

India's Trade-Offs Between Accessing US Markets and Strategic Autonomy in Sourcing Oil

A CGE Analysis

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Abstract

The global trading order has been undergoing a structural transformation from a rules-based multilateral trade discipline to a fragmented landscape with asymmetric power plays in global trade networks. Since early 2025, and extending into mid-2026, the United States has been leveraging its market dominance to influence the foreign policy objectives, specifically coercing India to halt Russian oil imports. Consequently, India faces a geoeconomic trilemma: balancing domestic economic growth, safeguarding strategic autonomy in energy procurement, and preserving market access for its exports. This paper utilises the GTAP Computable General Equilibrium (CGE) model and version 12 database to quantify the macroeconomic impacts of US trade coercion. We consider baseline and distressed global oil markets to determine whether India's optimal path is compliance, through terminating Russian oil imports, or defiance, by accepting a cumulative 35% tariff on exports to the US. The results show a divergence between impacts on Gross Domestic Product (GDP) and national welfare. Under baseline conditions, India's GDP contraction under defiance is less severe than under compliance, as refineries continue operating optimally. However, defiance leads to a larger reduction in national welfare than compliance, due to a more severe terms-of-trade deterioration in labour-intensive manufacturing. In a distressed global oil market following a Middle Eastern oil price shock, the rationale for compliance breaks down, making defiance a more strategic choice for macroeconomic stability. This paper also demonstrates that while a unilateral retaliation by India worsens economic losses, a coordinated multilateral retaliation with plurilateral liberalisation can neutralise the US's optimal tariff theory of extracting welfare. To navigate this weaponised interdependence, the paper recommends a policy strategy for India: secure short-term oil sanctions waivers, provide fiscal support to labour-intensive, trade-exposed manufacturing sectors, and accelerate India's accession to multilateral trade agreements.

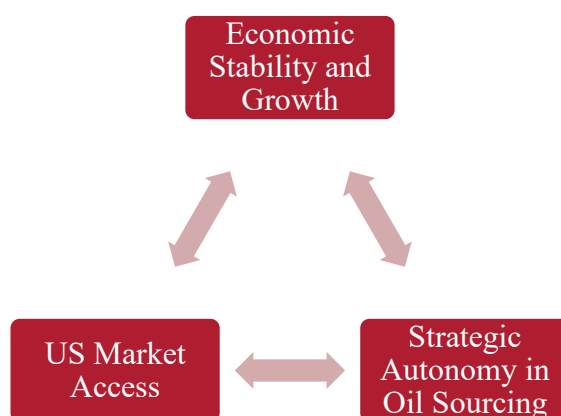
Keywords: computable general equilibrium; weaponised interdependence; trade policy; energy security; strategic autonomy

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1 Introduction: India's Geoeconomic Trilemma

The global trading order is currently undergoing a structural transformation, shifting from a rules-based multilateral system to a fragmented landscape. This change has been characterised by an increase in “weaponised interdependence,” whereby states, the US in particular, leverage their relatively powerful asymmetric positions in global trade networks to gain power, exert influence, and coerce others by imposing trade costs. Against this backdrop, India has been facing a US-driven geoeconomic trilemma since 2025 between: (a) economic stability and growth, (b) strategic autonomy in sourcing oil, and (c) maintaining its exports to its most significant export destination, the US.

Figure 1: India's Geoeconomic Trilemma in 2025-2026



Source: Authors' elaboration

The US, India's largest export destination, absorbing around 20% of its merchandise exports (representing approximately 2.2% of India's GDP), operationalised its weaponised interdependence in August 2025 by imposing a cumulative 50% tariff on Indian goods (with some exceptions), over and above existing rates. This measure combined a 25% “reciprocal” tariff¹ announced in April 2025 in response to India's merchandise trade surplus with the US (also known as the *Liberation Day tariffs*, which were imposed on almost all countries at rates dependant on the US's trade deficit with that country) and a further 25% penalty for purchasing Russian oil, which the US believes undermines the G7 price cap and economic restrictions imposed on Russia. India's imports of Russian oil shrank in 2025 vis-à-vis 2024, particularly significantly after November 2025 (Figure 2 and 3). In response to India's reduction of oil imports, the US suspended the punitive tariffs. However, the US established a monitoring mechanism to track India's energy shipments, threatening to reimpose the tariff if Russian oil imports rise again. With the Strait of Hormuz crisis driving global oil prices higher, the US granted India a 30-day waiver on March 6, 2026, to import Russian oil.² The waiver has been revised twice and is applicable until June 17, 2026.

¹ Originally announced as an additional 26% tariff, before being revised down to an additional 25% tariff.

² <https://www.bloomberg.com/news/articles/2026-03-06/us-issues-license-to-allow-some-russian-oil-sales-to-india-mme5qix4>

