foreign countries, US exports face tougher competition, leading to a decline in US exports. In addition, if trade partners retaliate against the United States with higher tariffs, the cost of US goods in these importing countries will rise, and they are likely to start buying from other, lower-cost exporting countries, hurting US producers and exporters of commodities such as soybeans, corn, wheat. In such a scenario, the United States could lose the export market in these importing countries permanently, as happened with China diverting its soybean imports from the United States to Brazil under the Trump 1.0 US-China trade war. It is worth noting that, in these cases, US producers may divert surplus commodities to the domestic market and receive lower prices.

As of mid-September, eight countries have bilateral trade agreements with the United States, and these countries have lowered their tariffs on US goods. US exporters can increase their exports to these countries, which will benefit these export industries. But this increase in exports will raise the domestic price in the United States, and consumers will have to pay these higher prices. However, the reallocations by importing countries from other exporters to the United States can cause global inefficiencies as these policies favor high-cost US producers over low-cost foreign suppliers.

These industry-level analyses paint a complicated picture of winners and losers from the trade policies.

However, from an economy-wide perspective, trade theory is clear that the inefficiencies caused by tariffs lead to lower welfare for the US economy and the world.

Trump's unilateral tariff policies could lead to a new world trading order where tariffs are used as a geopolitical cudgel (Malmström, 2025), rather than a multilateral, pluralistic trade negotiation based on economics. Such trade reallocations based on geopolitical issues defy the comparative advantage and cause inefficiencies in global trade. Any bilateral trade agreements where US tariffs are higher than foreign tariffs may force the trading partner to seek to sell in other importing countries. Such trade diversion is not in the best interest of the United States, particularly for US consumers. Also, public backlash in the trading partner may seek to import goods from other cheaper sources or expand domestic production, leading to lower imports from the United States. This will harm US producers and exporters.

Uncertainty Caused by the Tariff Policies

Frequent changes in tariff policies cause a great deal of uncertainty for businesses in making decisions related to investment, production, inventory, hiring, layoffs, purchases, and sales. These uncertainties hamper economic activities and are recipes for a recession (Handley and Limão, 2017).

Specific to agriculture, farmers need to know what the trade policies and trade agreements are so that they can make appropriate planting decisions. For instance, if the Chinese market is closed for US soybeans, farmers are going to be concerned about where to sell their soybeans. In such a scenario, they may consider planting alternate crops such as corn. Also, if trade restrictions keep the prices lower for many agricultural commodities, farmers will likely lose revenues and profits (see also Thompson, 2025). During the US-China trade war, Trump 1.0 provided payments to farmers through the Market Facilitation Program (MFP). Many farmers are wondering whether such subsidies would be forthcoming under Trump 2.0 to compensate for the potential losses from the current tariff policy.

Furthermore, if the US is not a reliable partner, some of these exporting countries could permanently shift their sales to other countries, which further exacerbates the import problems for US businesses, in addition to facing higher tariffs.

Trade Deficit

One of the justifications for high tariffs on imports from some countries is that the United States has a large trade deficit with these countries. Balance of payments

equals capital account (foreign financial claims on assets in the United States minus US claims on assets in foreign countries) plus current account (goods and services exports minus imports). For every country, the balance of payments is equal to zero, which implies, if a country has a current account deficit (trade deficit), it will have a capital account surplus. For several decades, the United States has been experiencing a trade deficit and a capital account surplus. The Trump administration's high tariffs on imports from various countries will cause imports to decline. For the trade deficit to decrease significantly, in addition to imports going down, exports need to increase. However, if foreign countries retaliate against the United States and do not import US goods, the trade deficit may not shrink.

If the Trump administration succeeds with its tariff policies of lowering imports, increasing exports, and generating a trade surplus, this will make the capital account become a deficit. This means foreigners are not investing in the United States; rather, they are taking money out of the United States. When foreign investment declines, businesses will not be able to finance their economic activities, which can lead to a recession.

In the exporting sector, for the United States to increase exports, particularly in labor-intensive sectors, producers need more labor. Trump's policies of deporting undocumented workers are counterproductive as they hamstring producers in expanding production. Therefore, achieving an expansion in exports to reduce the trade deficit reduction goal could be difficult. In the importing sector, if the United States cannot produce enough because of a lack of labor, the United States will have to import more, which will worsen the trade deficit and is counterproductive to Trump's goal.

Conclusion

This study presents an overview of Trump 2.0 trade policies and the consequences for US agricultural and trade. These uncertain policies can cause economic harm to the United States by raising prices to consumers, lowering welfare, and triggering an economic recession. Furthermore, these policies are harmful to US trade partners who may seek to establish stable trade relationships with other countries. Policy makers should consider the long-term consequences of these trade policies.

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A New Vision for US Trade Policy: What Recent Trade Deals Could Mean for US Agricultural Exports

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JEL Classifications: F13; Q17

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New Trade Agreements: Where Do We Stand?

The United States is the largest agricultural exporting country (on an individual country basis), with over \$170 billion in exports annually since 2021. While the United States's top three destination markets—Mexico, Canada, and China—accounted for \$84.12 billion, or nearly half (48%) of total US exports in 2024, other regions such as East Asia (Japan and South Korea), South and Southeast Asia, Latin America and Europe imported 52% of US food and agricultural exports worth \$92.3 billion (USDA-FAS, 2025a).

On April 2, 2025, the United States unveiled a new approach to rebalance global trade, introducing new supplemental tariffs on imports from nearly all trading partners. A universal 10% tariff applied to imports beginning April 9, 2025, with higher rates targeting nations with persistent US trade deficits. After several delays, the tariffs entered into force on August 7, 2025. Subsequently, the US Court of International Trade (CIT) ruled that the tariffs exceeded the authority granted by the International Emergency Economic Powers Act (IEEPA), and on August 29, 2025, the US Court of Appeals for the Federal Circuit affirmed the CIT's ruling but stayed the decision until October 14, 2025, to allow time for further appeal. The Supreme Court of the United States is now hearing the case involving broad tariffs that contribute to large and persistent goods trade deficits imposed under IEEPA.

Separately, two-way tariffs between the United States and China briefly exceeded 125% in April 2025 before being adjusted and paused. During this period, the United States maintained a 10% baseline along with a 20% tariff in response to China's role in supplying precursor chemicals used to produce fentanyl, resulting in an effective tariff rate of 30%. China retaliated with

10%–15% tariffs related to US fentanyl actions and a 10% baseline tariff, for an effective supplemental tariff of 20%–25% on its imports from the United States.¹ While China's retaliatory tariffs may seem low compared to the over 100% tariffs the two countries exchanged in April 2025, they are roughly equal to the retaliatory duties China imposed during the 2018/19 trade dispute in which US agricultural exports to China fell 53%, or \$10.3 billion, in 2018 compared to 2017 (Carter and Steinbach, 2020; Grant and Sydow, 2020; Grant et al., 2020; Adjemian, Smith, and He, 2021; Grant et al., 2021). An important recent development is that China has not booked any new US soybeans as of late August 2025. This is a significant departure from historical patterns (Arita et al., 2025b): By the end of August in 2022, 2023, and 2024, US exporters had booked 4.9 million metric tons (MMT), 6.3 MMT, and 12.7 MMT, respectively, of new crop soybean exports to China, a notable year-over-year decrease.²

Soybeans have received considerable media attention as the largest US agricultural export by value (with corn leading by volume). However, as discussed later, exports of several other agricultural products to China have also declined in 2025. A tentative agreement between the US and China in early November 2025 aimed to ease some tariffs and resume agricultural trade, but data through September 2025 indicate that agriculture has again been caught in the crossfire of US-China trade relations (Arita et al., 2025b).

Despite these challenges, US trade negotiators have simultaneously pursued an aggressive strategy of bilateral engagement with other key markets. This dual approach—maintaining pressure on China while expanding into other markets—has yielded a series of framework agreements that could help diversify US agricultural exports.

¹ These rates exclude China's valued added tax (VAT).

² Marketing years for soybeans run from September 1 to August 31.

This article reviews current bilateral trade negotiations for agriculture, including announced trade deals and preliminary trade projections summarized by various media outlets, and summarizes the height of agricultural most-favored-nation (MFN) tariffs in these regions and potential tariff offers being proposed. We conclude by evaluating the trade complementarity index (TCI) between the United States and bilateral trade agreement countries. The TCI provides insight into how well these regional trading partners' import shares across products align with US export shares and comparative advantage in the same product categories.

Bilateral Trade Agreements and US Agricultural Exports

Although specific details continue to be negotiated, the more aggressive US approach to trade negotiations has resulted in several announcements of bilateral trade frameworks. Table 1 reviews these announcements and highlights select trade potential for increased US agricultural exports. Admittedly, the details of these framework announcements are scarce as of this writing, and we lack sufficient information across all product categories to provide a more comprehensive assessment. Thus, our projections are somewhat speculative and only touch key agricultural products that

Table 1. US Agricultural Export Potential under New US Trade Framework Deals

| Country ^a | Avg. Annual US Ag. Exports (2020–2024, \$billions) | Framework Deal Announced | Agricultural Products Mentioned | Trade Commitments Mentioned by Media Articles or Factsheets | Potential Trade Change from Current Levels | Additional Information |
|----------------------|--|--|---|--|--|--|
| Indonesia | \$3.0 | Yes: joint Statement announced July 22, 2025 | Wheat, soybeans, soybean meal, wheat, and cotton | 1 MMT wheat annually; overall \$4.5 billion in US ag exports annually | \$1.5 billion/year | Eliminates 99% of tariffs; 214,000 MT of cereals purchased in July 2025; 67% higher than 2024. Indonesia will exempt US food and agricultural products from all of Indonesia's import licensing regimes |
| Bangladesh | \$0.881 | Tentative, the Bangladesh interim government announces | Wheat | 700,000 MT wheat annually; \$260–\$300/MT for approx. value of \$200 million | \$200 million/year | Wheat increases from near-zero; 220,000 MT government-approved purchase by July 30, 2025. |
| Vietnam | \$3.37 | Yes: joint Statement announced July 2, 2025 | Corn, wheat, DDG, soybean meal, other farm products | \$2 billion total farm produce over 3 years, | \$667 million/year | Potential for \$800 million from Iowa; Includes 134,000 MT corn booked for 2025/26; up from just 2,000 MT last year. |
| Thailand | \$1.5 | Yes: framework deal announced July 31, 2025 | Soybeans, feed corn | Up to 2 MMT soybeans; >1 MMT feed corn; | ~\$1 billion/year | Tariff reductions could imply replacement of current feed grain imports |
| Philippines | \$3.58 | Yes: trade deal announced July 22, 2025 | Corn | Potential 3.3 MMT corn (but could replace feed wheat) | Increase corn potential of \$760 million/year (assumes no other feed grain displacement) | 117,000 MT of US corn exports in 2024. Trade increases will depend on tariff cuts and expansion of the corn tariff-rate quota (TRQ). The Philippines is projected to need 2–3 million tons of corn imports annually through 2034. |
| Taiwan | \$3.9 | No: broader agreement expected soon | Corn, soybeans, wheat, beef | \$10 billion over 4 years (2026–2029); \$2.5 billion/year | \$760 million/year | Includes up to \$4 billion in soybeans over four years, \$2 billion in corn products (Indiana), and \$1.2 billion of wheat (Idaho). Indiana, Ohio, and Idaho sign letters of intent for specific products. Current trade levels: soybeans, \$626 million, corn/DDGs/ethanol: \$448 million; wheat, \$317 million |

