

Macroeconomic Implications of Trade Wars

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Abstract:

This study provides an extensive analysis of trade wars focusing on the causes, the consequences as well as the macroeconomic implications for international trade and global financial markets. The tools and the policies used during trade wars, the stages of trade wars, key macroeconomic transmission channels and core macroeconomic indicators are examined. The most significant trade wars in the world in terms of the impact they had on global economy are also reviewed in order to offer an empirical perspective. Evaluating the causes and the consequences of trade wars helps identify vulnerabilities and fragilities of countries severely affected by trade wars. Understanding the dynamics of trade wars and their implications for the global financial system plays a key role in designing macroeconomic and financial policies that create strong and stable economies.

Keywords: Trade Wars, International Trade, Global Financial System

Introduction

Trade wars have been an important topic for both policy makers and academicians in terms of their causes, consequences and implications for the global economy. A trade war occurs when one country imposes tariffs or trade barriers on another nation's imports, triggering a series of retaliatory trade restrictions. Rather than serving to achieve economic goals, trade wars typically function as retaliatory feedback loops that alter global trade flows, reshape supply chains and increase operational costs for businesses and consumers.

Key tools and policies used in trade wars are tariffs, import quotas, subsidies, non-tariff barriers and currency interventions. Tariffs are taxes placed directly on imported goods, making foreign products more expensive relative to domestic alternatives. Import quotas usually take the form of strict caps on the total quantity or overall dollar value of a specific commodity allowed into a country. Subsidies are in the form of financial support or tax breaks granted to local domestic industries, allowing them to lower prices and undercut foreign rivals. Non-tariff barriers include administrative hurdles, strict safety/environmental standards, licenses and custom delays designed to slow or discourage foreign imports. Last but not least, currency interventions are performed by intentionally lowering or devaluing a national currency to make home exports cheaper abroad.

Trade disputes generally progress through a repeating macroeconomic cycle that consists of initial protectionist catalyst, import price inflation, retaliatory escalation and supply chain rerouting. Initially, a country introduces tariffs, in the form of taxes on foreign goods, import quotas or subsidies to protect

domestic industries, correct trade deficits or address unfair trade practices. Then, importers have to pay the foreign tariff to domestic customs authorities. These costs are usually passed down the supply chain to domestic businesses and end consumers, raising prices on foreign finished goods and intermediate components. In response to that, the targeted trading partner reacts by levying counter-tariffs on high-value exports, often targeting key agricultural, automotive or industrial sectors to maximize economic and political leverage. Finally, companies modify sourcing to bypass tariff-heavy jurisdictions, a process known as *trade diversion*, moving production to third-party neutral countries or attempting *near-shoring* and *reshoring*.

Literature Review

Academic literature on trade wars spans several foundational themes including non-cooperative tariff games, the political economy of protectionism, welfare implications and empirical analyses of major trade conflicts. While theoretical models show that unilateral tariffs can offer temporary tactical leverage to large economies, empirical consensus confirms that non-cooperative trade wars ultimately depress aggregate welfare, distort supply chains and increase economic uncertainty. As part of the theoretical literature, Johnson (1953) developed the classical general-equilibrium model of tariff retaliation, analyzing whether a large country can gain welfare by imposing tariffs when trading partners retaliate. The author produced the foundational theoretical model evaluating trade wars as a dynamic game of non-cooperative tariff setting between two countries. Challenging the classical assumption that trade wars always end in mutual ruin, Johnson demonstrated that if a country possesses sufficient market power (monopoly/monopsony power in world markets), its terms-of-trade gains can theoretically outweigh the deadweight losses of retaliatory tariffs, allowing it to "win" a trade war. The model established the mathematical baseline for analyzing optimal tariffs under threat of retaliation.

Theoretical literature built on Johnson (1953) demonstrates that a large country can improve its terms of trade by imposing an optimal tariff, shifting the cost onto foreign exporters. However, when trading partners retaliate with symmetric counter measures, the system collapses into a sub-optimal equilibrium where trade volumes shrink and aggregate welfare falls across all participating nations.