Figure 2: Changes in India's Crude Oil Import Basket

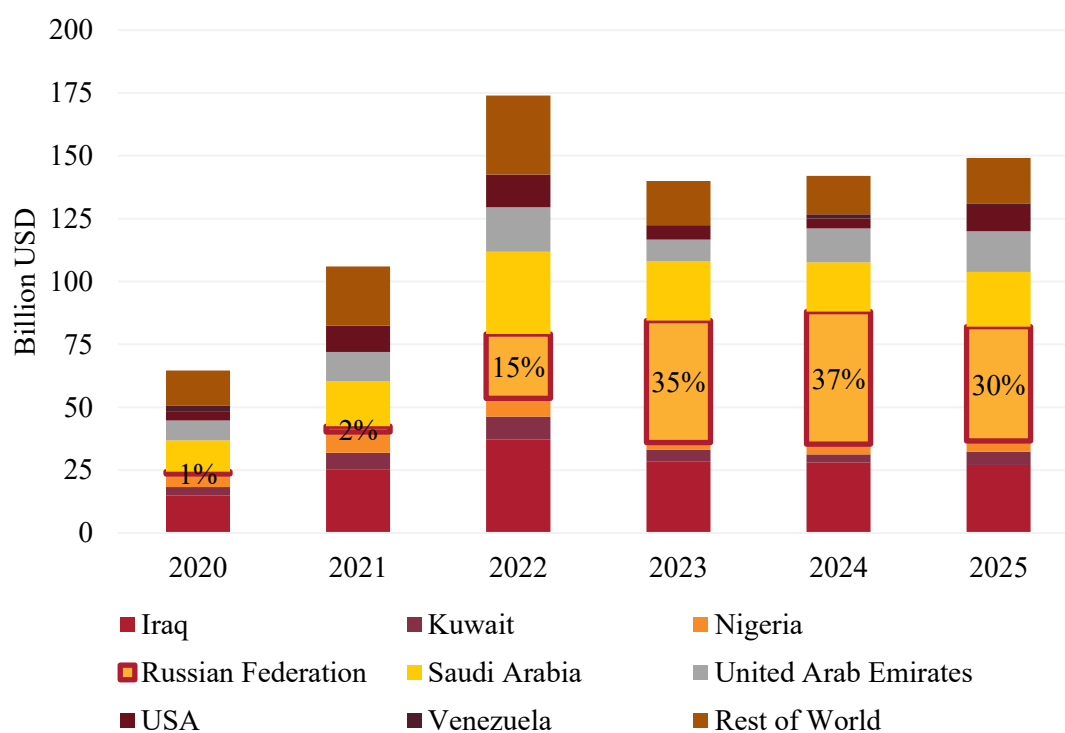
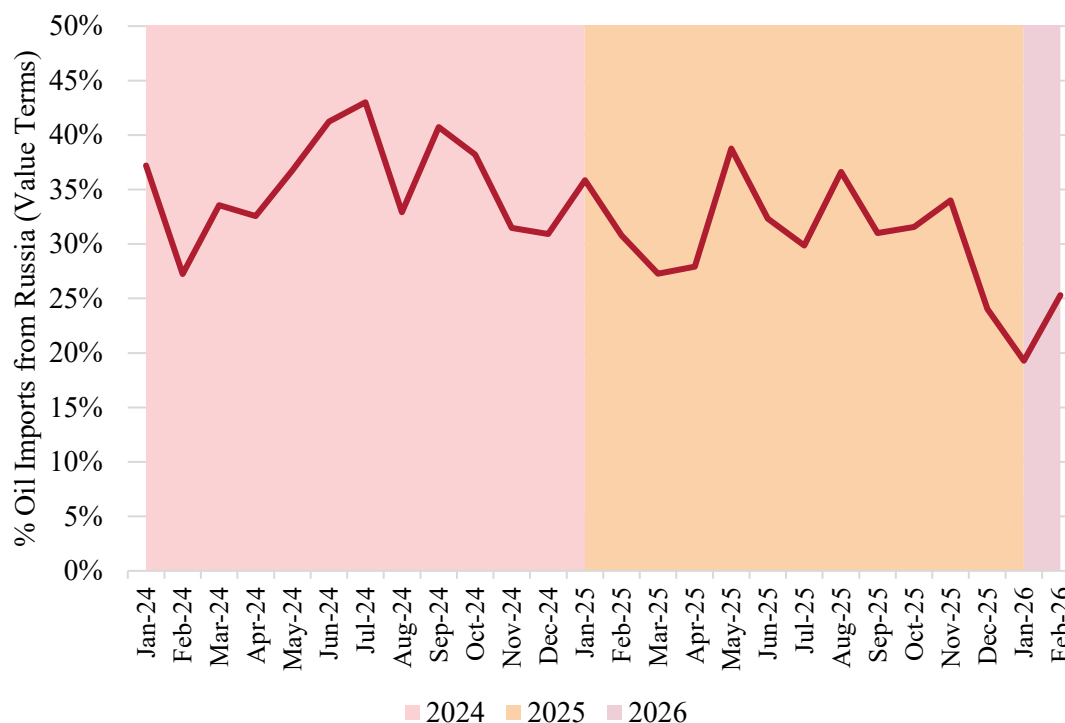


Figure 3: Share of Russian Urals in India's Crude Oil Import Basket



Source: HS Code 2709, Ministry of Commerce and Industry, Government of India³

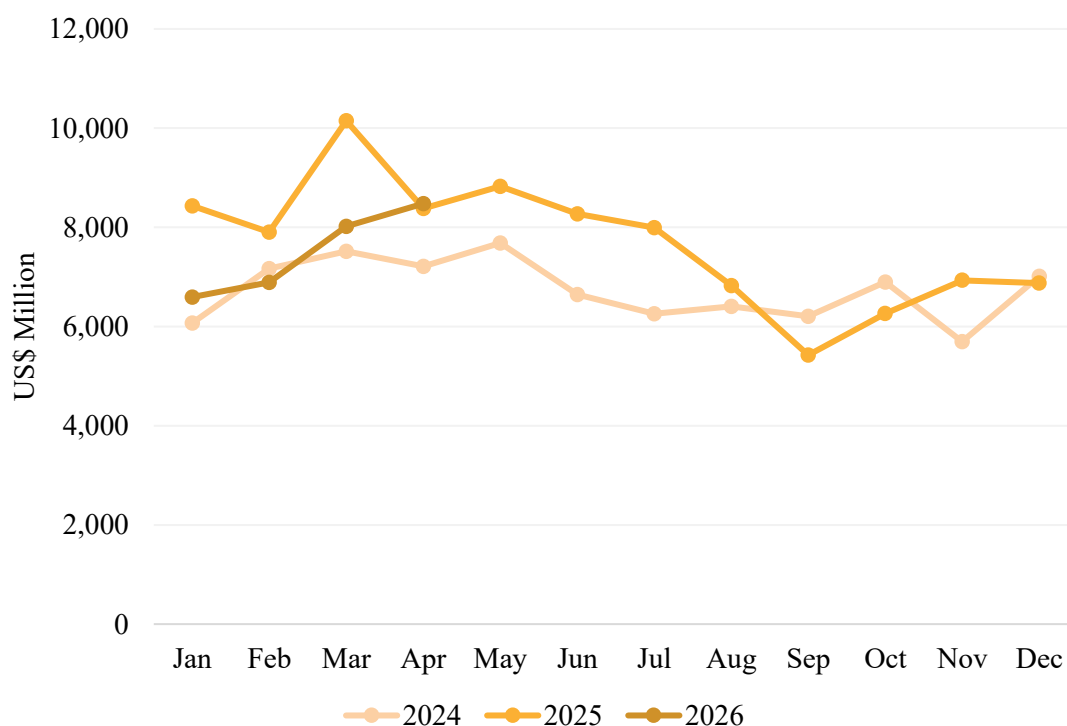
³ https://tradestat.commerce.gov.in/eidb/commodity_wise_export

Notably, India has an established record of complying with US-led sanctions. Under US pressure in 2019, India stopped importing Iranian oil after Washington’s temporary sanctions waivers ended, and also ended its procurement of Venezuelan oil in 2020. After forgoing these oil supplies to accommodate Washington’s will, India soon turned to relying on Russian crude.

