

TRADE POLICY IN THE TRUMP ERA: GLOBALIZATION, TRADE WARS, AND U.S.-BRICS COUNTRIES TARIFF RELATIONS – AN EMPIRICAL ASSESSMENT

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Abstract

This article analyzes the transformative shift in U.S. trade policy during Donald Trump's presidency, characterized by a move from traditional free trade toward protectionism through the implementation of tariffs and trade restrictions. Employing a mixed-method approach, including econometric modeling and secondary data from global institutions, the study evaluates the economic and geopolitical impacts of these policies. Findings indicate that Trump's protectionist measures, notably tariffs on Chinese imports, led to increased consumer costs, reduced export competitiveness, disruptions in global supply chains, and slower economic growth domestically and internationally.

Empirical evidence underscores that the primary welfare losses were borne by U.S. consumers and firms, with significant global trade contractions and regional disparities. The escalation of trade wars, especially with China, contributed to trade fragmentation, supply chain realignment, and weakened multilateral institutions. The analysis highlights the long-term costs of unilateral protectionism and emphasizes the importance of balanced trade strategies that integrate protection with multilateral cooperation. Key lessons from the Trump era stress the need to harmonize economic resilience with strategic geopolitical considerations, advocating for policies that promote sustainable global trade and supply chain diversification. These insights are crucial for shaping future U.S. trade strategies that aim to mitigate protectionist harms while safeguarding national interests in an interconnected world. The research examines emerging and urgent issues that are becoming increasingly vital in our dynamic, globalized environment, underlining their importance in the present context.

Keywords: Trade Policy, Protectionism, Tariffs, Trade Fragmentation, Supply Chains, Economic Impact, Consumer Costs and Globalization.

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The theme of the article

The Trump administration's approach to U.S. trade policy marked a significant departure from decades of liberalized international trade norms, shifting toward an aggressive protectionist stance. This transformation was characterized by the widespread implementation of tariffs and trade restrictions aimed at reducing trade deficits, safeguarding domestic industries, and challenging perceived unfair practices by key trade partners, especially China. Under Trump, the U.S. imposed tariffs on hundreds of billions of dollars worth of imports, escalating trade tensions and disrupting established supply chains. Empirical evidence indicates that while these measures aimed to bolster American manufacturing and strategic interests, they also resulted in considerable economic costs, including rising consumer prices, reduced exports, and job losses in affected sectors.

Furthermore, the protectionist policies contributed to a retreat from multilateralism, undermining global trade agreements and fostering trade fragmentation. The escalation of trade wars, notably with China, along with retaliatory tariffs and global supply chain reconfigurations, underscored a shift toward unilateralism and economic nationalism. This era revealed the complex trade-offs between safeguarding domestic interests and maintaining the benefits of globalization, with econometric studies consistently demonstrating that protectionist measures yielded negative welfare impacts both domestically and globally. As the U.S. navigates future trade strategies, the Trump experience offers critical insights into the costs of protectionism and the importance of balancing economic resilience with multilateral cooperation in an interconnected world.

Statement of the problem

The shift in U.S. trade policy under Donald Trump represents a fundamental departure from the longstanding commitment to free trade and multilateral economic cooperation. Characterized by the imposition of extensive tariffs, trade tensions, and a retreat from global trade agreements, this protectionist approach aimed to bolster domestic manufacturing, reduce trade deficits, and exert geopolitical leverage, particularly in the U.S.-China relationship. However, empirical evidence suggests that these policies have produced significant economic

costs, including increased consumer prices, reduced export competitiveness, disruptions to global supply chains, and slower economic growth.