Grossman and Helpman (1994) established the political economy framework showing how interest-group lobbying and political contributions interact with national welfare in shaping protective trade policy and tariff setting. The authors developed the benchmark "Protection for Sale" framework to explain why governments implement inefficient tariffs and trade restrictions. Grossman and Helpman modeled trade policy as an equilibrium outcome where special-interest group lobbies provide political contributions to influence policymakers, while the government balances these campaign funds against consumer welfare. The paper provides the core theoretical apparatus for understanding the domestic political drivers behind unilateral trade actions and tariff escalation.

Bagwell and Staiger (1999) examine trade agreements as mechanisms to resolve the terms-of-trade prisoner's dilemma, demonstrating how reciprocity and non-discrimination principles help prevent trade wars. The authors formalize international agreements such as the "World Trade Organization/General Agreement on Tariffs and Trade" framework as institutional mechanisms designed to eliminate the terms-of-trade "prisoner's dilemma". Their model shows that principles like reciprocity and non-discrimination allow states to negotiate tariffs down to Pareto-efficient levels, preventing non-cooperative tariff escalation.

Among the studies in the empirical literature, Amiti et al. (2019) analyzed the short-run pass-through effects of US tariffs, showing nearly complete pass-through into domestic prices and immediate real-income welfare losses. Utilizing high-frequency administrative trade data, Amiti et al. provided the first comprehensive empirical evaluation of the 2018 U.S. tariff escalations. Contrary to classical expectations that foreign exporters would drop their prices to maintain market share, the authors found near 100% tariff pass-through directly onto U.S. importers and consumers. The paper quantified the aggregate U.S. real-income loss at \$1.4 billion per month by the end of 2018 due to higher input costs and supply chain disruptions.

In another empirical study, Fajgelbaum et al. (2020) quantified the welfare and distributional impacts of the 2018–2019 US trade actions, revealing aggregate real-income losses alongside concentrated geographic redistributions. The authors estimated a dynamic general-equilibrium model of the U.S. economy to measure the aggregate and distributional consequences of the 2018 U.S. tariffs and foreign retaliatory duties. The authors documented complete pass-through of import tariffs and mapped significant regional disparities. While import protection favored competitive agricultural and industrial counties, retaliatory tariffs heavily hit export-dependent Republican agricultural regions, creating a net national aggregate welfare loss of \$7.2 billion. Handley and Limao (2017) established the theoretical framework linking trade policy uncertainty to corporate investment and export market entry. The study demonstrated that reducing trade policy threats such as China's 2001 accession to the WTO functions as an economic stimulus by removing the "option value of waiting" for firms face-to-face with sunk costs. Conversely, the threat or uncertainty of escalating tariffs operates as a persistent drag on real GDP, private investment and innovation regardless of executed tariff levels.

Moving beyond conventional tariff economics, Farrell and Newman (2019) introduced the concept of "weaponized interdependence" to analyze modern geoeconomic warfare. The authors demonstrated how asymmetric global hub structures—such as global semiconductor design chains or international clearing networks—allow dominant states to deploy export controls, financial sanctions and trade blockades to gather intelligence or sever strategic access for foreign rivals. Handley et al. (2025) investigate how import tariffs on intermediate inputs negatively impact the global export performance of domestic downstream firms. Bown (2021) presents the details regarding the structural changes in international trade policy, tariff escalation patterns and bilateral supply chain realignments during the dispute.

Oermann and Wolff (2022) provide a historical and legal overview comparing modern non-tariff measures and economic sanctions with centuries of international trade conflict. Another historical analysis by Glick and Taylor (2010) shows that trade wars generate long-term structural reallocation. Trade flows often divert through neutral third countries rather than returning to domestic production, causing durable efficiency losses. Modern strategic policy literature including Mattoo and Staiger (2020) examines the shift from "rules-based" to "power-based" trade bargaining. In this framework, large economies leverage temporary tariff shocks to force structural concessions or target bilateral trade deficits.