The period of tariff volatility seemed to end when details of an ongoing trade deal discussion between the US and India emerged on February 9, 2026. Later, on February 20, 2026, the US Supreme Court struck down the *Liberation Day tariffs*.⁴ In response to the Court’s verdict, the US executive branch imposed a 10% tariff on all countries. In addition, the US launched investigations into India’s manufacturing capacity alongside 15 other trading partners.⁵ The ongoing discussion on a bilateral trade deal is currently in limbo as India takes a “wait and watch” approach to the changes in US tariff policies.⁶

The impacts of the tariffs for India were immediately visible (Figure 4). While India’s year-over-year (YoY) exports to the US grew by 24% between January and July 2025, the growth in exports reversed following the imposition of the cumulative 50% duties in August. Exports contracted by 13% and 9% YoY in September and October 2025, respectively. While exports rebounded marginally in November 2025, the downward trend continued in 2026, with YoY reductions of 22% and 13% in January and February 2026, respectively.

Figure 4: India's Merchandise Exports to the US – Monthly



⁴ <https://www.reuters.com/legal/government/us-supreme-court-rejects-trumps-global-tariffs-2026-02-20/>

⁵ <https://ustr.gov/about/policy-offices/press-office/press-releases/2026/march/ustr-initiates-section-301-investigations-relating-structural-excess-capacity-and-production>

⁶ <https://www.reuters.com/world/india/india-hold-off-us-trade-deal-amid-new-probe-sources-say-2026-03-13/>

Source: Ministry of Commerce and Industry, Government of India⁷

A newly emerged global energy shock has further complicated the coercive pressure the US has applied on India. In February 2026, the US-Israel-Iran conflict led to the near-closure of the Strait of Hormuz, disrupting oil shipments from the Middle East and triggering a major oil price spike. With this ongoing crisis, India's strategy of importing Russian oil is less about taking advantage of price discounts (which have largely ended) and more about maintaining its domestic energy security. Additionally, India received temporary waivers from the US to import Russian crude without triggering the 25% punitive tariff. The ongoing waiver will cease on June 17 2026. This arrangement has seemingly left India's economic and energy security at the whims of the US's geopolitical order.

This paper utilises the Global Trade Analysis Project (GTAP) multi-country Computable General Equilibrium (CGE) framework to quantify the impacts of the geoeconomic trilemma India faces. Beyond the ongoing energy shock in early 2026, this study examines the implications of India exercising its strategic autonomy amid an economic superpower weaponising its market dominance. The model specifically seeks to answer the question currently facing India: How do the economic damages inflicted by coercive US tariffs compare with maintaining an independent energy procurement strategy? Through quantitative simulations of compliance, defiance and bargaining, with and without an energy price shock, this paper looks to determine India's optimal strategic pathway in an increasingly fragmented global trading order.

To meet this objective, the paper first examines the theoretical and historical context of weaponising trade (Section 2), the mounting challenges posed by energy insecurity (Section 3), and the extant literature on the impacts of US tariffs (Section 4). A set of simulations is designed to depict the outcomes of various scenarios on India's trade, GDP, and economic welfare (Sections 5 and 6). Finally, the paper analyses the simulation results (Section 6) and provides Indian policymakers with the optimal outcome that balances trade and energy while safeguarding India's sovereignty. This paper contributes to the extant literature in two broad ways: first, it bridges the international relations theory of weaponised interdependence with quantitative CGE modelling, and second, it simulates the impacts of trade coercion in the context of energy security.

⁷ https://tradestat.commerce.gov.in/eidb/commodity_wise_export

2 Theoretical and Historical Context: The Weaponisation of Trade

This paper looks to anchor the CGE analysis within three theoretical geoeconomic frameworks, thereby bridging the gap between international relations and quantitative economics. First, we consider how the US is leveraging its weight in global consumer markets to enforce compliance with its foreign policy (weaponised interdependence). Second, we examine how historical US actions have undermined multilateral values and, more recently, have paralysed the WTO Appellate Body, leaving no neutral arbiter to settle genuine trade disputes and replacing rules-based adjudication with bargaining. Third, we draw parallels between the current reciprocal tariffs and the Hawley Tariff Act of 1930, which raised US import tariffs drastically, triggered a global trade war, and worsened the worldwide economic crisis by increasing unemployment and fuelling economic nationalism during the Great Depression 1929-1939.

2.1 Weaponised Interdependence

Standard economic theory has posited that globalisation would lead to decentralised, fragmented networks of power that curb state coercion. However, Farrell and Newman (2019)⁸ challenge this by showing how states increasingly “weaponise interdependence” to gain strategic advantage. They argue that global economic networks have grown asymmetrically, centring heavily on a few highly connected nodes – one of which is the United States. The asymmetrical network allows states with power over these central nodes and the appropriate domestic institutions to weaponise their position for their own ends.

Farrell and Newman have identified two mechanisms to employ this coercion: the “panopticon effect” to gather strategically valuable information, and the “chokepoint effect” to deny network access to adversarial states. The US has employed the latter in the context of India's 2025-2026 geoeconomic trilemma. Washington has leveraged its asymmetric control over the American consumer market by threatening to deny network access through prohibitively high tariffs, to coerce New Delhi into aligning with the US foreign policy objective of isolating Russia. This theoretical framework describes the nature of the trade coercion that India finds itself in. While the original study proposed the concept of weaponised interdependence in the context of finance or information infrastructure, this framework can also be applied to global value chains and considering the large size of the US consumer market as the asymmetric hub, providing Washington with a chokepoint on global manufacturing.

The literature also outlines how targeted states can respond to such coercive tactics, including decoupling and the creation of alternate networks. India has pursued such strategies through rupee-rouble currency settlements (bypassing the dollar and sanctions)^{9 10} and by diversifying export markets through the establishment of new Free Trade Agreements (FTAs). However, these strategies have so far found limited success and will likely take time to enable India to leverage alternative networks effectively when challenged by coercive tactics.

2.2 The Rise and Fall of Multilateralism

⁸ <https://direct.mit.edu/isec/article/44/1/42/12237/Weaponized-Interdependence-How-Global-Economic>

⁹ <https://www.rbi.org.in/Scripts/NotificationUser.aspx?id=12358>

¹⁰ <https://www.orfonline.org/research/mapping-russian-investment-in-india>

The ability and desire of the US to weaponise economic chokepoints represents a broader structural decay in global trade governance. Since the end of World War II, the US has supported the idea of multilateral rules through the General Agreement on Tariffs and Trade (GATT), established in 1948, and later the World Trade Organisation (WTO), established in 1995. The WTO functioned as a “GATT-plus” system with a legally binding Appellate Body for dispute settlements.