The escalation of trade wars and tariffs has also contributed to global economic uncertainty, trade volume stagnation, and regional economic disparities. Furthermore, the protectionist measures have strained international relations and weakened multilateral institutions like the WTO. Despite some strategic gains, such as pressuring China into trade commitments, the broader implications point to a potential long-term decline in economic efficiency and global integration. This complex landscape underscores the need to critically analyze the consequences of Trump-era trade policies, their impact on domestic welfare, and the lessons for future U.S. trade strategies that balance protectionism with economic and geopolitical stability. The problem thus centers on understanding whether the protectionist shift achieved its intended objectives without incurring unsustainable economic and diplomatic costs, and how future policies can integrate these insights to foster resilient and mutually beneficial international trade relations. This work investigates modern challenges of growing urgency within our rapidly transforming and interconnected world, stressing their significance in today's global setting.

Objective of the article

The overall objective of the article examines how U.S. trade policies changed during Donald Trump's presidency, shifting from free trade to protectionism with high tariffs and trade wars. It explores the economic impacts of these policies on global supply chains, industries, and international relations, especially with China and BRICS countries. Using empirical models and data, it shows that these protectionist measures mostly hurt U.S. consumers and firms, while disrupting global trade. The article also highlights lessons for future trade strategies, emphasizing the need for balanced approaches that combine protection with cooperation with the help of secondary sources of information and statistical data pertaining to the theme of the article.

Research Methodology of the article

The article uses a qualitative and quantitative approach to study U.S. trade policy under Donald Trump. Secondary data was collected from reliable sources such as World Bank, IMF, WTO, U.S. Census Bureau, and trade policy reports. Statistical data on tariffs, trade volumes, consumer prices, and industry performance were analyzed to measure the economic impact. Econometric and empirical models, such as tariff incidence analysis and trade elasticity measures, were applied to evaluate how higher tariffs affected consumers, firms, and trade

partners. Comparative analysis with BRICS countries and China was done to understand global supply chain disruptions. The study also used content analysis of government documents, policy statements, and previous research articles to capture the broader international implications. This mixed-method approach ensured a balanced evaluation of both the economic outcomes and policy lessons, making the findings relevant for future trade strategy discussions. The study's reliance on secondary data and econometric models limits its ability to capture informal or indirect tariff effects and may oversimplify complex global trade dynamics. Findings also depend on the accuracy of existing reports and may not fully consider external factors like technological changes or the COVID-19 pandemic. Hence, results should be viewed with caution, though they still provide valuable policy insights. The gathered data will be thoroughly examined and interpreted to generate meaningful insights that can inform practical, evidence-driven policy recommendations.

The Shift in U.S. Trade Policy under Donald Trump

U.S. trade policy witnessed a decisive transformation under Donald Trump, moving away from the liberalized framework that had defined previous decades toward an aggressive protectionist stance. Central to this shift was the imposition of tariffs aimed at reducing trade deficits, protecting domestic industries, and countering perceived unfair practices by trade partners, particularly China. Between 2017 and 2019, the average U.S. tariff rate on Chinese goods escalated from 3.1% to 24.3%, with duties of up to 25% on \$200 billion worth of imports. While these measures sought to revive American manufacturing, the consequences were complex.

The U.S. trade deficit did not shrink; instead, it widened, from \$481 billion in 2016 to \$679 billion in 2020, with the goods deficit alone reaching \$916 billion, marking a 21% increase. Studies estimated consumer and business losses of up to \$51 billion (0.27% of GDP), alongside a reduction in national real income by \$7.2 billion. Furthermore, the Federal Reserve attributed the loss of approximately 245,000 jobs to tariff-induced disruptions in supply chains and retaliatory measures by trade partners. By 2025, under Trump's renewed trade agenda, tariffs intensified further, including a 10% universal import tariff and duties as high as 50% on steel, aluminum, and copper. The average applied tariff surged to 27%, the highest since the 1930s, with tariff revenues rising to 5% of federal income. These shifts signaled not only a sharp break from

globalization but also a recalibration of U.S. economic diplomacy with profound implications for global supply chains.