Table 1. Continued...

| | | | | | | |
|--------------------|-----------------|---|---|---|---|---|
| Japan ^b | \$12.9 | Yes: trade deal announced July 22, 2025 | Rice increase 75%, corn, soybeans, biofuels/SAF, fertilizer | \$8 billion farm products; (\$220–\$345 million for biofuels) | \$1 billion/year (increase from ~ \$7 billion of current farm products mentioned) | Increased rice imports; biofuels volume 220–230 million gallons |
| United Kingdom | \$1.89 | Yes: trade deal announced May 8, 2025 | Ethanol, beef | \$700 million ethanol; \$250 million beef | Increase of \$550 million/year given current trade levels | Tariff elimination and US-specific tariff-rate quota |
| European Union | \$11.83 billion | Yes: trade deal announced July 2025 | Soybean oil, planting seeds, dairy, tree nuts, processed foods, pork/bison meat | Unclear | Unclear | New market access will be subject to US-specific tariff-rate quotas |
| Total | \$42.85 billion | – | – | Approximately \$20 billion in announced trade values | \$6.6 billion (estimated from current trade levels) | Aggregated across countries |

Source: Authors' interpretation and tabulations from Thukral (2025), Paul (2025), Hanrahan (2025), Reuters (2025), and other media and White House Fact Sheets, including

<https://www.whitehouse.gov/fact-sheets/2025/07/fact-sheet-president-donald-j-trump-secures-unprecedented-u-s-japan-strategic-trade-and-investment-agreement/>,

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<https://www.whitehouse.gov/fact-sheets/2025/07/fact-sheet-the-united-states-and-indonesia-reach-historic-trade-deal/>

https://policy.trade.ec.europa.eu/news/joint-statement-united-states-european-union-framework-agreement-reciprocal-fair-and-balanced-trade-2025-08-21_en

<https://www.govinfo.gov/content/pkg/DCPD-202500738/pdf/DCPD-202500738.pdf>

^aMalaysia and Cambodia trade deals are not included in Southeast Asia above. The specific details so far indicate commitments to nonagricultural products such as aircraft, coal, and telecommunications.

^bJapan's farm product imports from current levels include soybeans, corn, wheat, coarse grains, rice, DDGs, ethanol, beef, pork, and poultry. Historically, these products totaled around \$7 billion worth of imports from the United States.

have been summarized by the media or White House Factsheets or mentioned in the media by US or foreign trade officials.

We base our information solely on public announcements and summaries as scrutinized by the authors and compared to historical bilateral trade levels. In many cases, these announcements include volume-based pledges, such as a commitment to import 750,000 metric tons of US wheat. To estimate the potential trade value, we convert volume figures into dollars using average monthly free-on-board (FOB) unit prices from 2025. While prices can and will fluctuate in future marketing years based on global supply and demand conditions, our trade estimates are based on initial reference year 2025 FOB prices. Finally, much will depend on whether these commitments are additive to current trade levels.

Southeast Asia

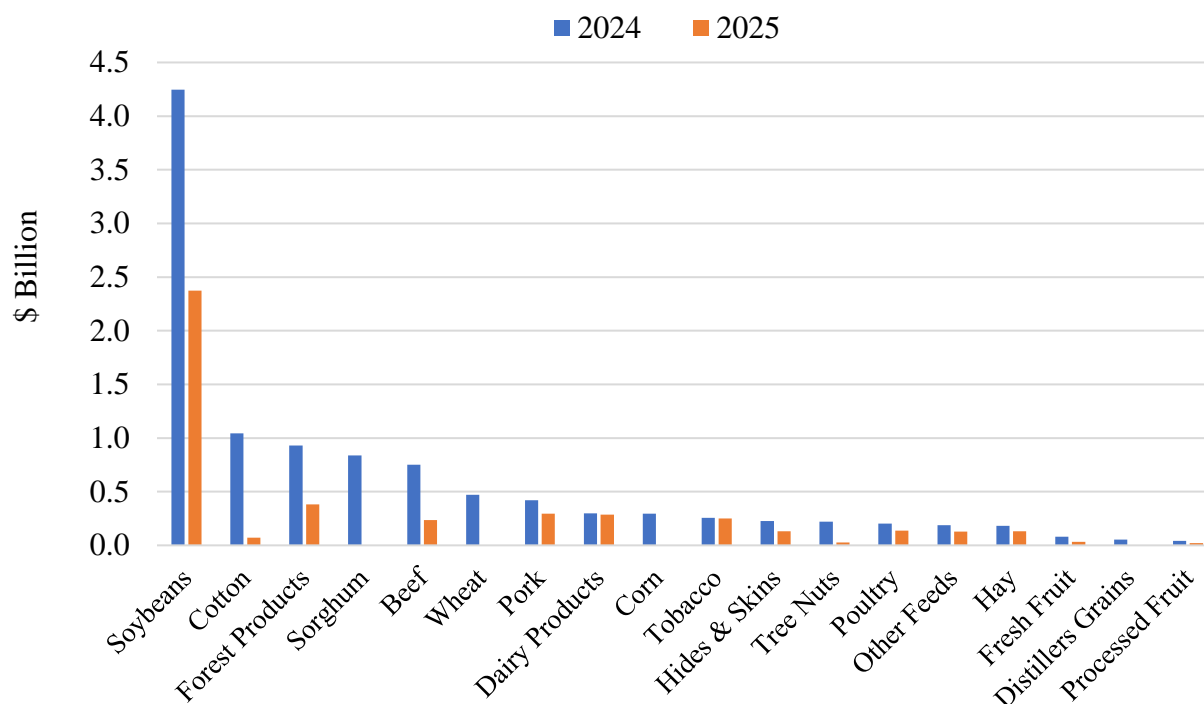
In 2024, the Philippines, Vietnam, Indonesia, and Thailand were the 8th, 9th, 11th, and 26th largest markets for US agricultural exports, respectively, with \$11.2 billion exported. In July 2025, the United States and Indonesia signed a framework agreement that included Indonesian tariff reductions on most agricultural products and biofuels. The framework includes increased imports of US wheat and overall agricultural purchases of \$4.5 billion annually through 2030. Currently, total US agricultural exports to Indonesia average over \$3 billion.

The Philippines is the largest Southeast Asian market for US exports, sourcing 17.3% of its total agricultural imports from the United States, particularly soybean meal. The US-Philippines framework deal mentions the potential for 3.3 MMT of corn with an estimated value of nearly \$760 million using current FOB export unit value prices.

At \$3.37 billion, US agricultural exports to Vietnam in 2024 are almost equal to those to the Philippines. Vietnam has announced intentions to import US corn, wheat, distiller's dried grains (DDGs), soybean meal, and other farm products (Table 1) totaling \$2 billion. Year-to-date, Vietnam's imports of agricultural products from the United States are 37% higher than in 2024.

Thai officials have indicated the potential for importing up to 2 million metric tons (MMT) of soybeans and more than 1 MMT of corn. Soybeans, soybean meal, dairy products, and wheat are among Thailand's largest agricultural imports, collectively accounting for nearly 32% of its total agricultural import value. Thailand imposes a very high corn tariff of 73% on its imports from nonpreferential partners, including the US, and an 80% over-quota tariff rate on soybean imports. Based on current US export unit values, converting the mentioned volume increases over existing levels suggests that the trade framework could generate approximately \$1 billion in additional US agricultural exports to Thailand.

Figure 1. Value of China's Imports of US Agricultural Products (April–September)



Source: Authors' calculations from Global Trade Atlas.

Bangladesh, Japan, and Taiwan

Although discussions remain ongoing, Bangladeshi officials announced a tentative trade deal with the United States on August 1, 2025. Sources indicate that Bangladesh will commit to importing 700,000 MT annually of US wheat (Paul, 2025). Current US wheat shipments to Asia are averaging \$260–\$300/MT. The implication is that US wheat exports to Bangladesh could increase by \$200 million.

Japan is a major market for US agricultural exports. It is the second largest market for US corn, beef, and pork exports; the third largest wheat market; the fifth- or sixth-largest soybean market (depending on the year); and the seventh- and ninth-largest market for US sorghum and DDG exports, respectively (USDA-FAS, 2025a). The US-Japan framework deal is less specific on product-specific purchases, although it does mention increased imports of US rice, biofuels, and farm products. Japan imports around \$7 billion of corn, wheat, soybeans, rice, coarse grains, DDGs, ethanol, beef, pork, and poultry. Scaling this to the announced \$8 billion, including a 75% increase in Japanese rice imports from the United States, suggests an additional potential of \$1 billion of US-Japan agricultural trade (Table 1).

The US-Taiwan framework deal has yet to be announced, but it is expected soon. Under this agreement, media reports indicate that Taiwan could

purchase up to \$3 billion of soybeans, \$2 billion in corn products (Indiana), and \$1.2 billion of wheat (Idaho). Indiana, Ohio, and Idaho signed direct letters of intent for specific products. Given current trade levels with Taiwan in these product categories, these increases could generate an additional \$760 million per year of bilateral trade.

UK and the EU

For agriculture, the US-UK and US-EU deals are harder to pin down. The US-UK framework was the first trade deal announced in May 2025, and media coverage has focused on increased imports of two US agricultural products: ethanol and beef. In 2024, UK imports of undenatured and denatured ethyl alcohol (ethanol) from all countries totaled nearly \$1 billion.³ For ethanol, trade increases will be achieved through a combination of tariff elimination and a US-specific tariff-rate quota carve-out of 1.4 billion liters. The UK's current applied tariff on ethanol imports from the United States is 16 British pounds/hectoliter (16 GBP/HL) for undenatured and 8 GBP/HL for denatured. Using a USD/GBP exchange rate of 1.34 and US export prices of \$0.60/liter suggests an applied tariff of 21%–30% on an *ad valorem* equivalent basis.⁴ Assuming the UK will allocate all of the 1.4 billion liters of ethanol quota licenses and including the higher high-quality beef quota allotment could generate an additional \$550 million in US-UK exports.

³ UK harmonized tariff codes do not delineate the portion of imported ethanol for fuel use.

⁴ Because most US ethanol exports to the UK are undenatured with a higher applicable duty (16GBP/HL) the trade-weighted applied *ad valorem* equivalent tariff is closer to 30%.

The US-EU framework is less specific on agricultural details, although the EU Commission (2025) notes that the agreement will provide preferential market access for a wide range of US seafood and agricultural goods, including tree nuts, dairy products, fresh and processed fruits and vegetables, processed foods, planting seeds, soybean oil, and pork and bison meat.

Preliminary Totals for Selected Product Mentions

To get a sense of what these agreements may hold for US agricultural exports, we can sum up the preliminary announced total trade values (column 5, Table 1) and the potential trade change from current levels (column 6, Table 1). Publicly announced trade values total \$20 billion (column 5). However, some of this is likely to include current trade levels. The aggregate total of column 6 suggests that US exports increase \$6.6 billion under these framework agreements; 68% of the potential trade increase is from increased trade with Indonesia (23% of column 6 total), Japan (18%), Thailand (15%), and the Philippines (12%).