However, the multilateral system did not foresee China’s rapid growth. Following its entry into the WTO in 2001, China’s merchandise exports grew from \$266 billion to over \$3.3 trillion by 2023, making it the world’s second-largest economy. As global value chains shifted towards Asia, underpinned by the “Flying Geese”¹¹ model, the US was unable to match those levels of economic growth, which it itself had witnessed some decades prior, and began to view the WTO’s multilateral disciplines as unable to protect American industrial interests or manage China’s state-driven excess capacity. Historically, the global trading order consisted of developed nations promoting open markets, while developing nations protected growing industries with tariffs. The current situation seems to invert the multilateral order.

Washington has been retreating from multilateralism values, preferring bilateral engagements with transactional bargaining. In detriment to the multilateral order, the US has paralysed the WTO’s dispute settlement mechanism by blocking the appointment of new judges to the Appellate Body, which had a full complement of seven judges in 2016, and none today. In the absence of a rules-based multilateral system, powerful states freely deploy unilateral trade restrictions without fear of repercussions. The US’s deliberate inaction in appointing judges to the Appellate Body has shifted the structure of global trade from one of rules to one of power.

2.3 Parallels to the 1930s: A Return to Protectionism?

The unilateral trade actions currently being deployed by the US share concerning parallels to the protectionist era of the 1930s. Following the Wall Street crash in 1929, the US enacted the Smoot-Hawley Tariff Act of 1930 to protect domestic agriculture and industry from foreign competition. Instead of stabilisation, the legislation led to retaliatory tariffs worldwide, resulting in a major contraction of global trade and exacerbating the Great Depression of 1929-1934. The Great Depression was not a sudden event stemming from the stock market crash; it simmered amid the impressive economic growth and rising consumerism in the post-First World War period, built on shaky foundations laid by the Roaring Twenties.¹² The multilateral frameworks built post-World War II were explicitly designed to prevent the repeat of such destructive trade policies.

However, with the dismantling of the WTO Appellate Body, the US has revived the destructive instrument of tariffs as it continues its recession from multilateral commitments. This current wave of protectionism began with actions against China in 2018 and has been sustained through subsequent administrations. It escalated significantly in early 2025, despite the pertinent lessons that the US had learned from the Smoot-Hawley Act. First, with the reciprocal *Liberation Day* tariffs, and now with the universal baseline tariffs on allies and adversaries

¹¹ <https://www.sciencedirect.com/science/article/abs/pii/S1049007800000671>

¹² <https://worldhistoryjournal.com/2025/11/20/roaring-twenties/>

alike, the current US administration has pushed the country's tariff revenue-to-GDP ratio to levels not seen since the Smoot-Hawley era.¹³

As Baldwin (2025)¹⁴ noted, the April 2025 *Liberation Day* announcements did not sound like standard trade policy but rather like the first shot fired in a world trade war affecting almost all countries. The fallout mirrored the cycle of retaliation of the 1930s: the very next day, China announced export controls on the critical materials needed to manufacture semiconductors and jet planes. With the US, the world's largest importer, weaponising market access, and China, the world's largest exporter, weaponising supply chains, it appears that both imports and exports have been fully weaponised by the two largest nodes in the world economy, thus fracturing global trade flows.

The political justifications for these 2025 reciprocal tariffs range from supply chain security to unfair trade practices, and they somewhat echo the protectionist discourse of the 1930s. However, the current economic reality is far more complex than it was back then. The modern global economy is deeply intertwined, and, in this environment, high tariffs will not automatically lead to the onshoring of manufacturing. Rather, they act as regressive taxes on domestic consumers and distort the input costs for domestic producers. The pursuit of short-term geoeconomic leverage threatens to fracture already-vulnerable global value chains, reduce allocative efficiency, and depress global welfare. The fallout from these US actions is likely to be akin to the post-1930 trade collapse, with disrupted value chains and weakened multilateral trade rules. India must now navigate not only the demands of the US but also an increasingly fragmented global trading order amidst substantial energy shocks.

3 Weaponised Interdependence and Energy Insecurity

3.1 Market Coercion and the Threat of Tariffs

The US initiated a major shift in trade policies in April 2025 by imposing a baseline tariff of 10% on almost all imports, alongside higher “reciprocal tariffs” designed to penalise countries that impose higher customs duties on US goods and have trade surpluses with the US. For India, this resulted in an additional 25% tariff rate over the previous baselines. Later, in August 2025, this coercion escalated when the US announced a 25% punitive duty on a wide range of imports from India explicitly linked to India's continued purchase of Russian oil. To enforce India's compliance with sanctions on Russia, the US established a monitoring mechanism to track India's energy imports. If the watchdog finds India resuming its Russian Urals imports without Washington's clearance, the 25% punitive duty may be reimposed.

These duties were imposed on India's major export categories (Table 1), including textiles and apparel, gems and jewellery, leather goods, machinery and furniture, and marine products. Certain sectors were exempted, including pharmaceuticals, electronics products, passenger

¹³ <https://www.brookings.edu/articles/tariffs-in-2025-short-run-impacts-on-the-us-economy/>

¹⁴ https://cepr.org/system/files/publication-files/296107-world_war_trade_conflict_containment_and_the_emergent_world_trading_order.pdf

vehicles, and steel, aluminium, and copper products. The tariff exemption for certain sectors creates a layer of mutual dependence. While the US is weaponising its broader market access, it remains reliant on Indian exports to meet some of its domestic needs. This reciprocal vulnerability provides India with a degree of geoeconomic leverage, particularly in essential sectors, like pharmaceuticals, which can be utilised in future bargaining.