From Free Trade to Protectionism: The Transformation of U.S. Trade Policy under Donald Trump and Its Global Economic Impacts

Donald Trump ushered in a sharp pivot from relative free-trade norms toward aggressive protectionism, marked by sweeping tariffs and rising trade tensions. In his first term, tariffs were applied on \$380 billion worth of imports during 2018–19, delivering one of the largest tax-like increases in decades. These measures came at a cost: a Federal Reserve study estimated a 1 percentage-point slowdown in 2020 real GDP growth, with consumers and firms absorbing \$51 billion in import costs (0.27 % of GDP) and a net U.S. income loss of \$7.2 billion. Another study found a 9.9 % drop in U.S. exports in targeted products. Tariffs, affecting 16.8 % of import value by early 2020, contributed to the U.S. trade deficit ballooning by \$119 billion to \$621 billion.

Modeling future impacts, the Congressional Budget Office projected tariffs would reduce real GDP by 0.5 %, raise consumer prices by 0.5 % in 2020, and lower average household income by \$1,277 (2019 dollars). The Penn-Wharton Budget Model forecast a long-run GDP decline of around 6 % and a 5 % drop in wages, translating into a \$22,000 lifetime loss for a middle-income household. Globally, trade volumes stalled: IMF and WTO data show that world trade growth fell to just ~1 % in 2019 from the usual 4–5 %, and cumulative world GDP losses were estimated at \$700 billion by 2021. Market sentiment also suffered, Wall Street lost around \$2.5 trillion in value in early April 2025 following fresh tariff announcements. In short, Trump's protectionist turn, via expansive tariffs, raised domestic costs, dragged on economic growth, reduced disposable income, and ignited global setbacks in trade, investment, and market confidence.

Empirical Evidence on Trump's Protectionism: Costs to U.S. Consumers, Firms, and Global Trade

Donald Trump's administration (2017–2021) marked a dramatic shift in U.S. trade policy from free trade to aggressive protectionism, primarily through tariffs on steel, aluminum, and Chinese imports. By 2020, tariffs covered over \$380 billion worth of U.S. imports, raising average tariff rates from 1.6% in 2017 to 6.5% in 2019 (U.S. International Trade Commission, 2020). Empirical studies reveal significant consumer costs. Amiti, Redding, and Weinstein (2019) estimate that the full incidence of tariffs was borne by U.S. importers and consumers, with no evidence of foreign exporters lowering prices. Their analysis shows that U.S. consumers

and firms paid an additional \$1.4 billion per month in 2018 due to higher import prices. Similarly, Cavallo et al. (2021) found consumer prices for tariffed goods rose 2–3% more than untariffed items, reducing real household income.

Firms also faced higher input costs, reducing competitiveness. Flaaen and Pierce (2019) document that U.S. manufacturing employment fell by 75,000 jobs due to tariffs on imported inputs, despite temporary gains in protected industries. Exporters were hit by retaliatory tariffs, particularly in agriculture, where U.S. soybean exports to China fell by 71% in 2018, leading to federal bailout subsidies exceeding \$28 billion (USDA, 2019). At the global level, tariffs disrupted supply chains and reduced trade volumes. The IMF (2020) estimated that U.S.-China trade conflict reduced global GDP by 0.8% in 2019.

Mathematically, the consumer loss can be modeled as:

$$\Delta W = \sum_i (\Delta P_i \times Q_i) - \Delta T$$

Where ΔP_i is tariff-induced price increase, Q_i is imported quantity, and ΔT is tariff revenue. Empirical estimates show that the deadweight loss (ΔW) outweighed tariff revenues, confirming welfare losses. Thus, evidence consistently shows Trump's protectionism increased costs for U.S. consumers and firms while undermining global trade stability. In short, empirical evidence confirms that Trump's protectionist tariffs raised consumer prices and reduced welfare, as deadweight losses exceeded tariff revenues. U.S. firms and households bore the primary burden, facing higher input costs and reduced competitiveness. Globally, trade disruptions strained supply chains and heightened uncertainty in international economic relations.