Historical Overview of Trade Wars

The earliest trade conflict over the last century, known as the "Smoot-Hawley Tariff Act", goes back to 1930. The U.S. raised thousands of import tariffs to protect farmers during the Great Depression. Retaliatory tariffs from foreign trade partners caused global trade to collapse by roughly two-thirds,

exacerbating the economic crisis. Trade disputes over the last 60 years have shifted from localized product disputes to sweeping structural and geopolitical conflicts. After World War II, the rise of the General Agreement on Tariffs and Trade (GATT) and later the World Trade Organization (WTO) helped manage trade friction through rules-based negotiations. However, economic shocks, rapid industrialization and emerging superpowers repeatedly triggered retaliatory trade battles. The "Chicken War" (1962–1964) was triggered by European Economic Community (EEC) tariffs on cheap U.S. poultry imports, where the U.S. retaliated with a 25% tariff on light trucks, potato starch, dextrin and brandy. The 25% duty on light trucks remains in effect today, significantly shaping the North American pickup truck market. "U.S.–Japan Trade Friction" (1970s–1980s) was caused by the fact that rapid growth in Japanese auto, steel and semiconductor exports created significant trade deficits with the U.S. The dispute led to Voluntary Export Restraints (VERs) on Japanese cars, the 1986 Semiconductor Agreement and the 1985 Plaza Accord, which appreciated the yen to make Japanese exports less competitive.

The "Pasta War" in 1985 started when the U.S. imposed tariffs on Italian pasta in response to EU preferences on Mediterranean citrus, leading to European tariffs on American lemons and walnuts. "Beef Hormones & Bananas" during the 1990s was caused by the fact that the EU banned growth-hormone-treated U.S. beef and established preferential banana tariffs for former colonies. The U.S. successfully challenged these rules at the WTO and imposed retaliatory tariffs on luxury European goods. "Airbus vs. Boeing" (2004–2021) was a 17-year dispute over government subsidies given to domestic aircraft makers, resulting in billions of dollars in mutual tariffs before both sides paused duties to focus on strategic industrial alignment. Last but not least, the "U.S.–China Strategic Trade Conflict" since 2018 was initiated over allegations of unfair trade practices, forced technology transfers, and intellectual property theft. This conflict introduced broad tariffs across hundreds of billions of dollars in goods, leading to retaliatory levies and tech export restrictions that continue to reshape global supply chains.

Early trade wars focused primarily on raw materials and agricultural commodities. Modern conflicts increasingly center on advanced technology, microchips, data security, and green energy supply chains. Retaliatory trade measures often remain in place long after the original dispute ends, inadvertently reshaping whole domestic industries (such as the long-term impact of the "Chicken Tax" on U.S. auto production). While the establishment of the WTO in 1995 provided a formal framework to resolve disputes, recent years have seen a resurgence in unilateral tariffs and national security designations to bypass traditional trade rules.

U.S.-China Trade War

The U.S.–China trade war marks a major shift from post-Cold War globalization toward strategic, technology-driven economic competition. Beginning in 2018, the conflict transformed bilateral relations from economic interdependence into managed decoupling. The key drivers were bilateral trade imbalance, structural reform demands and technological hegemony. The U.S. goods trade deficit with China grew significantly over two decades, reaching a peak of over \$419 billion in 2018, driving political pressure to protect domestic manufacturing. U.S. policymakers demanded an end to forced technology transfers, industrial subsidies, currency manipulation, and state-backed intellectual property theft. Beyond physical goods, the confrontation centers on leadership in strategic industries like advanced semiconductors, artificial intelligence, biotechnology and green energy.

The strategic progression can be summarized as “tariff escalation” during 2018-2019, the “Phase One Agreement” in 2020 and “technology restrictions and export controls” that were implemented afterwards. The U.S. imposed tariffs under Section 301 of the Trade Act of 1974, targeting over \$350 billion worth of Chinese imports across electronics, consumer items, and industrial machinery. China retaliated with tariffs on over \$100 billion of U.S. exports, specifically targeting agricultural commodities such as soybeans and pork and automotive sectors. According to the “Phase One Agreement” signed in January 2020, China agreed to purchase an additional \$200 billion in U.S. goods and services over two years and offered incremental commitments on IP protections. Most tariffs remained in place, and purchase targets were ultimately disrupted by macroeconomic shifts and supply chain bottlenecks. The conflict expanded beyond tariffs to export restrictions, such as adding key Chinese firms including Huawei and SMIC (Semiconductor Manufacturing International Cooperation) to the U.S. Department of Commerce Entity List. Broad controls were placed on advanced microchips, semiconductor manufacturing equipment and inbound/outbound investment in critical technology sectors.