Table 1: India's Most Vulnerable Exports to the USA

HSN	Description	Share in India's Total Exports to the World %	Share of India's Exports by HSN-2 going to the US %
03	Fish and crustaceans, molluscs and other aquatic invertebrates	1.4	32.2
30	Pharmaceutical Products	5.3	38.0
39	Plastics and articles thereof	1.8	20.3
61	Articles of apparel and clothing accessories, knitted or crocheted	1.7	34.4
62	Articles of apparel and clothing accessories that are not knitted or crocheted	1.9	31.6
63	Other made-up textile articles; sets; worn clothing and worn textile articles; rags	1.4	48.8
71	Natural or cultured pearls, precious or semi-precious stones, precious metals, metals clad with precious metal, and articles thereof	6.7	31.3
73	Articles of iron or steel	2.3	29.4
84	Nuclear reactors, boilers, machinery and mechanical appliances; parts thereof	7.4	20.2
85	Electrical machinery and equipment and parts thereof; sound recorders and reproducers, television image and sound recorders and reproducers, and parts and accessories of such articles	9.1	31.3

Source: UN Comtrade¹⁵

The initial impact of the US tariffs on India in August 2025 was severe, as evidenced by the sharp drop in exports (Figure 4). While the preceding months had year-over-year growth ranging from 10% to 39%, the full impact of the cumulative 50% tariffs materialised in September and October 2025, causing exports to the US to contract by 13% and 9% than the previous year, respectively. New Delhi has officially stated that these tariffs are unfair and do not align with the spirit of a bilateral strategic partnership, simultaneously asserting that India's oil purchases from Russia are matters of India's sovereign decision-making.¹⁶

¹⁵ <https://comtradeplus.un.org/>

¹⁶ <https://www.mea.gov.in/Speeches-Statements.htm?dtl/39945>

The landscape shifted again in early 2026. On February 20, 2026, the US Supreme Court struck down sweeping reciprocal tariffs that President Trump had announced under the International Emergency Economic Powers Act (IEEPA), ruling they were unlawful. In response, the US administration turned to Section 122 of the Trade Act of 1974, which allows for temporary across-the-board tariffs when the United States has “large and serious balance-of-payments deficits”. President Trump announced a 10% across-the-board tariff immediately after the Supreme Court’s judgment, with an (extendable) expiry of 150 days. However, applying Section 122 may not be justified either, as it seeks to address balance-of-payments deficits rather than trade deficits that the US wants to target.¹⁷ Such disharmony creates even more uncertainty in policy. After the US observed a moderation of India’s Russian oil imports (see Figure 3: the share of Urals in the Indian import basket fell to 19% in January 2026, compared to peaks of over 37% in 2024), the US temporarily paused the 25% punitive tariffs, with the watchdog mechanism in effect.

Following the US Supreme Court ruling, the United States Trade Representative (USTR) has opened a new avenue of coercion by launching investigations under Section 301(b) of the Trade Act of 1974 into structural excess capacity and production in manufacturing sectors. The Trade Representative issued a notice of investigation against 16 countries, including India and the EU, on March 17, 2026. If a violation is found after the investigation, the USTR can recommend specific actions, the most common being increased tariff rates. The USTR has already flagged India’s solar module manufacturing capacity as nearly triple its domestic demand and claimed this is due to a state-backed production model reliant on exports. This claim resulted in a 126% countervailing duty (CVD) on Indian solar PV exports. Similar concerns have been raised regarding excess capacity in India’s petrochemical, steel, and textiles sectors. Table 2 outlines the rapidly evolving status of tariff measures since the *Liberation Day* tariffs.

Table 2: Tariffs Imposed by the USA on India

Date	Measure	Tariff Rate	Rationale
April 2025	Universal tariff	+10%	“Liberation Day” tariffs, to reciprocate the trade barriers faced by US exporters. Under the IEEPA.
August 2025	Reciprocal tariff	+15% =25%	Responding to India’s high tariffs on US goods. Announced in April 2025. Under the IEEPA.
August 2025	Russian oil import penalty	+25% =50%	Penalty on India for continuing to import Russian oil. Announced in July 2025.

¹⁷ <https://www.piie.com/blogs/realtime-economics/2026/what-supreme-courts-tariff-ruling-changes-and-what-it-doesnt>

February 2026	US lifts Russian oil import penalty	-25% =25%	India commits to reducing its imports of Russian oil. A watchdog mechanism is in place for the tariff rollback.
February 2026	US Supreme Court strikes down reciprocal tariffs	-25% =0%	The Supreme Court ruled that the tariffs were unlawful under the IEEPA.
February 2026	Global universal tariff	+10% =10%	Initially 10%, but it may change to 15%. Imposed under Section 122 of the Trade Act of 1974. Valid for 150 days.
March 2026	Solar CVDs on imports from India	+125.87%	Addressing excess manufacturing capacity. Section 301 investigations underway for other sectors.

Source: Cleartax¹⁸

India chose not to introduce any retaliatory measures and instead focused its attention on securing trade agreements and diversifying exports, particularly to the UK and the EU. The situation was somewhat calmed by the start of bilateral discussions on a US-India trade deal and India's partial reduction of oil imports from Russia, which led to the removal of the 25% punitive tariff.

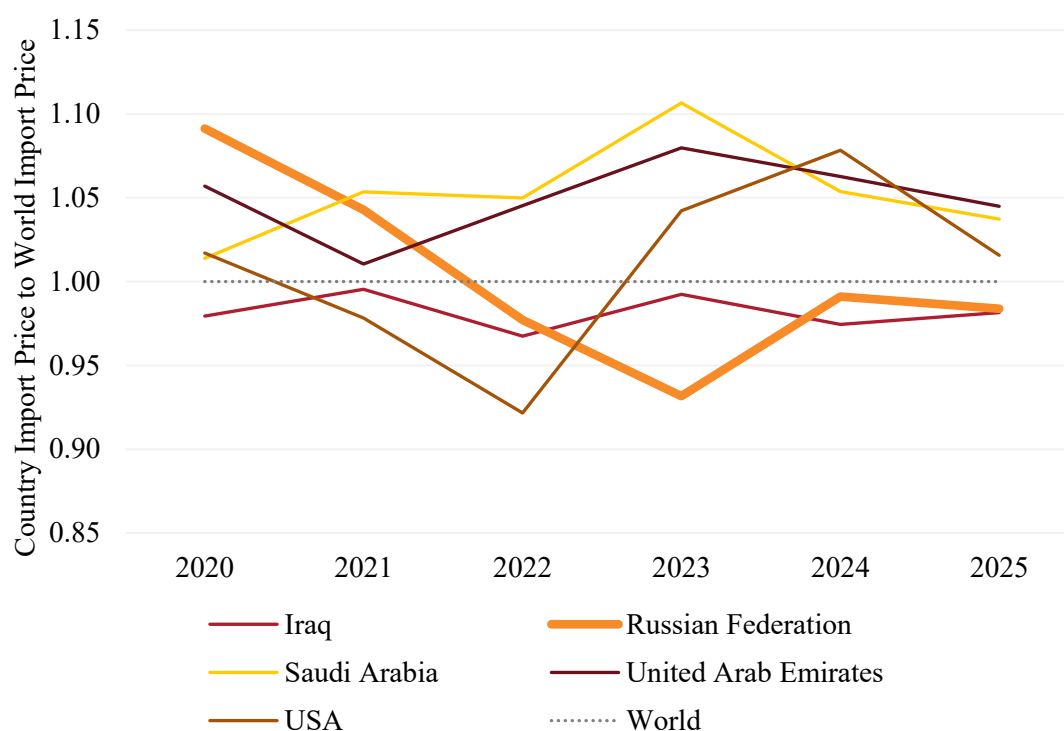
While the US has threatened and applied punitive tariffs on India for purchasing Russian oil, other major buyers of Russian energy, including China, Türkiye, and the European Union, have faced different policy responses from the US. Multiple geoeconomic factors can explain this variance. China is already facing substantial Section 301 tariffs, so additional trade penalties may not carry much weight. Conversely, the EU and Türkiye are NATO allies, where the imposition of unilateral trade penalties may lead to broader diplomatic issues. India, on the other hand, follows a non-aligned strategy and relies heavily on the US market for its exports. The asymmetric targeting of India shows how the US can weaponise its interdependence and test its ability to leverage market access to influence foreign policy decisions.