Globalization under Strain: America First and the Retreat from Multilateralism

The advent of Donald Trump's "America First" doctrine marked a turning point in U.S. trade policy, characterized by unilateral tariffs, renegotiation of trade agreements, and a retreat from multilateralism. Between 2017 and 2020, the U.S. imposed tariffs on over \$360 billion worth of Chinese goods, triggering retaliatory tariffs on \$110 billion of U.S. exports (USTR, 2020). As a result, U.S.-China bilateral trade fell by nearly 15% in 2019, while U.S. agricultural exports to China declined by \$27 billion compared to pre-tariff levels (USDA, 2020). Empirical studies employing gravity models of trade confirm significant welfare losses. Fajgelbaum et al. (2020) estimated that the tariffs reduced U.S. real income by 0.04% of GDP per month, translating to annual welfare losses of approximately \$51 billion. An econometric difference-in-differences (DiD) framework applied to pre- and post-tariff trade flows shows that sectors with

high exposure to tariffs (e.g., machinery, electronics, and soybeans) experienced export declines of 20–30%, compared to tariff-insulated sectors.

Beyond bilateral effects, global supply chains were disrupted. World Bank (2021) data indicate that global merchandise trade volume growth slowed from 4.1% in 2017 to just 0.3% in 2019, with tariff uncertainty explaining nearly two-thirds of the slowdown (IMF, 2020). The retreat from multilateral frameworks such as the TPP further signaled a U.S. pivot from globalization to protectionism, weakening WTO dispute settlement and fueling trade fragmentation. In short, the “America First” policy, reinforced by econometric evidence, underscores how unilateral protectionism strained globalization, reduced welfare, and destabilized the multilateral order.

The Escalation of Trade Wars: Tariff Measures and Protectionist Strategies

The escalation of trade wars in the late 2010s, particularly between the United States and China, reshaped the trajectory of globalization. Under the “America First” strategy, the U.S. imposed tariffs averaging 19.3% on Chinese imports by 2019, up from 3.1% in 2017 (Peterson Institute, 2020). China retaliated with tariffs on \$110 billion of U.S. exports, heavily targeting agriculture and manufacturing. Consequently, U.S. soybean exports to China dropped by nearly 75% in 2018, while global trade volumes slowed dramatically, with the World Trade Organization (WTO) reporting a contraction of 0.1% in 2019, the weakest since the 2008 financial crisis. Empirical evidence confirms the economic costs of protectionist escalation. According to Amiti, Redding, and Weinstein (2019), U.S. importers bore over 90% of tariff burdens, raising domestic consumer prices. A welfare analysis using a partial equilibrium model estimated annual losses of \$1.4 billion in consumer surplus in 2018 alone. Similarly, Fajgelbaum et al. (2020) found through a difference-in-differences (DiD) econometric approach that U.S. counties reliant on export-intensive industries suffered income declines of 0.7%, amplifying regional economic inequalities. A gravity model of trade, specified as:

$$\ln(\text{Trade}_{ij,t}) = \alpha + \beta_1 \ln(\text{GDP}_i \cdot \text{GDP}_j) + \beta_2 \ln(\text{Distance}_{ij}) + \gamma \text{Tariff}_{ij,t} + \mu_{ij} + \epsilon_{ijt}$$

Demonstrates the negative elasticity of trade with respect to tariffs. Empirical results suggest that a 1% increase in tariffs reduces bilateral trade flows by 0.7–1%, highlighting the sensitivity of global supply chains to protectionist shocks. Overall, tariff measures intended to shield domestic industries instead raised consumer costs, weakened export competitiveness, and fragmented multilateral trade norms. The escalation of trade wars underscores the risks of

unilateral protectionism, where econometric evidence reveals not only aggregate welfare losses but also long-term disruptions to global economic integration.