The Costs of Retaliatory Tariffs: US Agriculture Caught in the Crossfire

While new bilateral trade agreements offer promising opportunities, these potential trade increases have to be weighed against retaliatory trade actions in other markets. China and Canada both imposed retaliatory measures in response to US trade actions. As shown in Figure 1, the value of China's imports of US agricultural products during April–September 2025 declined significantly across nearly all major commodity categories relative to the same period in 2024. While China's soybean imports from the US decreased by nearly \$2 billion (from \$4.2 billion in 2024 to \$2.3 billion in 2025), its imports of cotton, grain sorghum, wheat, and corn have fallen close to zero.⁵ Until recently, China had not purchased a single new-crop US soybean shipment through late October 2025, resulting in a record low soybean basis in September 2025 (Arita et al., 2025a).⁶ This structural shift has resulted in Brazil capturing the vast majority of China's soybean imports, while the US share has declined substantially.

A US-China Trade Deal is Announced

In November 2025, the United States and China reached a deal that offers partial relief to US agriculture. The centerpiece of the agreement is China's commitment to purchase 12 million metric tons (MMT) of US soybeans through January 2026, plus a minimum of 25 MMT annually for calendar years 2026–2028, totaling 87 MMT

over the commitment period. This volume-based approach represents a shift from the Phase 1 agreement's dollar-denominated targets, improving transparency and establishing a defined export baseline that stabilizes expectations. To facilitate US-China agricultural trade, China agreed to suspend its 10% baseline and 15% additional tariffs imposed in March 2025 in response to US fentanyl-related measures, which had covered many agricultural products, including soybeans. However, the 10% baseline tariff in May 2025 remains in effect, leaving US soybean exports facing a 3% most favored nation (MFN) and 10% retaliation rate. China also committed to resume purchases of US sorghum.

While the agreement provides meaningful relief and establishes a floor for US soybean exports, historical evidence suggests that Chinese soybean purchases are closely tied to counterseasonal relative prices. China consistently buys US soybeans during the October through January period when US beans are competitively priced compared to Brazil. This raises important questions: Can China meet its annual purchase commitment during this peak export window, particularly the 12 MMT pledged between November 2025 and January 2026? Or will Chinese importers need to purchase out-of-season US soybeans at a premium? Much remains to be seen; thus, we have not included US-China trade potential in Table 1. For now, however, the new deal signals a positive step toward putting US-China agricultural trade back on track.

Average Tariff Levels Across Trade Agreement Partners

The projected gains for US agricultural exports will depend, to some extent, on the degree to which trading partners lower their existing tariffs and non-tariff measures (NTMs) (Karagulle et al., 2025). Figure 2 compares average applied MFN tariffs across bulk, intermediate, and consumer-oriented (BICO) product categories for 11 countries/regions: the United States, India, five Southeast Asian economies (Thailand, Vietnam, the Philippines, Indonesia, and Malaysia), Japan, Taiwan, the UK, and the international average for all WTO members.⁷ Countries/regions are plotted on the horizontal axis, while the depth axis lists the three BICO categories. The vertical axis measures the height of the current average applied MFN tariffs. All tariff data come from the World Trade Organization's Tariff and Trade Download (TTD) system.⁸

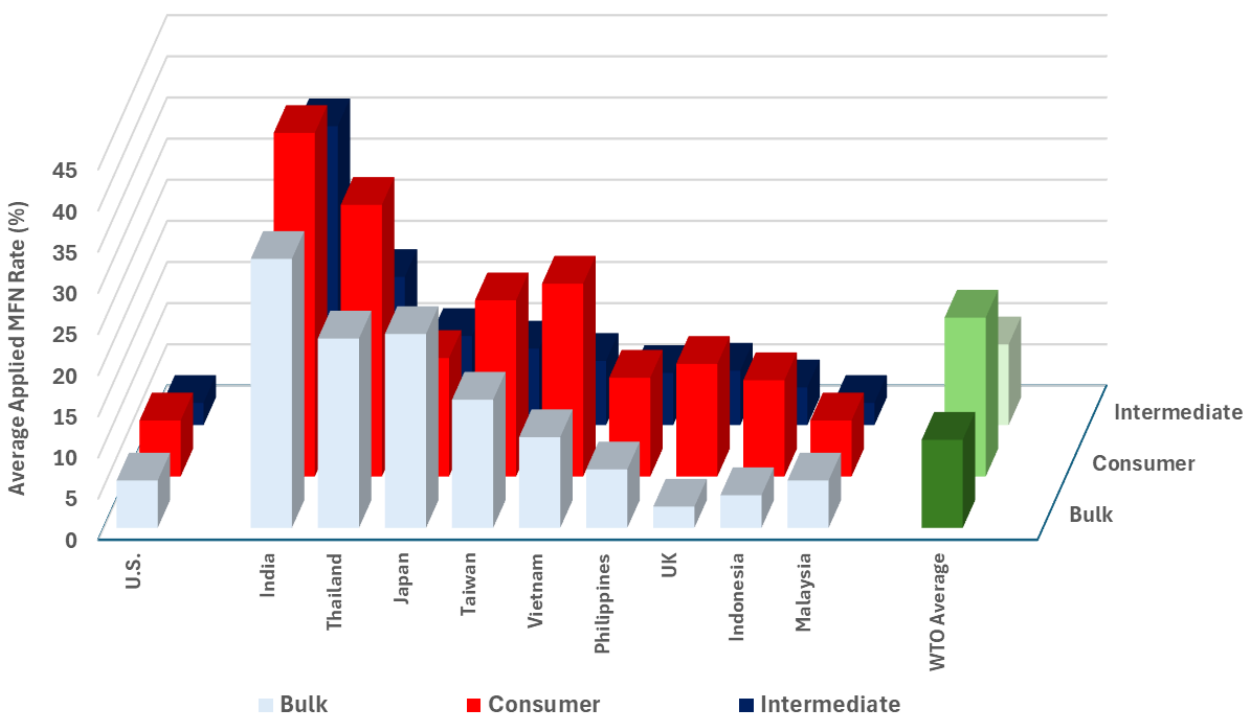
⁵ Canada also retaliated, imposing tariffs on over \$20 billion of US agricultural products in March 2025. For food and agricultural products, many of Canada's retaliatory tariffs were confined to smaller, often thinly traded over-quota tariff lines. Canada removed these trade actions on September 1, 2025.

⁶ Basis refers to the difference between local cash market offers and the nearby futures price.

⁷ Korea is omitted due to prohibitively high tariffs on rice (bulk category) that skew the average and compress the scale, making it difficult to read.

⁸ Available at: <https://ttd.wto.org>

Figure 2. Average Agricultural Applied MFN Tariffs Notified to the WTO



Source: Authors' calculations from the World Trade Organization (WTO) Tariff and Trade Database (<https://ttd.wto.org>) using simple averages of HS6 products within bulk, consumer, and intermediate categories for 2024 or the latest year of WTO notification.

India and Thailand's average tariffs are the highest at 39% and 25%, respectively. These applied tariff levels are more than 6 and 5 times the average MFN tariffs applied by the United States. Thailand's tariff structure also varies by product category, with the highest rates imposed on consumer-related products (33%), followed by bulk (23%) and intermediate products (18%). Among Southeast Asian countries, Malaysia has the lowest average applied MFN tariffs.

Average tariff rates can obscure some product-line tariffs that are prohibitively high. For example, US soybean and corn exports to India face 45% and 50% tariffs, respectively. Thailand maintains a tariff-rate quota on soybean imports with a 20% in-quota rate and a prohibitive 80% over-quota rate. US corn exports to Thailand face a 73% tariff. By comparison, Vietnam's soybean tariff is 0%, and it recently reduced its soy meal tariff from 2% to 0%.

US wheat is exported in high volumes to the Philippines, Japan, South Korea, Thailand, and Indonesia. While the average MFN applied tariff rates for wheat in these countries are below 3%, they are relatively high in the UK (23%) and India (72%) and are subject to a country-specific quota and markup pricing rules in Japan.

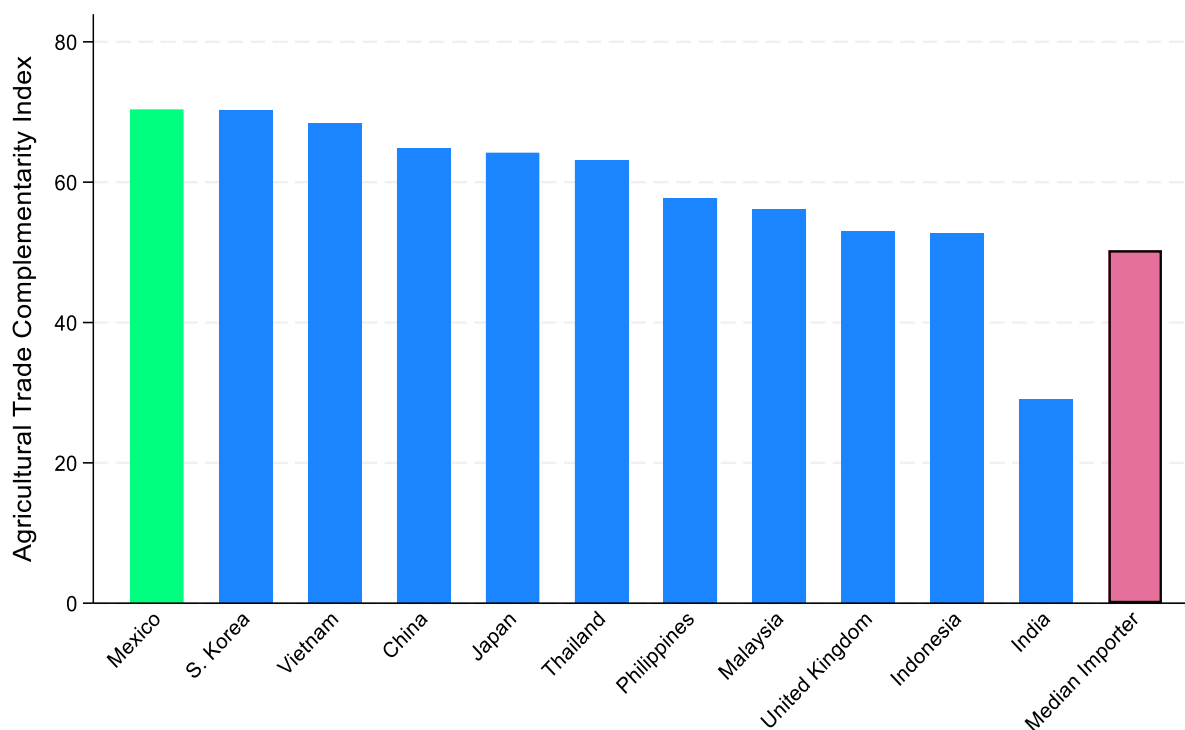
As illustrated in Figure 2, tariff rates on consumer-oriented products are generally higher across most

countries. US poultry exports face a near 100% tariff in India, 40% in Malaysia, 38% in Thailand, 33% in the Philippines, 21% in the United Kingdom, and 8% in Indonesia and Japan. For US beef exports, the UK maintains an in-quota tariff of 20% for up to 1,000 MT of high-quality non-hormone-treated beef and only allows US non-hormone-treated beef exports. Under the recently announced trade deal, the UK will eliminate its 20% in-quota tariff and expand the quota level to 13,000 MT. Vietnam applies a 30% tariff on frozen beef and 14%–20% on chilled beef. Relative tariff disadvantages vis-à-vis Australia and New Zealand undercut US beef exports to Vietnam. Under the recently announced US-Vietnam trade deal, Vietnam's beef tariff will be liberalized, which will provide parity with Vietnam's trade agreement partners Australia and New Zealand (USDA FAS, 2023). By contrast, tariff rates are lower in the Philippines (10%), Indonesia (5%), and Malaysia (0%).