3.2 The Risks of Oil Supply Shock

India's initial pivot towards Russian Urals in 2022 was primarily price-driven, shaped by the G7's \$60/barrel price cap and the European Union's embargo on Russian seaborne crude, measures introduced in response to Russia's invasion of Ukraine. Russian oil was consequently traded at a discount, allowing Indian refiners to export petroleum products at higher refining margins. Historic pricing dynamics are shown in Figure 5, which tracks the ratio of prices paid for specific crude imports to the average price India paid for all oil imports each year.

¹⁸ <https://cleartax.in/s/us-tariff-on-india>

Figure 5: Ratio of India's Country-wise Oil Import Price to Average Oil Import Price



Source: Authors' calculations based on [UN Comtrade](#) HS Code 2709 for Crude Petroleum

The data capture the depth of the price discounts India received between 2022 and 2024, with the price of imported Urals dropping as low as 0.93 relative to the average oil import price in 2023. As these are Cost, Insurance, and Freight (CIF) prices, the actual Free on Board (FOB) discount was likely considerably higher. Due to the higher risks associated with transporting Russian freight, insurance premiums and freight costs were higher.

Box 3.1: India's Oil Refining Capabilities

The profitable 2022–2024 Russian oil purchases were dependent on India's large-scale refining capabilities. Crude oils are primarily differentiated by density (light or heavy) and sulphur content (sweet or sour). Russian Urals is a “medium sour” oil. Because it contains relatively higher impurities, it typically trades at a lower price than lighter, sweeter oils (such as North Sea Brent), as it requires more advanced infrastructure to process. India's private and public refiners have some of the highest Nelson Complexity Indices (NCI) globally, enabling them to process lower-quality crudes and convert them into high-value oil products, such as diesel.

Since 2024, the discount on Russian oil has shrunk, with prices reaching 0.99 and 0.98 of the average import prices. Supplies from Iraq have consistently remained below the global average import price, making it an essential baseline for India's energy requirements and accounting for around 21% of India's oil imports over the last five years. On the other hand, supplies from the US have been volatile, dipping below the global average import price in 2021 and 2022 before rebounding to a high premium. As the Russian discount has waned, India's YoY imports from Russia also began to moderate in early 2025.

In an assertion of its strategic autonomy, New Delhi hosted Russian President Vladimir Putin in December 2025 amid reduced Urals discounts and the risk of US tariffs. The two countries signed a joint statement committing to increasing bilateral trade to \$100 billion by 2030, with a focus on energy cooperation.¹⁹

However, the situation changed in February 2026, when the US-Israel-Iran conflict led to a blockade of the Strait of Hormuz, which accounts for one-fifth of global oil trade and around two-fifths of India's oil supplies. The movement of commercial vessels came to a near halt, with the average of 129 ships a day during February 1 to 27, 2026, dropping to fewer than five by early March.²⁰ Consequently, crude oil prices have skyrocketed, necessitating India to rethink its energy sourcing strategy.

The Russian Urals once again became an alternative to meet India's energy requirements, while traditional oil supplies were caught in blockades. New Delhi has been negotiating with the US to obtain a waiver from punitive tariffs on Russian oil amid global events. It has received several 30-day sanction exemptions from Washington, the latest of which expires on June 17, 2026. This sanction will put India back into the geoeconomic trilemma it had found itself in before the conflict in West Asia.

These events underscore India's geoeconomic vulnerability, where the country relies on conditional waivers from other countries to meet its energy needs. By complying fully with US coercion, India also exposes itself to inflationary shocks, while defying it risks export contractions. Thus, India must evaluate its policy options while facing a distressed oil market.

4 Literature Review: How Tariffs Harm Economies

The Macroeconomic Impacts of Unilateral Tariffs

Economists often warn against using tariffs to resolve trade imbalances. A justification used in the US in 2025 to impose tariffs was to correct for bilateral trade deficits. However, the literature shows that high tariffs cannot, in and of themselves, fix this, as these deficits are driven by domestic consumption or investment exceeding the country's production. Tariffs form a tax on industrial inputs and consumption, rather than reviving manufacturing, and they disrupt supply chains by artificially inflating input costs. Studies on recent US tariffs show that the monetary impact of these hikes is largely borne by domestic US importers, wholesalers, retailers, and consumers, rather than by the targeted foreign exporters. Basu (2018), Lin and Wang (2018), and Stiglitz (2018) all observe that while protectionist policies might provide short-term political dividends, they are inherently harmful to long-term economic efficiency, fail to increase domestic employment, and degrade global welfare meaningfully. Robinson and Thierfelder (2018) demonstrate that initiating trade wars and reneging on existing trade agreements lead to net economic damages that hurt not only the targeted nations but also the country initiating the tariffs.

¹⁹ <https://www.mea.gov.in/bilateral-documents.htm?dtl/40410>

²⁰ <https://www.bbc.com/news/articles/c3w39lg84w2o>

CGE Modelling Trade Wars and India's Responses

The impacts of US trade coercion on India have been quantified using Computable General Equilibrium frameworks in earlier studies. Chadha, Pohit, and Pratap (2019) utilised the GTAP CGE model to analyse India's policy choices in response to the US administration's initiation of a global tariff war. The study found that while the Indian economy might see marginal benefits from trade diversion, if it remained neutral during bilateral disputes between the US and China, retaliating with tariffs would lead to a reduced GDP and welfare losses. In a seemingly counterintuitive plan, they found that unilaterally reducing tariffs, rather than raising them, was the more beneficial strategy for India to gain from shifting global supply chains.