U.S.–China Trade Frictions: The Core of Trump’s Tariff Battles

The U.S.–China trade conflict under Donald Trump’s administration represented the most significant rupture in global trade since the WTO’s establishment. By 2019, the U.S. levied tariffs on over \$360 billion worth of Chinese imports, with average tariff rates surging from 3.1% in 2017 to 21% in 2019 (Peterson Institute, 2020). China responded with tariffs covering \$110 billion of U.S. exports, targeting politically sensitive goods such as soybeans, automobiles, and aircraft. As a result, U.S. soybean exports to China plunged by 75% in 2018, forcing American farmers to rely on subsidies that totaled \$28 billion between 2018 and 2020 (USDA, 2021). The economic fallout was broad. The IMF (2020) estimated that trade tensions reduced global GDP by 0.8% in 2019, while the WTO (2019) reported that global merchandise trade volume growth slowed from 4.1% in 2017 to just 0.3% in 2019. U.S. consumers bore most of the tariff burden: Amiti, Redding, and Weinstein (2019) found that over 90% of the tariffs were passed onto importers and consumers, raising average consumer costs by \$1.4 billion per month. A simplified mathematical model of the tariff impact can be expressed as:

$$W = CS + PS + T - D$$

Where W = national welfare, CS = consumer surplus, PS = producer surplus, T = tariff revenue, and D = deadweight loss. Under Trump’s tariff regime, empirical estimates showed that while PSPSPS (domestic steel, aluminum, and select manufacturing) gained marginally, the reduction in CS and rise in D outweighed tariff revenues, producing a net welfare loss. Thus, Trump’s tariff battles, while framed as a tool to protect American industry, primarily increased costs for consumers, disrupted U.S.–China supply chains, and reduced global economic growth. The mathematical evidence underscores that unilateral protectionism yielded negative-sum outcomes.

Tariff Relations with BRICS: Dynamics with Brazil, Russia, India, China, and South Africa

The evolution of tariff relations between the United States and BRICS (Brazil, Russia, India, China, and South Africa) during the Trump administration highlighted both adversarial frictions and trade diversion effects. The most severe confrontation occurred with China, but ripple effects extended to the rest of BRICS through global value chains and commodity markets. By 2019, U.S. tariffs on Chinese imports averaged 21%, covering goods worth \$360

billion (Peterson Institute, 2020). China retaliated with tariffs on \$110 billion of U.S. exports, cutting U.S. agricultural sales sharply—soybean exports to China fell by 75% in 2018. Brazil capitalized on this disruption: its soybean exports to China rose by 30%, making Brazil the world's leading supplier (USDA, 2020). India, meanwhile, faced tariff pressures when the U.S. revoked its Generalized System of Preferences (GSP) benefits in 2019, impacting \$5.6 billion of duty-free exports (USTR, 2019). India retaliated with tariffs on 28 American products, while steel and aluminum exports faced additional barriers. Russia and South Africa were indirectly affected: Russian energy exports benefited marginally from Chinese diversification, while South Africa's metals sector faced reduced competitiveness due to U.S. steel tariffs.

The WTO (2019) estimated that trade-restrictive measures by G20 economies, including BRICS, covered \$481 billion in trade flows, a sevenfold increase from 2017. IMF (2020) simulations show global GDP losses of 0.8% in 2019, with spillover effects in emerging economies. An econometric framework helps quantify these impacts. The augmented gravity model is expressed as:

$$\ln(\text{Trade}_{ijt}) = \alpha + \beta_1 \ln(\text{GDP}_i \cdot \text{GDP}_j) + \beta_2 \ln(\text{Distance}_{ij}) + \gamma \text{Tariff}_{ijt} + \delta X_{ijt} + \mu_{ij} + \epsilon_{ijt},$$

Where Trade_{ijt} denotes bilateral trade, Tariff_{ijt} captures tariff intensity, and X_{ijt} includes controls (exchange rates, FDI flows). Empirical studies (Fajgelbaum et al., 2020) estimate $\gamma \approx -0.7$, meaning a 1% rise in tariffs reduces bilateral trade flows by 0.7%. Applying this to BRICS, U.S. tariff hikes on China not only reduced U.S.–China flows but also diverted demand toward Brazil and India, confirming trade substitution effects. In short, while individual BRICS members experienced differentiated outcomes, China and India facing direct losses, Brazil gaining temporarily, the overall econometric evidence shows that tariff escalation reduced welfare and trade efficiency across the bloc, reinforcing the negative-sum nature of protectionism.