The long-term implications of the U.S.-China Trade War include supply chain fragmentation, industrial policy resurgence and bypassing multilateral frameworks. Global manufacturers are adopting “China Plus One” strategies, maintaining production in China for its domestic market while building redundant capacity elsewhere for Western markets. Both nations heavily subsidize strategic industries internally such as the U.S. CHIPS Act and Inflation Reduction Act as well as China’s state support for electric vehicles and solar panel manufacturing. Unilateral tariffs and national security exceptions have reduced reliance on standard WTO dispute mechanisms, establishing a new norm of transactional trade relations.

Macroeconomic Implications of Trade Wars

The macroeconomic implications of trade wars extend far beyond the specific products or industries targeted by tariffs. By altering relative prices, disrupting trade flows and creating broad policy uncertainty, trade wars ripple across national economies and the global financial system.

Key macroeconomic transmission channels can be summarized as “inflation and pass-through”, “contraction of aggregate demand and real wages”, “investment drag and trade policy uncertainty” and “capital stock depreciation and productivity”. Import duties act as a tax on domestic businesses and consumers. Contrary to classical assumptions where foreign producers lower prices to maintain market share, modern empirical trade literature shows near 100% tariff pass-through, driving up production input costs and retail prices. Higher prices erode real consumer purchasing power. As living costs rise and input prices jump, household consumption drops and real wages decline. Beyond direct costs, the *threat* of expanding trade conflicts increases capital expenditure risks. Facing unpredictable supply chains, multinational corporations delay fixed-capital investments and research and development. In the long run, taxing foreign capital goods and intermediate inputs increases the relative cost of technology and equipment. This depresses total capital formation, lowering labor productivity and long-run growth potential.

Core macroeconomic indicators used in the analyses of the impact of trade wars on global economy are gross domestic product (GDP), inflation rates, global value chains and currency values. The mechanism through which GDP is affected by trade wars is lower trade volumes and delayed corporate spending causing immediate slowdown in economic activity. Following permanent capital stock reduction and lower total factor productivity lead to significant fall in GDP. The short-term effect of trade wars on

inflation is observed through temporary spikes in consumer price indices. In the long run, this forces central banks into monetary policy dilemmas since controlling inflation would be in conflict with the policy of supporting growth. Supply chain bottlenecks, higher inventory buffer costs and component shortages are among the immediate effects of trade wars on global value chains. As a result, industrial reallocation takes place, causing structural trade diversion. Finally, in the financial markets, high market volatility, stock price pullbacks and flight-to-safety capital flows are observed in response to trade wars. Persistent currency devaluations by affected export economies are undertaken in order to offset tariff burdens.

Global and structural spillover effects of trade wars are in the form of deadweight economic loss, trade diversion and fragmentation of global governance. Tariffs create allocative inefficiencies by forcing businesses to source higher-cost domestic inputs or intermediate goods from non-optimal third countries rather than the most efficient global producer. While tariffs are frequently implemented to bring manufacturing back home, empirical evidence shows production rarely returns to the initiating country. Instead, trade diverts to neutral intermediary nations such as Vietnam or Mexico, adding intermediate transport and transaction costs. Prolonged trade disputes weaken multilateral rules-based enforcement such as the WTO Appellate Body, shifting global commerce toward fragmented, power-based bilateral arrangements.

Conclusion

Trade wars have significant consequences for international trade, financial markets and global economy. Countries, both directly and indirectly affected, as well as several different sectors and interest groups all across the world are severely influenced by trade wars. Reduced GDP growth, cost-push inflation, investment suppression and monetary policy strains are among the macroeconomic consequences of trade wars while supply chain fragmentation, targeted sector distress and consumer purchasing power loss constitute the major microeconomic outcomes. Domestic consumers are affected through higher retail prices and reduced product selection in the short run while they experience persistent real wage erosion and lowered standard of living in the long run. Protected local industries enjoy the short-term benefit of trade wars in the form of temporary relief from foreign price competition; however, they face higher input costs for raw materials and risk of retaliatory export losses in the long run. Multinational firms experience margin compression and immediate supply chain shock and undertake capital re-allocation to third-party intermediary nations. Finally, neutral nations during trade wars benefit from “trade diversion” since production shifts to them, but become vulnerable to secondary sanctions, tariffs and global demand slowdowns.

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