Jaiswal and Ganesh-Kumar (2025) have also utilised the GTAP framework to evaluate the implications of the US's cumulative 50% tariffs on India announced in August 2025. The study found that unilateral tariff reductions yield moderate economic gains due to more efficient resource allocation. However, these gains improve substantially if India enters a bilateral Free Trade Agreement (FTA) with the US. The paper recommended a selective FTA that excludes sensitive agricultural sectors as the most optimal strategic pathway.

The Potential of a US-India Trade Agreement

Studies have shown that a US-India trade agreement can have mutual benefits. Lawrence and Chadha (2004) analysed the potential of a deep bilateral FTA, concluding that the economic gains would be positive, stable, and strategically valuable for both nations. Under the agreement in the study, India would specialise in agriculture and labour-intensive manufacturing, where it has a comparative advantage. On the other hand, the US would see gains through services liberalisation and investment-led integration, which generate deeper value than just tariff cuts. Research by Fukase and Martin (2016) confirmed these potential impacts. Since India already has a relatively high level of trade protection, the US would gain substantially through improved market access. India would see a notable increase in exports and industrial output, particularly for the textiles and apparel sectors. This mutually beneficial agreement provides a backdrop for simulating a type of bilateral trade deal that can resolve the current geoeconomic trilemma.

5 Methodology and Scenarios

5.1 GTAP Computable General Equilibrium (CGE) Model

The present work addresses issues arising from a rapidly changing, increasingly protectionist global trading regime affecting India's growth and international trade. The analysis utilises the Global Trade Analysis Project (GTAP) Model version 7 and the trade database version 12 with 2023 baseline data. The GTAP model is a multi-region, multi-sector computable general equilibrium (CGE) model and is well-grounded in economic theory. The model assumes perfect competition in all markets, constant returns to scale in all production and trade

activities, profit-maximising behaviour by firms, and utility-maximising behaviour by households (Hertel 1997).²¹

Each region in the model features a single regional household that receives all income generated from primary factor payments and tax revenues, which is then allocated across private household consumption, government expenditure, and savings. Taxes are collected by the government and spent on public goods. At the same time, households maximise utility through commodity purchases, which are determined using the non-homothetic constant difference of elasticities (CDE) functional form to represent differing preferences based on expenditure availability.

Production activities utilise primary factors and intermediate inputs in fixed proportions. Primary factors, labour, capital, land, and natural resources, are substitutable with one another. Labour and capital are assumed to be perfectly mobile within domestic sectors but immobile across international borders. Intermediate inputs are used in fixed proportions to the output. The GTAP model uses the Armington elasticity of substitution to differentiate between domestic and bilateral imported sourcing of intermediate inputs. The elasticity estimates affect the responsiveness of trade flows to relative price changes across sectors.

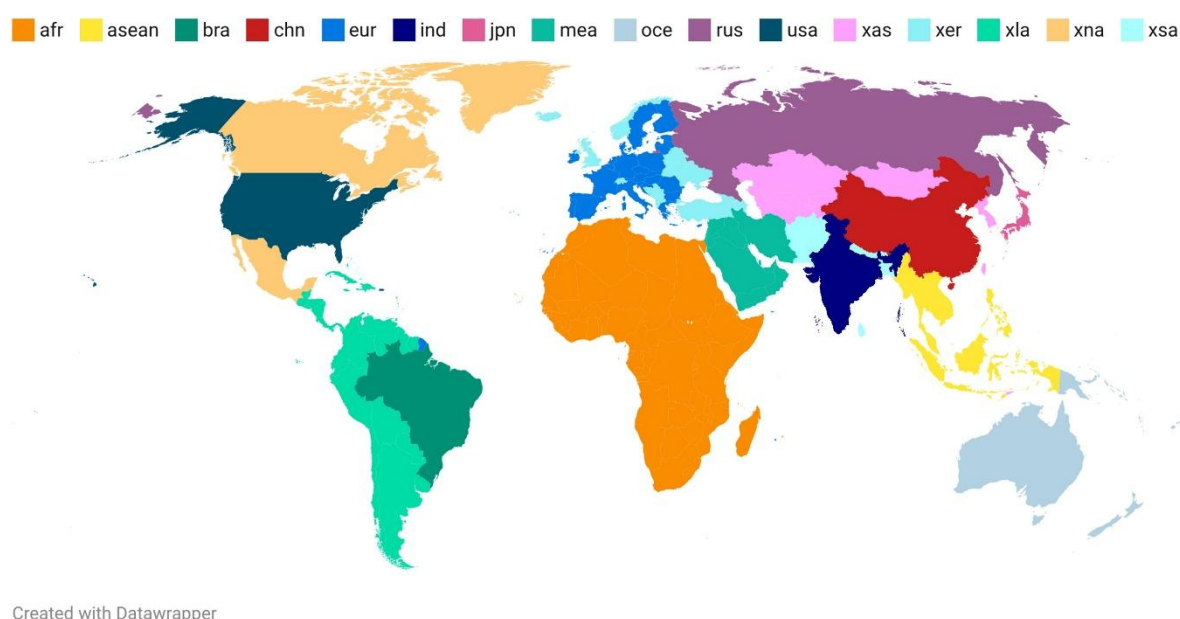
Household consumers are affected by shifts in resource allocation in the economy. A more efficient allocation of resources adds to consumer welfare. The welfare gain or loss from a policy simulation in GTAP is measured using Equivalent Variation (EV), which reflects the consumer's real consumption and saving due to changes in commodity prices. In our analysis, we primarily report the allocative efficiency, terms-of-trade (ToT) effects, and endowment effects that contribute to changes in real GDP and EV across the various scenarios.

In this study, we use the comparative-static version of the GTAP model and the latest GTAP version 12 database, which represents the reference year 2023.²² While a comparative-static model can capture the short- and medium-term structural reallocations, it does not account for long-term capital accumulation and transfer. Additionally, the model assumes perfect competition, which may miss out the market dynamics of large multinational petroleum firms.

The 2023 base year provides a baseline before the recent waves of tariff escalations. This database encompasses 145 countries (plus 18 aggregate regions) and 65 sectors of production. For our experiments, we aggregated the database into 17 geographic regions and retained all 65 sectors. The regional aggregation retains key geopolitical actors, including India, the United States, Russia, the Middle East, China, and the European Union, while compressing the rest of the world into larger regions.

²¹ [GTAP Models: Current GTAP Model](#)

²² <https://jgea.org/ojs/index.php/jgea/article/view/47>



Source: Authors' elaboration, visualised using Datawrapper²³

5.2 Scenarios

To evaluate the impacts of India's geoeconomic trilemma, we have considered simulating scenarios representing three strategic pathways: (1) Compliance, (2) Defiance, and (3) Bargaining. These pathways are tested across two global environments: (1) the extant oil prices, versus (2) a compromised energy market on account of an increase in oil from the Middle East. Running experiments across both environments can provide a deeper understanding of the implications of US trade coercion, without being affected by a potential temporary issue. The scenarios are detailed in Table 3.