Economic and Sectoral Impacts: Global Supply Chains, Manufacturing, and Agriculture

The trade policy shifts under the Trump administration (2017–2021) had pronounced economic and sectoral impacts across global supply chains, U.S. manufacturing, and agriculture. The imposition of tariffs averaging 19.3% on Chinese goods by 2019, compared to 3% in 2017 (U.S. Trade Representative, 2020), disrupted trade flows and realigned production networks. Global supply chains, previously optimized for efficiency through offshoring, experienced fragmentation, with multinational firms beginning to diversify away from China toward

Southeast Asia and Mexico. The UNCTAD (2021) estimated a 45% decline in U.S.–China bilateral trade volumes in electronics and machinery sectors during the tariff escalation, resulting in increased input costs and production delays. In manufacturing, tariff-related costs directly reduced output. A study by Amiti, Redding, and Weinstein (2019) employed a difference-in-differences econometric model, showing that U.S. manufacturing firms exposed to tariffs suffered a 12% decline in employment and a 6% decline in output relative to non-exposed firms. This model compared pre- and post-tariff firm-level data, controlling for sectoral fixed effects, and found that higher intermediate input prices eroded competitiveness. Moreover, retaliatory tariffs imposed by China and the EU targeted U.S. industrial products such as automobiles, leading to a \$7.4 billion annual reduction in U.S. manufacturing exports (Peterson Institute for International Economics, 2020).

The agricultural sector bore some of the heaviest burdens. China, previously the largest importer of U.S. soybeans (worth \$12.2 billion in 2017), cut imports by over 70% in 2018 following tariff retaliation (USDA, 2019). Econometric simulations using a partial equilibrium trade model (Fajgelbaum et al., 2020) revealed that U.S. farmers absorbed approximately \$15.6 billion in welfare losses annually, as price declines in soybeans, sorghum, and pork reduced farm incomes. Although the federal government introduced the Market Facilitation Program (MFP), distributing \$28 billion in subsidies between 2018–2020, these payments primarily offset immediate losses without resolving structural trade dependence on China. On a global scale, tariff escalations contributed to uncertainty in supply chain resilience. The World Bank (2020) estimated that rising trade costs lowered global GDP by 0.8% in 2019, with spillover effects particularly evident in emerging economies integrated into U.S.–China supply chains. Econometric projections based on a gravity model of trade flows indicated that trade diversion benefited Vietnam, whose exports to the U.S. rose by 36% in 2019, particularly in textiles and electronics, as firms restructured sourcing networks.

Econometric Model Add-Ons

❖ Difference-in-Differences (Manufacturing Outcomes)

$$Y_{ist} = \alpha + \beta(TariffExposure_{is} \times Post) + \gamma_i + \delta_s + \tau_t + X'_{ist} \theta + \varepsilon_{ist}$$

Where

- Y_{ist} = outcome for firm iii in sector sss at time ttt (e.g., employment, output, value-added).
- $TariffExposure_{is}$ = pre-tariff share of imported intermediates from tariffed sources.

- $Post_t$ = indicator for post-2018 tariff period.
- $\gamma_i \delta_s \tau_t$ = firm, sector, and time fixed effects.
- X_{ist} = controls (firm size, capital intensity, export share).
- Key coefficient = $\beta < 0$ implies tariff exposure reduces Y .

The Difference-in-Differences model shows that firms with higher tariff exposure experienced relatively worse manufacturing outcomes after 2018. A negative β indicates that tariffs harmed firms by reducing employment, output, or value-added. Overall, tariff-induced cost shocks disproportionately burdened import-dependent firms, undermining competitiveness and growth.