Measuring Trade Complementarity: US Agricultural Exports to Trade Agreement Partners

While the US pursues new bilateral trade deals, less is known about how closely the profile of US agricultural exports lines up with the importing needs of partner countries. Here, we use the trade complementarity index as a method by which to evaluate US trade

Figure 3. Agricultural Trade Complementarity Index Between the United States and Potential Trade Agreement Partners, Average 2021–2023



Source: Authors' calculations from equation (1) using BACI bilateral trade averages from 2021–2023 for all BICO food and agricultural product categories (Gaulier and Zignago, 2010). Median importer denotes the median TCI across all importing countries.

complementarity. The trade complementarity index (TCI) measures the extent to which an export supplier's share of global agricultural exports aligns with a partner country's import profile. The TCI between exporting country o and importing country d for product k is defined as

$$(1) \quad TCI_{od} = 100 * \left[1 - \frac{\sum_k |M_d^k - X_o^k|}{2} \right],$$

where M_d^k is the share of good k in the imports of country d and X_o^k is the share of good k in the exports of country o . Goods are defined according to the product categories within the USDA's Bulk, Intermediate, and Consumer-Oriented (BICO) classification of agricultural products.⁹ The TCI index approaches zero when goods exported by o are not aligned with products imported by d . The index approaches 100 when the export and import shares of product k match.

Intuitively, the TCI can be thought of as the degree of overlap, or correlation, in d 's reliance on imports of product k and o 's ability or comparative advantage to

provide exports of product k . If o 's comparative advantage products are those in which d relies on imports (comparative disadvantage), the TCI will reflect a higher value, indicating that o and d are a good match for a bilateral trade deal.

Figure 3 plots the 2021–2023 average TCI values for 11 individual trading partners and the median TCI value (shown in red) across all 75 countries in the database. Mexico is also illustrated (in green) because the United States and Mexico have shared one of the longest-standing trade agreements under the North American Free Trade Agreement (NAFTA) (1994–2019) and the United States-Mexico-Canada (USMCA) agreement (2019-present). Mexico and South Korea registered the highest TCI value, suggesting that the mix of food and agricultural products they import matches well the shares of these products in US exports. Vietnam, China, and Japan are also excellent candidates for a trade agreement with the United States, given their relatively high TCI scores of 68.4, 64.8, and 64.1, respectively. The United States lacks a formal trade agreement with either Vietnam or China, and only a limited trade arrangement with Japan (USJTA),

⁹ There are 60 BICO product categories as defined by USDA's Foreign Agricultural Service (FAS/USDA, 2025a).

established under the first Trump administration. Moving along the horizontal axis, we can see that current US trade deal announcements with Thailand, the Philippines, Malaysia, the United Kingdom, and Indonesia are all above the median importing country in the sample.

The TCI analysis confirms that most announced bilateral partners represent strategically important opportunities for US agriculture. With TCI scores consistently above the global median, these markets demonstrate strong alignment between their import needs and US export capabilities. However, realizing the projected \$6.6 billion in additional exports (Table 1) will require continued effort in trade negotiations, attention to implementation and timeframes, and proactive liberalization of each country's non-tariff restrictions. Success in these bilateral agreements could provide a critical diversification channel for US agricultural exports amidst a more uncertain trade relationship with China.

Conclusion

The United States' pursuit of new bilateral frameworks marks a strategic pivot toward diversification in agricultural export markets amid a shifting and unpredictable trade relationship with China. While details remain limited, preliminary evidence compiled from various media articles suggests that these agreements—particularly with Indonesia, Japan, Thailand, and the Philippines—could expand US agricultural exports by an estimated \$6.6 billion annually, led by stronger demand for grains, oilseeds, and biofuels. The trade complementarity analysis confirms that most new partners exhibit strong alignment between their import needs and US comparative advantage, underscoring a strong economic rationale for these trade deals. However, realizing this trade potential will depend on implementation timeframes, the depth of tariff and non-tariff barrier trade concessions, and the extent to which income growth in partner countries supports rising demand for higher-quality, protein-rich foods.

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2025 US Trade Policy Shifts and Agricultural Exports: Mapping Retaliation Exposure and Assessing Potential Market Access Offsets in the UK and Japan

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JEL Classifications: F14; Q17; Q18

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Introduction

On February 1, 2025, the Trump administration announced tariffs on imports from Canada, Mexico, and China, framed as part of efforts to curb fentanyl trafficking and illegal immigration (Hammond and Burkhart, 2025). This move prompted swift retaliation from longstanding US trading partners, notably Canada and Mexico, and reignited the 2018–2019 trade dispute with China. Two days later, on February 3, the Trump administration paused the tariffs in exchange for commitments to strengthen border security and to enforce drug laws. Since then, as summarized in Table 1, the White House has maintained a steady flow of announcements throughout 2025 involving new tariff threats (“on”), pauses (“off”), and trade deals.

A key development occurred on April 2, known as “Liberation Day,” when the White House announced a 10% blanket tariff on all imports, alongside additional duties of up to 40% on certain countries, including Vietnam and Sri Lanka. Trump administration officials stated that these tariffs have prompted foreign governments to negotiate bilateral trade deals with the US (The White House, 2025). The path toward such talks, however, proved far from straightforward. As Figure 1 illustrates, the immediate market response was a decline in confidence in the US dollar. Historically, the 10-year US Treasury bond yield and the US Dollar Index, which tracks the dollar’s value against a basket of six major currencies, have tended to move together. Since Liberation Day, however, the Dollar Index has fallen below the Treasury yield, signaling a decline in foreign investors’ confidence in the currency. When investors perceive the US economy as riskier, they sell Treasury bonds, which drives down prices and pushes up yields. At the same time, selling dollar-denominated assets puts downward pressure on the US dollar.

The trade conflict with China escalated more sharply than that with other countries. Following the US increase in tariffs on Chinese goods, China responded by raising its tariffs on American exports by 125%. In turn, the US raised its duties to as much as 145%. While the two countries eventually resumed talks, negotiations remain ongoing (Hammond and Burkhart, 2025). Meanwhile, the Trump administration has signed new trade deals with several countries, including the United Kingdom (UK), Japan, South Korea, Indonesia, and the European Union (EU). Still, the direction of US trade policy and the potential impact on US agriculture remain uncertain.

US Agriculture Foreign Market Dependencies

To identify which agricultural products are more vulnerable to export losses from potential tariff retaliation, we calculate each product’s foreign market dependency, defined as the share of total US exports sent to China, Canada, Mexico, or the EU. This approach, based on Huang et al. (2023), assumes that a higher share indicates greater reliance on that market. These four destinations are highlighted because they are key targets in the current White House trade agenda. Figure 2 presents the top ten BICO (Bulk, Intermediate, and Consumer-Oriented) product groups with the highest export dependencies in each market in 2024. Export dependence ranges from 0 to 1, where 1 indicates that all exports are directed to that market. For context, the figure also reports the total export value of each product to that destination in 2024.

We begin with Canada and Mexico, shown in Panels A and B of Figure 2, given their proximity to the US and their participation in the United States-Mexico-Canada Agreement (USMCA), which resulted from the renegotiation of the North American Free Trade Agreement (NAFTA) during President Trump’s first term.

Among the products exported to Canada, several show dependencies above 0.60, with some exceeding 0.80. However, the most significant products in terms of both export dependency and export value are fresh vegetables, with a dependency of 0.79 and nearly \$3 billion in exports in 2024. They are followed by baked goods, cereals, and pasta, with a dependency of 0.61 and \$2.7 billion in exports. These products would be among the most exposed to losses if Canada were to impose retaliatory trade measures on US goods. For Mexico, the products with the highest potential impact are corn, dairy products, and pork and pork products. In 2024, the US exported \$5.7 billion in corn to Mexico, accounting for 40% of total corn exports. Dairy and pork exports to Mexico totaled \$2.5 billion each, representing 30% of total US exports for both product groups.

For China, presented in Panel C of Figure 2, five product groups stand out as most at risk when considering both export dependency and export value. The most important is soybeans, with an export dependency of 0.52 and \$12.7 billion in exports to China in 2024, the highest export volume among all product groups analyzed. Next are coarse grains (rye, barley, oats, and sorghum, among others), with a dependency of 0.83 and

\$1.3 billion in exports. Cotton follows, with a dependency of 0.30 and \$1.5 billion in exports. The last two are beef and beef products, as well as pork and pork products, each with export dependencies below 0.20 but with export values of \$1.6 billion and \$1 billion, respectively. The case of soybeans recalls the experience of the 2018–2019 trade dispute, when they became China’s primary choice for tariff retaliation (Carter and Steinbach, 2020; Adjemian, Smith, and He, 2021; Baryshpolets, Devadoss, and Sabala, 2022).

In the EU, as shown in Panel D of Figure 2, two product groups stand out as the most at risk. First are tree nuts (almonds, cashews, walnuts, etc.), which have an export dependency of 0.27 and are projected to have \$2.7 billion in exports to the EU in 2024. Of the total tree nut exports, over 50% were almonds, 23% were pistachios, and 13% were walnuts, highlighting that producers in California are the most exposed (Carter and Steinbach, 2019, 2022; Asci and Devadoss, 2021; Steinbach and Zhuang, 2023). Second are distilled spirits, with an export dependency of 0.45 and \$1.3 billion exported, more than 56% of which was whiskey. This places a larger burden on producers in Southern US states (Muhammad, Menard, and Smith, 2025).

Table 1. US Tariffs on Exporting Countries

| Date | Event | On/Off |
|-------------|---|--------|
| February 1 | The White House announced 25% tariffs on Mexican and most Canadian imports and 10% on goods from China, demanding that these countries curb the flow of fentanyl and illegal immigrants into the United States. | On |
| February 3 | The White House agreed to a 30-day pause in its tariff threat on Mexico and Canada in return for concessions on border and crime enforcement. | Off |
| February 10 | The US raised tariffs on steel and aluminum to 25%. | On |
| March 3 | The US announced 25% tariffs on goods from Mexico and Canada starting March 4, and that it will raise fentanyl-related tariffs on all Chinese imports to 20%. | On |
| March 6 | President Trump exempts goods from Canada and Mexico under a North American trade pact for a month. | Off |
| March 26 | The US announced a 25% tariff on imported cars and light trucks. | On |
| April 2 | <i>Liberation Day.</i> The White House announced global tariffs with a baseline rate of 10% on all imports, along with higher duties on certain countries, such as Vietnam (46% tariff). | On |
| April 9 | The US paused most <i>country-specific</i> tariffs for 90 days. <i>The 10% blanket tariff on nearly all US imports remains in place.</i> It also increased tariffs on Chinese goods to 125%, up from 104% the day before, raising total duties to 145%. | Off |
| May 8 | The US and UK announced a trade deal keeping 10% tariffs on British exports while lowering duties on British cars. The agreement expands US agricultural market access for ethanol, beef, cereals, fruits, vegetables, animal feed, and tobacco. | Deal |
| May 12 | The US and China agreed to a 90-day truce; the US will cut the extra tariffs on Chinese imports to 30%, while China’s duties on US imports will be reduced to 10% from 125%. | Off |
| May 29 | A federal appeals court temporarily reinstated the most sweeping of the White House tariffs, pausing an earlier lower court’s ruling to consider the government’s appeal. | On |

Table 1. Continued...