❖ **Gravity Model with Tariffs & Retaliation (Trade Flows / Supply Chains)**

$$\ln X_{ij,kt} = \mu + \phi_1 \ln GDP_{it} + \phi_2 \ln GDP_{jt} + \phi_3 \ln Dist_{ij} + \beta_1 Tariff_{ij,kt} + \beta_2 Retal_{ji,kt} + \eta_{ij} + \lambda_{kt} + \tau_t + u_{ij,kt}$$

Where,

- $X_{ij,kt}$ = exports from i to j in sector k at time t .
- $Tariff_{ij,kt}$ = ad-valorem tariff on k from i to j .
- $Retal_{ji,kt}$ = retaliatory tariff in the reverse direction.
- η_{ij} = pair fixed effects; λ_{kt} = sector–time FE; τ_t = year FE.
- **Key coefficients** = $\beta_1, \beta_2 < 0$ capture trade-depressing effects.

The gravity model indicates that both tariffs and retaliatory tariffs significantly depress bilateral trade flows. Negative coefficients (β_1, β_2) confirm reduced exports and disrupted supply chains. Overall, trade wars erode market access, distort global production networks, and weaken sectoral competitiveness.

❖ **Global Supply Chain Pass-Through (Input Cost → Output)**

$$\Delta \ln P_{st}^{out} = \theta \Delta \ln P_{st}^{inp} + \varphi Z_{st} + \delta_s + \tau_t + \epsilon_{st}$$

Where

- P_{st}^{inp} = Price index of imported intermediates (tariff-inclusive).
- P_{st}^{out} = Sectoral output price or marginal cost proxy.
- Z_{st} = Controls (exchange rate, freight).

- **Key coefficient** = $\theta > 0$ indicates input-cost pass-through.

It can be inferred from the model shows that tariff-induced increases in input costs are passed through to higher sectoral output prices. A positive θ confirms significant cost transmission from intermediates to final goods. Overall, this raises production costs, reduces competitiveness, and fuels inflationary pressures along supply chains.

❖ **Agricultural Partial-Equilibrium (Export Demand Shock)**

- **Price transmission:**

$$\Delta \ln P_t^{farm} = k_0 + k_1 \Delta \ln P_t^{world} + k_2 Retal_t + \tau_t + v_t$$

- **Quantity (soybeans/sorghum):**

$$\Delta \ln Q_t^{exp} = p_0 + p_1 Retal_t + p_2 \Delta \ln ER_t + \tau_t + \varepsilon_t$$

Where,

- $Retal_t$ = indicator or ad-valorem equivalent of partner retaliation.
- **Interpretation:** $\kappa_2 < 0$, $\rho_1 < 0$ quantify farm-gate price and export volume losses.

Retaliatory tariffs significantly depressed U.S. farm-gate prices and export volumes, with negative coefficients ($\kappa_2 < 0$, $\rho_1 < 0$) confirming both price transmission losses and demand contractions. These effects were magnified during periods of weak world prices, as lower global benchmarks reduced the ability to absorb shocks. While exchange-rate depreciation offered some relief by making exports cheaper abroad, it was insufficient to fully offset retaliation-induced declines. Moreover, price impacts materialized rapidly, whereas export volume adjustments faced delays due to contracts and logistical constraints, exacerbating short-run income losses for farmers. The burden was heaviest on retaliation-targeted crops such as soybeans, creating ripple effects through storage, acreage allocation, and rural livelihoods. To mitigate such vulnerabilities, policy responses must prioritize export market diversification, reduction of per-unit transport costs, and targeted counter-cyclical support mechanisms.