| | | |
|-------------|---|------|
| June 3 | The White House announced a hike in the steel and aluminum tariffs to 50% from 25%. | On |
| July 3 | The White House announced a 20% tariff on many Vietnamese exports and a 40% levy on trans-shipments from third countries via Vietnam. | On |
| July 6 | President Trump announces an additional 10% tariff on countries aligning with the "anti-American policies" of BRICS. | On |
| July 7 | Trump said the previously announced higher duties will take effect on August 1, including tariffs of 25% to 40% on 14 countries, such as Japan and South Korea. | On |
| July 10 | The US announced a 35% tariff on imports from Canada in August and blanket tariffs of 15% or 20% on most other trading partners. | On |
| July 15 | The US announced a 19% tariff on goods from Indonesia under a new agreement. | Deal |
| July 23 | The US secured a trade deal with Japan, where Japan will increase US rice imports by 75% and purchase \$8 billion in US goods, including corn, soybeans, fertilizer, bioethanol, and sustainable aviation fuel. | Deal |
| July 27 | The US reached a trade deal with the EU that imposes a 15% tariff on most European imports and addresses non-tariff barriers, such as simplifying sanitary certificate requirements for US pork and dairy. | Deal |
| July 28 | Trump warned trading partners that refuse to negotiate trade deals may face tariffs of 15% to 20%. | On |
| July 30 | Trump said the US will impose a 25% tariff on Indian goods and place a 50% tariff on most Brazilian goods, with softer quotas for sectors such as aircraft, energy, and orange juice. He said a 50% tariff on copper pipes and wiring would also start on August 1. | On |
| July 30 | The US reached a deal with South Korea, reducing the planned levies to 15%. | Deal |
| July 31 | Trump revised reciprocal tariffs ranging from 10% to 41% on 69 trading partners ahead of the trade deal deadline. He issued a separate order raising duties on Canadian goods subject to fentanyl-related tariffs to 35%, from 25% previously. | On |
| July 31 | The US granted Mexico a 90-day reprieve from higher tariffs of 30% on many goods to allow time to negotiate a broader trade pact. | Off |
| August 11 | The US extended a temporary tariff reduction (from 125% to 10%) for goods from China to Nov. 10. | Off |
| August 21 | The US and EU issued a joint statement establishing a 15% tariff cap on EU goods and exempting certain products, such as aircraft and parts, select pharmaceuticals, and scarce natural resources like cork, effective September 1. | Off |
| September 4 | The US implemented the US–Japan framework agreement, setting a 15% tariff cap on Japanese goods and exempting aircraft, parts, pharmaceuticals, and scarce natural resources. | Off |
| September 5 | The US amended the list of products exempted from the reciprocal tariff action. | Off |

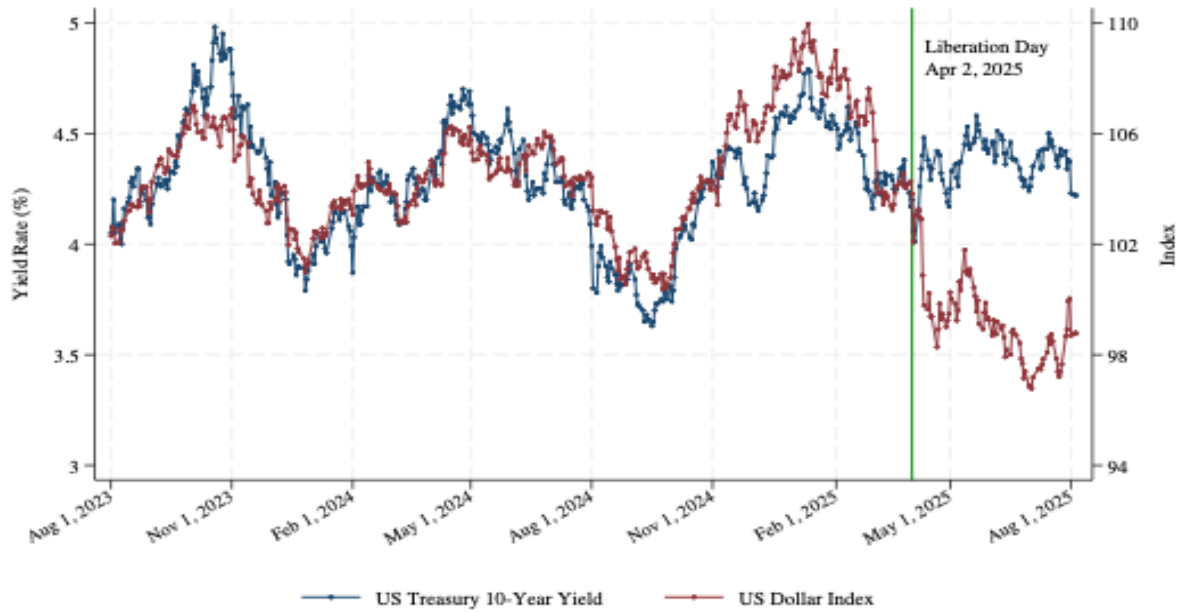
Note: The table outlines key announcements and events related to US trade policy in 2025. The third column identifies a tariff increase (On), a decrease or pause (Off), or a trade deal (Deal). Dates taken from Reuters (2025) and Hammond and Burkhart (2025).

Potential Impact of China's Trade Retaliation on US Agricultural Exports

US agricultural exports were hit harder by retaliation from China than from any other country, primarily due to the long-standing trade dispute between the two nations. Usually, China applies its most-favored-nation (MFN) tariff rate, which, for example, is 3% on soybeans.

However, during the 2018–2019 trade dispute, China imposed steep retaliatory tariffs after the US used Section 232 of the Trade Expansion Act and Section 301 of the Trade Act to charge additional import duties on Chinese goods. As part of the US-China Phase One Agreement in 2020, China granted exemptions to the Section 301 tariffs on certain agricultural imports (USDA-FAS, 2020).

Figure 1. US Treasury Rates vs. the US Dollar Index Before and After Liberation Day



Note: The graph plots the US Treasury Bond 10-Year Yield Rate (left-hand axis) and the US Dollar Index (right-hand axis) from August 1, 2023, to August 1, 2025.

Under the current trade policy, most US agricultural exports face an additional 20% retaliatory tariff. Tariffs briefly peaked at 150% in April but were reduced to 20% after the US and China announced a framework agreement in May. China has indicated that it will cease granting certain Section 301 tariff exemptions after October 30, 2025, with all approved exclusions remaining valid until December 13, 2025 (USDA-FAS,

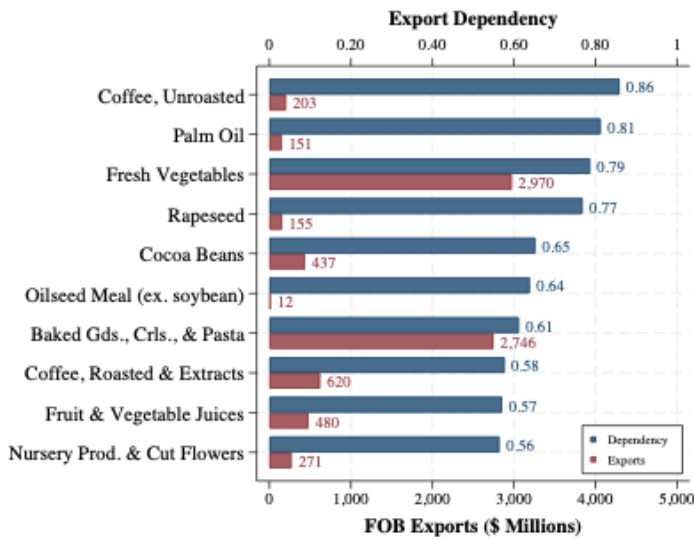
2025). If the exemptions are lifted, the 20%–30% retaliatory tariffs imposed since 2018 will remain in effect without relief. Table 2 presents the tariffs on the top 10 US agricultural exports to China in 2024, comparing the MFN rates, tariffs in effect through July 2025, and rates if the Section 301 exemptions are terminated. Soybeans, cotton, wheat, and tree nuts are among the hardest hit, with tariff increases of 27.5%, 25%, 25%, and 29%, respectively.

Table 2. Chinese Tariffs on Top US Agricultural Exports to China

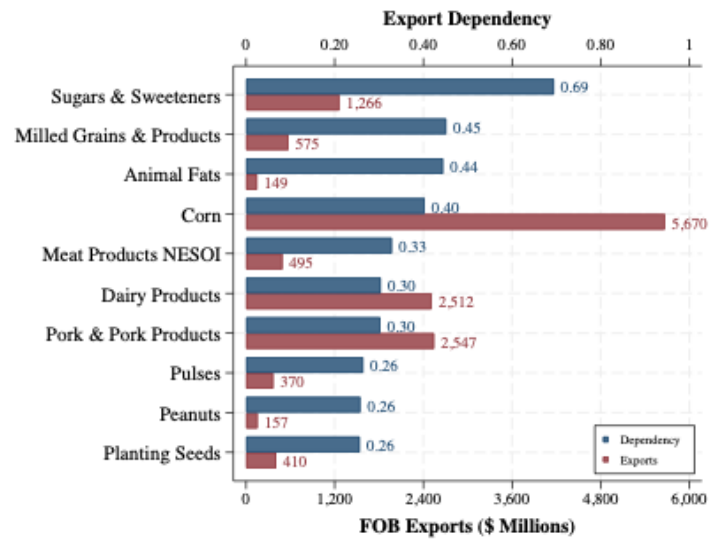
| Top Agricultural Products | US Exports to China in 2024 (\$ millions) | MFN Tariff Rate | July 2025 Tariff Rate | Tariff Rate without 301-Related Retaliatory Tariff Exemptions |
|--|---|-----------------|-----------------------|---|
| Soybeans | 12,761.37 | 3.0 | 23.0 | 50.5 |
| Beef & beef products | 1,551.63 | 12.1 | 32.1 | 52.1 |
| Cotton | 1,487.52 | 1.0 | 26.0 | 51.0 |
| Coarse grains (excluding corn) | 1,259.34 | 1.8 | 14.2 | 24.2 |
| Tree nuts | 1,064.53 | 11.7 | 44.8 | 73.7 |
| Pork & pork products | 992.62 | 15.9 | 51.2 | 77.6 |
| Dairy products | 584.61 | 9.8 | 27.7 | 50.9 |
| Wheat | 556.95 | 1.0 | 26.0 | 51.0 |
| Poultry meat & products (excluding eggs) | 479.27 | 11.4 | 30.0 | 53.2 |
| Hides & skins | 433.09 | 9.0 | 19.0 | 30.3 |

Note: The table summarizes the most recent tariff structure affecting top US agricultural exports to China as of July 2025. Export values for the year 2024 are obtained from UN Comtrade (2025). The MFN tariff rate represents the standard duty applied to WTO members in the absence of trade disputes. The July 2025 tariff level includes the 20% retaliatory duties imposed in response to US Section 232, Section 301, and fentanyl actions. The final column reflects projected tariff levels if China withdraws all Section 301 retaliatory tariff exemptions after September 14, 2025.