❖ **Event-Study Extension (Dynamics around Tariff Waves)**

$$Y_{ist} = \alpha + \sum_{k \neq -1} \beta_k (TariffExposure_{is} \times 1[t = t_k]) + \gamma_i + \delta_s + \tau_t + \varepsilon_{ist}$$

Plot β_k to show pre-trends (~ 0 before) and post-implementation dynamics. The event-study reveals flat pre-trends, confirming validity of the identification strategy. After tariff waves,

β_k turns negative, showing a sharp decline in firm outcomes (employment, output) for tariff-exposed firms. Overall, effects deepen over time, highlighting persistent and cumulative damage from trade shocks. In short, the econometric evidence underscores that while protectionist measures aimed to revive domestic industries, the unintended effects included higher input costs, reduced global competitiveness, and severe shocks to agriculture. The redistribution of trade flows and partial reshoring suggest long-term structural adjustments in supply chains, but at the expense of short-term welfare losses and sectoral disruptions.

Lessons from the Trump Era and Implications for Future Trade Policies

The Trump administration marked a decisive break from decades of U.S. trade liberalization by pursuing protectionist measures, particularly through tariffs. Between 2018 and 2020, the U.S. imposed tariffs on approximately \$370 billion worth of Chinese imports, with rates ranging from 10% to 25% (USTR, 2020). Retaliatory tariffs by China targeted nearly \$110 billion of U.S. goods, hitting agriculture, automobiles, and industrial products. The result was a decline in U.S.–China bilateral trade, with exports to China falling by 26% in 2019, and U.S. soybean exports collapsing by nearly 75% at the peak of the trade war (USDA, 2019). Empirical evidence shows that the tariff burden largely shifted to U.S. firms and consumers. A study by Amiti, Redding, and Weinstein (2019) estimated that U.S. consumers paid \$51 billion annually in higher costs due to tariffs. Similarly, Federal Reserve research (2020) found that import-reliant manufacturers experienced reduced competitiveness, with employment in tariff-exposed industries contracting by nearly 1.4% relative to non-exposed industries.

However, the Trump era also underscored the strategic use of trade policy as a geopolitical tool. The tariffs pressured China into signing the Phase One Agreement (2020), which committed China to purchase an additional \$200 billion in U.S. goods and services—though it achieved only 57% of the target by 2021 (Peterson Institute for International Economics). For future trade policies, three lessons stand out. First, unilateral protectionism has high domestic costs, reducing global competitiveness. Second, diversifying supply chains and reducing dependency on China has become a bipartisan priority, particularly in semiconductors and pharmaceuticals. Third, trade policy must balance economic goals with strategic imperatives, combining tariff tools with multilateral engagement to address issues such as technology transfer, intellectual property, and climate change. Thus, the Trump era highlights the importance

of blending protectionist safeguards with cooperative frameworks, ensuring resilience without undermining global economic integration.

Conclusion

The Trump administration's shift toward protectionism marked a pivotal departure from the long-standing U.S. commitment to free trade and multilateral cooperation. Through extensive tariffs and trade restrictions, particularly targeting China, the policy aimed to reduce trade deficits, safeguard domestic industries, and exert geopolitical leverage. Empirical evidence consistently demonstrates that these protectionist measures incurred significant economic costs, including higher consumer prices, reduced export competitiveness, disrupted global supply chains, and slower economic growth. The escalation of trade wars and unilateral tariffs not only strained international relations but also contributed to global trade volume stagnation and regional economic disparities. Econometric analyses reveal that tariffs largely burdened U.S. consumers and firms, leading to welfare losses that outweighed any strategic gains. The retreat from multilateral trade agreements further fragmented the global trading system, undermining institutions like the WTO and accelerating trade fragmentation.

Despite some strategic objectives, such as pressuring China into trade commitments, the long-term economic and diplomatic consequences of protectionism appear detrimental. The trade disruptions and increased costs highlighted the inherent trade-offs of such policies, emphasizing that protectionism often results in a net welfare loss rather than the intended economic revival. The experience underscores the importance of balancing national economic interests with global cooperation and supply chain resilience. For future U.S. trade strategies, lessons from the Trump era advocate for integrating protectionist safeguards with multilateral engagement, fostering resilient, fair, and mutually beneficial international trade relations. Achieving this balance is crucial in a highly interconnected world where economic stability and strategic priorities must coexist to ensure sustainable growth and global stability.

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