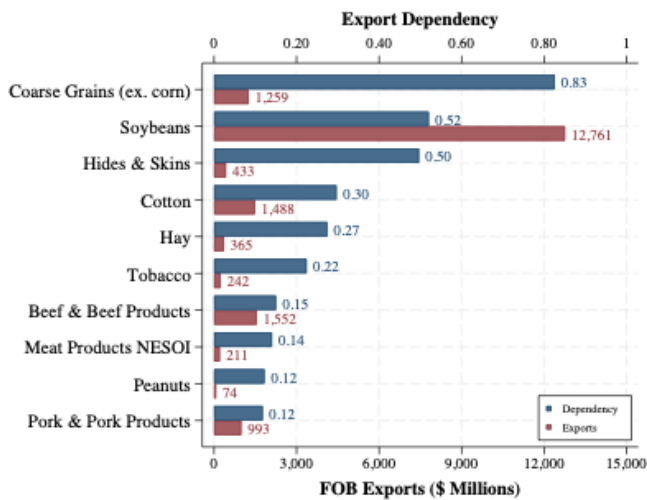
Figure 2. Agricultural Product-Level Trade Dependencies in Top Export Markets



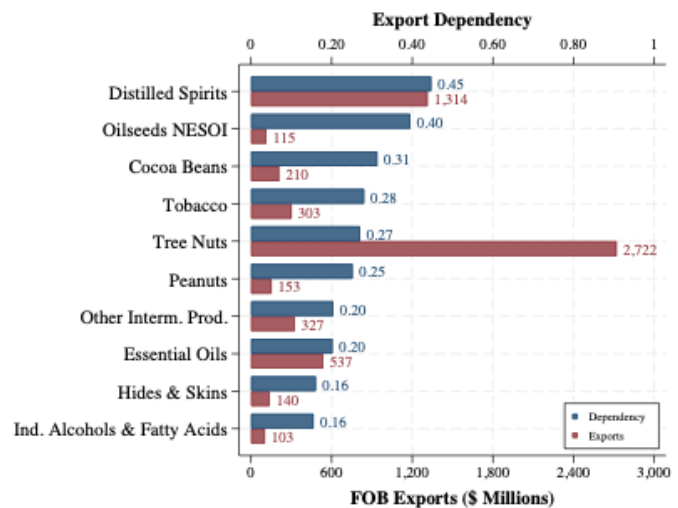
Panel A: Canada



Panel B: Mexico



Panel C: China



Panel D: EU

Note: The figure shows US agricultural products with the 10 highest 2022–2024 annual average export dependencies in the selected markets. Export values correspond to 2024.

To assess how China's 2025 retaliatory tariffs could affect US agricultural exports to China in 2026, we model two policy scenarios and compare them to the projected exports under the MFN tariff baseline. Scenario 1 models a tariff increase from the MFN rate to the rates applied in July 2025, corresponding to the change from column 3 to column 4. In Scenario 2, in addition to the tariff hike in Scenario 1, China removes all Section 301 tariff exemptions, corresponding to the change from column 3 to column 5. We estimate the partial effects on US exports using the methodology of Steinbach, Yildirim, and Zurita et al. (2024) and Steinbach et al. (2024), calculating them separately for each product group. This method applies trade elasticities estimated by Grant et al. (2021) to baseline export values in 2024, enabling us to simulate how

changes in applied tariffs affect US agricultural exports to China, while holding other factors constant.

Table 3 presents the potential impacts of Scenarios 1 and 2 in 2026 for the top US agricultural exports to China. The first column reports the projected export values under MFN tariffs, totaling \$27.3 billion. The remaining columns present the effects in percentages under each scenario. Under Scenario 1, exports would decline to \$18.6 billion, representing a 32% decrease. The most affected products include soybeans (down 61.2%), wheat (down 87.9%), and coarse grains excluding corn (down 47.3%). Scenario 2 shows a greater impact, with total exports falling by 81% to \$5.1 billion. In this case, exports of soybeans, wheat, and poultry to China would effectively be shut off.

Table 3. Potential US Agricultural Export Losses to China from Retaliatory Tariff Actions

| Commodity (BICO-HS6) | Exports to China in 2026 (\$ millions) | Scenario 1: MFN to July 2025 Tariffs With 301 Tariff Exemptions Partial Effects (%) | | | Scenario 2: MFN to July 2025 Tariffs Without 301 Tariff Exemptions Partial Effects (%) | | |
|--|--|--|-------------------|----------------|---|-------------------|----------------|
| | | Lower Bound | Point Estimate | Upper Bound | Lower Bound | Point Estimate | Upper Bound |
| | | Soybeans | 14,091.54 | -43.0 | -61.2 | -70.4 | -100.0 |
| Beef & beef products | 2,416.48 | -15.8 | -27.3 | -36.8 | -31.7 | -54.7 | -73.5 |
| Cotton | 1,646.62 | -20.1 | -37.4 | -51.0 | -40.1 | -74.9 | -100.0 |
| Coarse grains (excluding corn) | 1,273.08 | -45.1 | -47.3 | -48.5 | -81.1 | -85.1 | -87.3 |
| Tree nuts | 1,343.37 | -7.9 | -23.6 | -35.4 | -14.8 | -44.2 | -66.3 |
| Pork & pork products | 327.40 | -35.2 | -39.5 | -43.0 | -61.5 | -69.0 | -75.2 |
| Dairy products | 643.09 | -22.8 | -29.7 | -35.9 | -52.4 | -68.2 | -82.3 |
| Wheat | 367.25 | -67.3 | -87.9 | -95.5 | -100.0 | -100.0 | -100.0 |
| Poultry meat & products (excluding eggs) | 497.93 | -42.6 | -47.0 | -51.4 | -95.9 | -100.0 | -100.0 |
| Hides & skins | 495.72 | -23.0 | -25.3 | -27.7 | -48.8 | -53.8 | -58.8 |
| Other agricultural products | 4,227.28 | -23.0 | -29.0 | -33.0 | -64.0 | -79.0 | -89.0 |
| Total Agricultural Exports | 27,329.76 | -25.0 | -32.0 | -36.0 | -64.0 | -81.0 | -91.0 |

Note: The table shows the potential export losses to China for US commodities in 2026 under two possible scenarios regarding China's treatment of Section 301 tariffs. Effects for Other Agricultural Products and Total Agricultural Exports represent the average effect of all products within each category. The 2026 export values for each product are linear projections based on UN Comtrade (2025) export data from 2020 to 2024. Lower and upper bounds correspond to the 95% confidence interval of each product's tariff elasticity estimates. A full description of the methodology is available in Steinbach, Yildirim, and Zurita (2024) and Steinbach et al. (2024).

Potential Market Access Gains for Agricultural Exports from New Trade Deals

The White House states that its trade policies aim to encourage other countries to enter into agreements with the United States, thereby providing American farmers with increased access to foreign markets. We now assess the potential benefits of new trade deals. Our focus is on trade deals with the UK and Japan, as these specifically outline purchase commitments for agricultural products (Ridley and Devadoss, 2025). A comparable example is the Phase One agreement with China, in which China committed to purchasing and importing approximately \$40 billion annually in agricultural and seafood products over two years. China ultimately met only 83% of that target (Bown, 2022). UK and Japanese importers are likely guided by market prices and conditions. In contrast, China's Phase One commitments were primarily driven by government directives, making export potential in the former more dependent on market competition.

On May 8, the White House announced a trade deal with the UK, which is said to include greater access for US ethanol, beef, cereals, fruits, vegetables, animal feed, and tobacco. Using UN Comtrade (2025) data, we estimate the market potential for the products included in this new agreement. We define the overall market potential as the additional exports the US could achieve if it were to supply 100% of the UK's import demand. To estimate this, we calculate the average annual share of US exports in the UK's total imports and multiply the complement of that share by the UK's total import value in 2024. The results, presented in Panel A of Table 4, indicate that for the mentioned products, the UK has a total market potential of \$19.4 billion for US agricultural producers. The largest market potential values are found in processed and fresh vegetables, as well as poultry and poultry products, each at around \$4.2 billion. Beef and beef products have an estimated market potential of approximately \$2.1 billion, while ethanol has an estimated market potential of around \$435 million.

To evaluate whether US exporters can realistically capture this potential, we examine market share and CIF

Table 4. US's New Trade Deal Market Potential

| Panel A: UK Trade Deal | | | Panel B: Japan Trade Deal | | |
|----------------------------------|---|-----------------------------------|---------------------------|---|-----------------------------------|
| Agricultural Products | Imports from the US in 2024 (\$ millions) | US Market Potential (\$ millions) | Agricultural Products | Imports from the US in 2024 (\$ millions) | US Market Potential (\$ millions) |
| Processed vegetables | 63.95 | 4,435.20 | Pork & Pork Products | 1,433.07 | 3,557.90 |
| Poultry meat & prods. (ex. Eggs) | 0.24 | 4,206.76 | Beef & Beef Products | 1,838.19 | 2,367.71 |
| Fresh vegetables | 5.22 | 4,168.14 | Jet Fuel (SAF) | 718.52 | 1,760.53 |
| Beef & beef products | 5.24 | 2,125.06 | Corn | 3,032.84 | 1,442.68 |
| Soybean meal | 71.42 | 916.24 | Wheat | 653.38 | 1,019.95 |
| Other feeds & fodders | 60.66 | 799.35 | Soybeans | 1,239.48 | 605.67 |
| Rice | 14.66 | 733.13 | Grain Products | 17.49 | 503.50 |
| Corn | 47.88 | 680.01 | Biodiesel | 65.63 | 490.82 |
| Milled grains & products | 51.82 | 443.71 | Fertilizers | 27.90 | 434.70 |
| Ethanol, incl. Bev. | 708.11 | 437.80 | Rice | 337.51 | 277.99 |
| Soybeans | 85.35 | 401.83 | | | |
| Distillers grains | 86.27 | 72.75 | | | |
| Tobacco | 0.03 | 0.57 | | | |
| UK Total | 1,200.84 | 19,420.56 | Japan Total | 9,364.02 | 12,461.45 |

Note: The table shows the US market potential in the UK and in Japan under the new trade deals signed in 2025. Import data are sourced from UN Comtrade (2025). We define market potential as the additional exports that the United States would need to supply 100% of the destination market's import demand. To estimate it, we calculate the average US export share in the destination market's total imports for 2022–2024 and multiply the complement of that share by the destination market's 2024 import value.

import prices (in \$/kg) for BICO product categories with a market potential exceeding \$1 billion, as shown in Panels A–D of Figure 3, focusing on HS codes with a potential of more than \$300 million. For UK imports in 2024, we plot market share against import price for processed vegetables, poultry meat and products (excluding eggs), fresh vegetables, and beef and beef products. Of these, only processed vegetables show strong potential, with import prices below the average in the British market and a low US market share. The leading suppliers of processed vegetables are Belgium, the Netherlands, Italy, Portugal, and Spain. All of these countries are geographically closer to the UK than the United States, suggesting that transportation costs may be a key barrier to expanding US exports in this category. The other products do not show the same combination of favorable market conditions. However, these market potential estimates should be interpreted cautiously, as consumer preferences, regulatory standards (e.g., for poultry and beef), and existing trade agreements the UK has with Australia and New Zealand may further constrain US export opportunities.

The second relevant agreement for our analysis is the US–Japan trade deal, announced on July 23. Under this deal, Japan made two purchase commitments. First, it would increase US rice imports by 75% under its existing WTO minimum access quota, giving the US a larger share of Japan's total quota and providing a rare

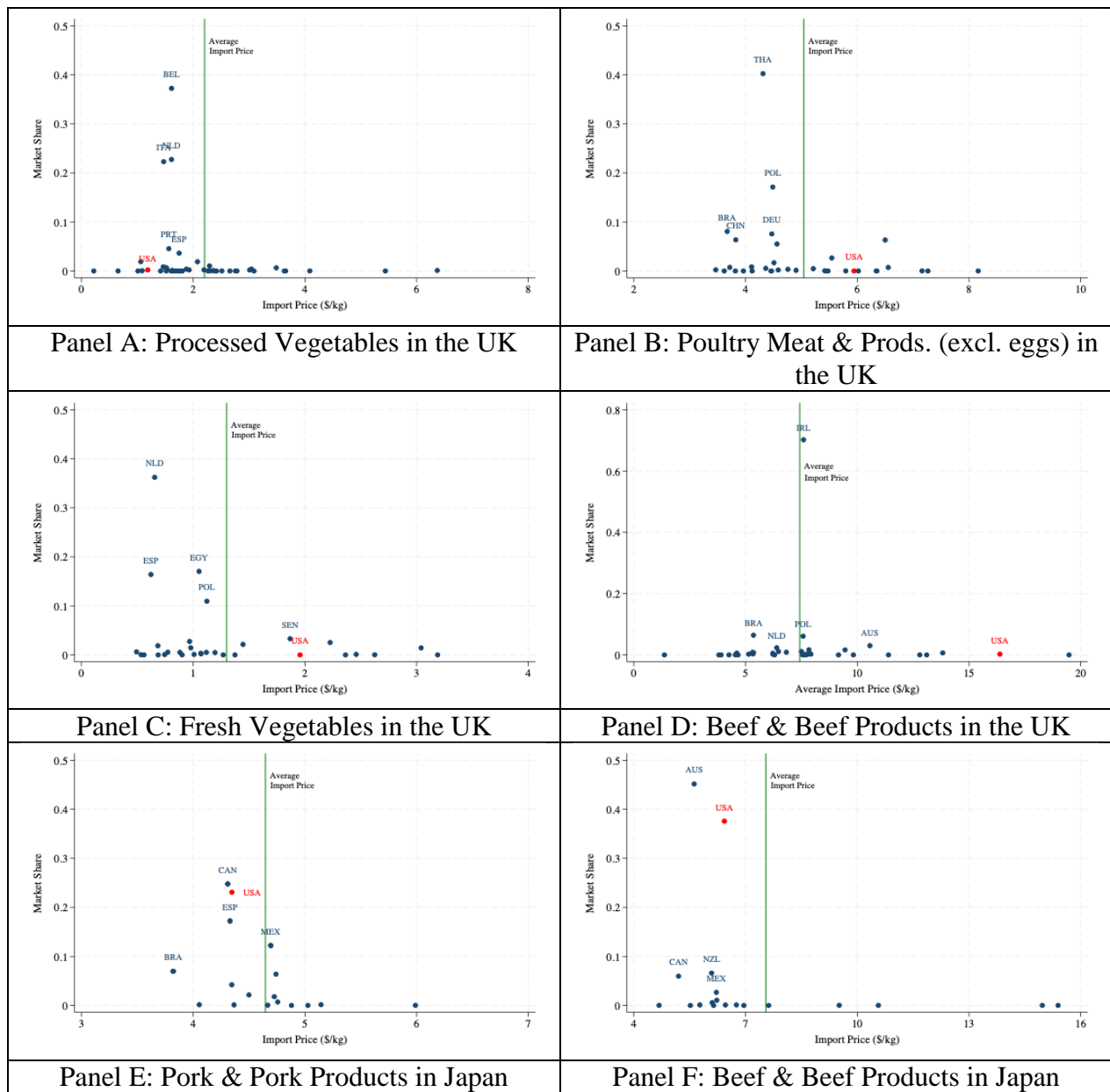
opening in a highly protected market. Japan also committed to purchasing \$8 billion in US agricultural and biobased products, including corn, soybeans, wheat, beef, grain products, fertilizers, bioethanol, and sustainable aviation fuel (SAF). Estimates of Japan's market potential are shown in Panel B of Table 4. The results indicate that, for the products covered in the agreement, Japan offers a total market potential of \$12.5 billion. The largest opportunities are in pork and pork products, valued at \$3.6 billion, and beef and beef products, valued at \$2.4 billion. Other significant prospects include SAF, corn, and wheat, each with a market potential exceeding \$1 billion.

As with the UK, we assess the potential for US producers to capture the Japanese market based on import price competitiveness, as shown in Panels E–F of Figure 3. Here, the focus is on pork and pork products and beef and beef products. The US already holds a significant share; around 20% for pork and 40% for beef. Import prices in both categories are below average, suggesting room for additional market share growth. In the pork market, the strongest competitors are Canada, Spain, Brazil, and Mexico. For beef, the competitors are Australia, Canada, New Zealand, and Mexico.

Conclusion

The Trump administration states that its trade policies, focused on raising certain tariffs, aim to encourage

Figure 3: Market Shares vs Import Price for US Exports in the UK and Japan



Note: The figure shows the market share and the import price in the year 2024 for US exports to the UK and Japan for BICO product groups with market potential higher than \$1 billion. Within each group, we have only selected the HS codes with a market potential higher than \$300 million. The green vertical line marks the average import price across exports to the destination market. Exporting countries with the five highest market shares are also labeled.

foreign leaders to engage in negotiations with the US based on the principles of fairness and reciprocity. However, there is also the risk that other countries will respond with retaliatory trade actions, as China, Canada, Mexico, and the EU did when the US first announced additional tariffs. To maximize impact, these countries target products that have the greatest effect on American producers. Our analysis suggests that these could include soybeans to China, corn, dairy, and pork to Mexico, fresh vegetables to Canada, and nuts and whiskey to the EU. Conversely, if tariffs are paused or scaled back, it could signal that the US is seeking negotiations rather than escalating toward a trade war.

Moving forward, US agricultural producers face both significant risks and substantial opportunities. Retaliatory tariffs from major trading partners could sharply reduce exports in key sectors, particularly if tensions with China continue. At the same time, new trade deals, especially those with purchase commitments, provide openings that the US can actively leverage. It will be essential to include purchase commitments for products most vulnerable to retaliation, such as soybeans in China and whiskey in the EU. Effectively managing these risks and opportunities will be essential to sustaining and expanding US agricultural exports in the years ahead.

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Economic Consequences of Recent US Tariff Changes

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JEL Classifications: F13, F14, F51

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The second Trump administration is actively engaged in imposing tariffs in favor of the United States (see Congressional Research Service (2025), Bown (2025), and WTO-IMF (2025) for a comprehensive review of these tariff policies). Because the United States is the major trading partner for the rest of the world, placing tariffs on neighboring countries (Canada and Mexico) and on the world's biggest supplier of manufactures (China) will have significant economic consequences. Among other reasons, an influx of fentanyl and undocumented migrants was used to justify the tariff policy. The tariff increases alone make imports into the United States more costly for American consumers of final products and producers who use imported inputs. American production could replace formerly imported inputs, but this reallocation would have a cost associated with it.

In response to President Trump's tariff policy, Canada and China declared retaliations of their own. Mexico agreed to a one-month hold on the tariff by sending more troops to protect the US-Mexican border (Janetsky, 2025). While Canada first announced two rounds of tariff increases, it then agreed to also increase border protection and obtained a one-month hold on prospective US tariffs (Stavis-Gridneff, 2025). China's announcement of retaliation includes tariff increases and export controls (Reuters, 2025). It is important to note that under the USMCA agreement, compliant imports are not affected by additional tariffs. American exports facing increased tariffs in the destination countries will have to find alternative markets; otherwise, production would need to adjust downwards, with the possibility of its resources getting reallocated to an industry facing no tariffs.

Later announcements targeted US trading partners and focused on imposing tariffs with the goal of reducing trade deficits. The ripple effects of large increases in tariffs need to be studied using an applied global general equilibrium model with multiple countries and sectors that link international trade with domestic transactions, including effects on capital and labor. We use the GTAP

(Global Trade Analysis Project) model to estimate and decompose the effects of the Trump administration's tariffs on the US economy and the rest of the world (ROW) economy. The GTAP model is a multicountry, multisector, computable general equilibrium model of the world. The model explicitly tracks bilateral trade between countries. Import demand adopts the Armington approach, which differentiates goods by origin (Corong et al., 2017).

The model calibrates to an aggregation of the GTAP Database. We use the latest GTAP Database, version 11, which includes 141 countries, 19 aggregated regions, and 65 sectors for each country/region (Aguiar et al., 2022). Aggregate regions include countries for which there is no input-output table (IOT).

Simulation Design

The standard GTAP model readily accommodates the analysis of bilateral tariff changes. Given the uncertainty surrounding the changes to tariffs imposed by the United States, including retaliations, we consider the following illustrative scenarios: The United States imposes tariffs on China (10%), Canada (35%), Mexico (25%), and the ROW (10%), and these four countries retaliate against the United States (see Table 1).

Results

The simulated change in tariffs causes world trade to decrease from US\$42.5 trillion to US\$41 trillion. Figure 1 shows that the US share of world imports decreases from 13.69% in the baseline to 11.08% under the tariff scenario; by contrast, China's share of world imports increases from 10.58% in the baseline to 11.11% under the tariff scenario. The rest of the world (ROW) captures the remaining share of world imports and is depicted using the secondary axis. ROW's share of imports increases from 75.73% to 77.8%. The US share of world exports also decreases from 10.57% to 8.53%, while China increases its share from 11.35% to 11.59%, and the ROW increases its share of world exports from 78.09% to 79.89%. These results are consistent with

| From/To | United States | China | Canada | Mexico | Rest of the World |
|-------------------|---------------|-------|--------|--------|-------------------|
| United States | | 10% | 35% | 25% | 10% |
| China | 10% | | | | |
| Canada | 35% | | | | |
| Mexico | 25% | | | | |
| Rest of the World | 10% | | | | |

Bouët, Sall, and Zhang (2025), who also find a reduction of world trade and a widening of the trade deficits of many countries with China, which would be expanding its role on the world market. Countries facing higher tariffs will try to sell domestically or to other foreign markets where they do not face tariffs. Overall, we see world trade diminish due to increased tariffs, but we also see that countries trade more with China since it is an important buyer of world products and has not increased its tariffs as the United States has.

Table 2 presents the effects of tariffs on US exports and imports for three aggregate sectors: agriculture, mining and manufacturing, and services. In the agricultural and manufacturing sectors, both US exports and imports decrease. The trade balance for agriculture and services grows, but this is driven by imports falling more than exports. In the case of services, exports increase due to tariffs, while imports decrease, which causes services to gain relevance as their share of total exports increases from 33% in the baseline to 47% under tariff scenarios, and the share of total imports rises from 19% to 24%. For the mining and manufacturing sector, we observe the largest decline of exports (39.74%) because of high US tariffs, and imports falling by 26.74% due to the retaliation by other countries. Overall, the United States lowers the trade deficit by 21% at the expense of the

economy contracting, as discussed below. Yet the trade deficit remains large at \$520.169 billion, even with the tariffs.

Table 3 reports the effects of tariffs on sectoral output. As with changes in trade, the mining and manufacturing sector endures the largest decline (1.17%), and agricultural output falls by 0.14%. The service sector's output increases because this sector is not directly affected by tariff policies and benefits from the use of factors released by manufacturing sectors. The overall output of all sectors experiences only a modest decrease of 0.13%. In contrast to output changes, domestic sales increase both in the manufacturing and agricultural sectors as the United States is reallocating its lost sales from importing countries to the domestic market. Domestic sales in the manufacturing sectors expand significantly (8.27%) to offset the decline in imports. This result is consistent with the findings of Rodriguez-Claire et al. (2025), who explain that the effect of "Liberation Day" tariffs causes home production to become comparatively more appealing as domestic manufacturing replaces previously imported products.

Within agriculture, output increases only in the wheat, vegetables, fruits and nuts, and fishing sectors (Table 4). Wheat production experiences the largest increase at

Figure 1. Share of Exports and Imports in the Baseline and After the Trade War for the US, China, and the Rest of the World Simulation

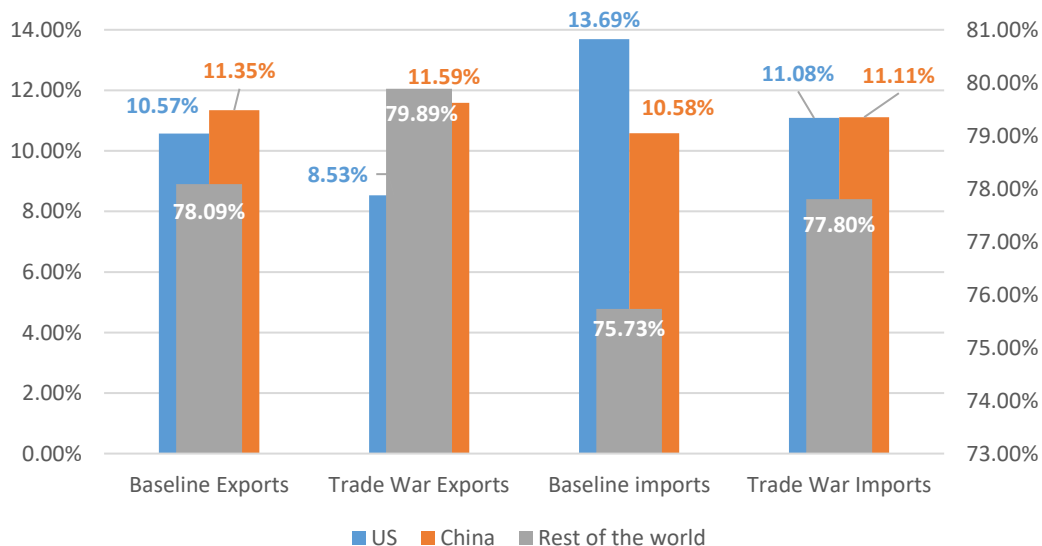


Table 2. Effect of Targeted Tariffs on US Aggregate Sectoral Trade (millions of 2017 USD)

| | Exports | | Imports | | Trade Balance | |
|--------------------------|-----------|-----------|-----------|-----------|---------------|-----------|
| | Base | Trade War | Base | Trade War | Base | Trade War |
| Agriculture | 77,990 | -5.76% | 51,233 | -14.78% | 26,757 | 29,835 |
| Mining and Manufacturing | 1,413,738 | -39.74% | 2,282,214 | -26.47% | -868,476 | -826,242 |
| Services | 736,052 | 9.89% | 552,034 | -3.51% | 184,018 | 276,238 |
| Total | 2,227,780 | -22.15% | 2,885,481 | -21.87% | -657,701 | -520,169 |
| Shares | | | | | | |
| Agriculture | 3.50% | 4.24% | 1.78% | 1.94% | | |
| Mining and Manufacturing | 63.46% | 49.12% | 79.09% | 74.44% | | |
| Services | 33.04% | 46.64% | 19.13% | 23.63% | | |

20.49%, and vegetable and fruit and nut production rise by 3.21%. The sectors that endure a significant decline in production are oil seeds, plant-based fibers (e.g., cotton), paddy rice, other crops, and other cereal grains. Sectors that experience output increases are also expanding domestic sales. The vegetable and fruit and nut sector expands the domestic sales by 8.42%, followed by other crops at 5.29%, and wheat at 4.66%. Outside of agriculture, domestic sales for mining, manufacturing, and services increase as expected, though only the output of the mining sector expands. Increase in wheat production translates into more wheat exports (42.27%);¹ however, all other sectors have large declines in exports because of the retaliatory tariffs by other countries. In particular, exports in mining, sugar cane and sugar beet, manufacturing, forestry, service, other crops, and fishing fall significantly. All US sectors endure large decreases in imports because of the US tariff increases. Given these large import decreases, domestic sales can increase only if exports fall, particularly with production decreasing in many sectors.

Figure 2 decomposes the effect of the policy scenario and shows that at the macro level, US GDP declines minimally by 0.37%, caused mainly by the United States imposing tariffs on Canadian goods and the rest of the

world retaliating against the United States. Bouët, Sall, and Zhang (2025) and McKibbin and Noland (2025) also find that increasing tariffs is detrimental to the United States and that retaliations only aggravate the GDP losses. China's GDP is negatively affected by the increasing US tariffs on Chinese products and by Chinese retaliatory tariffs against the United States. US tariffs on other countries and these countries' retaliations improve the Chinese GDP marginally. For Canada and Mexico, an increase in US tariffs and their retaliations causes negative effects on GDP, but their retaliations cause larger negative effects than the increased US tariffs.

Figure 2 also shows that the higher US tariffs will cause GDP reductions in other countries that endure these high tariffs, though GDP declines in the United States will be modest. This is because the United States is less reliant on exports than most other countries facing US tariffs. From Figure 2, we can also decipher some interactions between the tariff retaliations and other countries' GDP. For instance, the retaliation by the ROW towards the United States causes US GDP to decline, as American exports would be more expensive abroad, but Canadian and Mexican GDPs to rise as their exports increase to fill the void left by American exports.

Table 3. Effect of Targeted Tariffs on US Aggregate Sectoral Output and Domestic Sales (millions of 2017 USD)

| | Output | | Domestic Sales | |
|--------------------------|------------|-----------|----------------|-----------|
| | Base | Trade War | Base | Trade War |
| Agriculture | 465,471 | -0.14% | 387,814 | 0.98% |
| Mining and Manufacturing | 7,045,418 | -1.17% | 5,670,788 | 8.27% |
| Services | 25,774,295 | 0.16% | 25,038,243 | -0.13% |
| Total | 33,285,185 | -0.13% | 31,096,845 | 1.42% |

¹ Canada also expanded its production and exports of wheat, while the former Soviet Union and the ROW decrease their wheat production and exports.

Table 4. Effect of Targeted Tariffs on US Sectoral Output, Domestic Sales, Exports, and Imports (percentage)

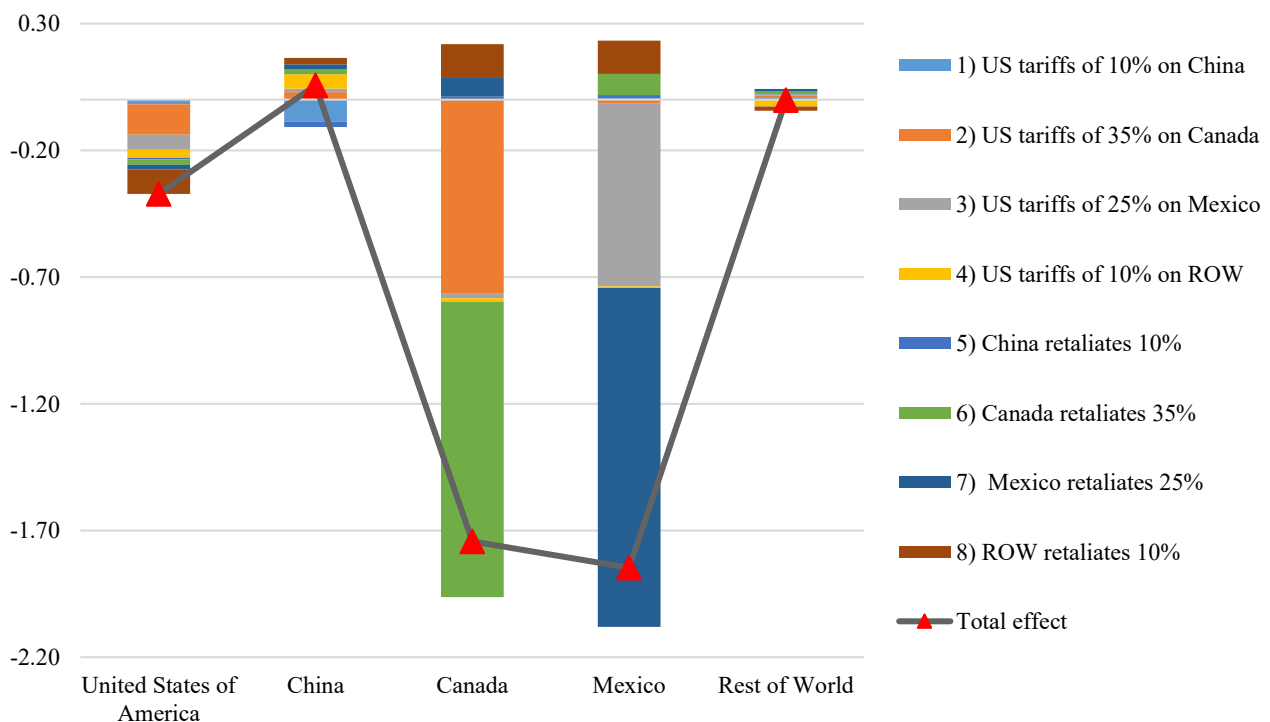
| | Output | Domestic Sales | Exports | Imports |
|--------------------------|--------|----------------|---------|---------|
| Paddy rice | -2.37 | -1.06 | -8.89 | -46.58 |
| Wheat | 20.49 | 4.66 | 42.27 | -55.43 |
| Cereal grains nec | -1.74 | -0.80 | -5.72 | -21.51 |
| Vegetables, fruits, nuts | 3.21 | 8.42 | -10.25 | -15.20 |
| Oil seeds | -5.00 | -0.11 | -10.66 | -35.32 |
| Sugar cane, sugar beet | -1.01 | -0.88 | -41.54 | -31.41 |
| Plant-based fibers | -3.36 | -0.23 | -8.30 | -24.76 |
| Crops nec | -2.11 | 5.29 | -25.11 | -5.74 |
| Livestock | -0.69 | -0.65 | -2.20 | -23.50 |
| Forestry | -0.80 | 0.01 | -27.29 | -30.63 |
| Fishing | 0.71 | 3.21 | -16.89 | -13.75 |
| Mining | 2.32 | 11.55 | -71.22 | -37.36 |
| Manufacturing | -1.45 | 7.98 | -38.32 | -25.64 |
| Services | 0.16 | 9.89 | -3.51 | -0.13 |

In addition, Mexico's retaliation against the United States would cause larger decreases in Mexico's GDP as it would raise the cost of imported products, but as Mexico substitutes American exports with Canadian exports, Canadian GDP rises. McKibbin and Noland (2025) emphasize that Mexico and Canada are much more dependent on trade with the United States than vice versa. Mexico's exports account for 40% of its GDP, and about 80% of its exports go to the United States (McKibbin and Noland, 2025). This confirms why Mexico is not engaging in tariff retaliation to avoid any losses, given its close trade relations with the United States.

Conclusions

This study utilizes styled scenarios to represent recent tariff changes that have been announced by the Trump administration, particularly targeting China, Canada, Mexico, and other major trade partners, with the potential for retaliation. Our simulations illustrate that while the trade deficit can be diminished, it comes at a cost: World trade contracts, and the US share in world trade diminishes. While the US trade deficit decreases, it is still the largest in the world. Because of these trade policies, China joins the United States as the top

Figure 2. Effects of Targeted Tariffs on GDP (percentage change)



importer in the world. The GDP effects on the United States are not as pronounced as in other countries because the United States is less reliant on export

markets, but as the United States isolates itself, other countries expand their trading relationships with each other.

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