²³ This map is for illustrative purposes and does not imply the expression of any opinion on the part of CSEP concerning the legal status of any country or territory or concerning the delimitation of frontiers or boundaries. The authors or CSEP do not vouch for the accuracy and correctness of the map.

Table 3: Simulation Scenarios

Scenario	Name	Description
1	Tariff Only	+ 10% flat tariffs on all countries
1A	Compliance	Scenario 1 + India's oil imports from Russia are reduced by 95%
1B	Defiance	Scenario 1 + India defies the US and continues to import oil from Russia at base data levels + The US imposes an additional 25% punitive tariffs on Indian exports to the US on top of the 10% base tariff
2	Energy Shock	Scenario 1 + global oil shock due to a hypothetical 15% price increase of oil exports from the Middle East region
2A	Compliance + Energy Shock	Scenario 1A + global oil shock due to a hypothetical 15% price increase of oil exports from the Middle East region
2B	Defiance + Energy Shock	Scenario 1B + global oil shock due to a hypothetical 15% price increase of oil from the Middle East region
3i	Coordinated Multilateral Retaliation	Scenario 1 + All regions impose an identical sector-specific tariff increase on US exports
3ii	Coordinated Multilateral Retaliation + Plurilateral Liberalisation	Scenario 3i + All regions (except the US) reduce tariffs by 10% on each other's non-agricultural exports.

Source: Authors' elaboration

5.3 Simulations Setup

Computing Effective Bilateral Tariff Shocks

The 10% tariff introduced by the United States administration does not apply uniformly across all products due to exemptions for strategic sectors and pre-existing preferential trade agreements. In alignment with the US Executive Order 14257 (Annex I and II)²⁴, strategic sectors, including petroleum and coal products (p_c) and pharmaceuticals (bph), are either fully or partially exempted from these tariffs. This exemption applies to the punitive tariff as well.²⁵ An effective trade-weighted tariff adjustment was calculated for each GTAP sector and region.

For a given GTAP sector s and exporting region r , the effective tariff shock $\Delta\tau_{s,r}$ applied by the US is:

²⁴ https://www.whitehouse.gov/wp-content/uploads/2026/02/2026Section122.prc_ANNEX1_FINAL.pdf
https://www.whitehouse.gov/wp-content/uploads/2026/02/2026Section122.prc_ANNEX2_Final.pdf

²⁵ <https://www.whitehouse.gov/fact-sheets/2025/08/fact-sheet-president-donald-j-trump-addresses-threats-to-the-united-states-by-the-government-of-the-russian-federation/>

$$\Delta\tau_{s,r} = \tau_{base} \times \left(1 - \frac{\sum_i^e \omega_{i,r}}{\sum_j^h \omega_{j,r}}\right) \times (1 - U_r)$$

Where:

- τ_{base} is the tariff imposed by the US – 10% for the baseline universal tariff and 35% for the cumulative tariff imposed on India in the defiance cases
- e is the specific HS-6 lines that are exempted by the US, aggregated by GTAP sector s
- h represents all HS-6 product lines, aggregated by GTAP sector s
- ω is the trade value imported by the US from region r
- U_r represents the utilisation rate of the US-Mexico-Canada (USMCA) agreement, set at 88.2% for the xna region and 0 for all other regions

For sectors with no bilateral trade, $\Delta\tau_{s,r}$ is set as 0%. These were used to shock tms from each of the 16 non-US regions to the US in all simulations.

Modelling a Global Oil Price Shock

We model a global oil price rise in Scenarios 2, 2A, and 2B by applying a 15% exogenous shock to the export tax (txs) on crude oil originating from our aggregated Middle East (mea) region. This approach attempts to emulate a supply restriction of oil from the region. It endogenously increases the world price of oil for importers by altering Armington substitution.

Russian Oil Price Considerations

This study uses the GTAP v12 database with a base year of 2023, when the price of Russian crude was lower than global oil prices, as the G7 price cap led to oil being sold at significant discounts. However, by 2026, due to the Strait of Hormuz crisis, this discount had largely been reduced (see Section 3.2). In this paper, we have retained the 2023 base year and have not shocked the price of Russian oil to reach 2026 levels. Consequently, the results are a conservative baseline for what India can do when it has the option to source cheaper crude – if model shows that a strategy of defiance (Scenario 1B) lead to a net national welfare losses even when India is enjoying energy discounts, then the economic argument against defiance becomes even more convincing under 2026 Russian oil pricing conditions, where the discounts have been eliminated.

Imposing a Trade Embargo on Russian Oil Imports

To simulate India's decision to comply with US demands to reduce oil imports from Russia, we shock the quantity (qxs) of oil (oil) exports from Russia to India by 95%. As qxs is endogenous in the standard model, we swap it with the bilateral trade friction variable ams .

Coordinated Retaliation and Systemic Pushback

The coordinated retaliation scenario (3i) was simulated by applying a symmetric additional tariff on imports from the US to each of the other 16 regions. For the systematic pushback

scenario (3ii), each of these 16 regions reduces its tariffs on the others by 10% on all non-agricultural commodities.

Macroeconomic Model Closures

During the simulations, two major changes have been made to the macroeconomic closures in the standard GTAP Model.

Firstly, the standard closure assumes full employment of all endowments and that wages are adjusted to clear the market. However, this assumption in the developing country context misrepresents the labour market, where there is a significant surplus of labour in the informal sector. In alignment with the dual-sector model, the standard closure has been modified by endogenising the supply of unskilled labour (*qe*) and treating the real wage (*pebfactreal*) as exogenous across three regions: India (*ind*), the Rest of South Asia (*xsa*), and Africa (*afr*). Consequently, contraction or expansion in the manufacturing sectors will lead to a reduction in employment volumes rather than wage rates. This assumption also means that in the scenarios with the global oil supply shock (2, 2A, and 2B), the burden of higher prices fall wholly on employment levels and not wages.

Secondly, GTAP models agents as cost-minimising. If India stops importing Russian oil (as in 1A and 2A), the relative price of that oil falls, leading other regions to absorb cheaper crude to increase efficiency. However, this trade diversion is politically unrealistic, as many regions have embargoes against Russian energy products. To better reflect current geopolitics, the bilateral trade friction variable (*ams*) was endogenised, and the bilateral trade volume (*qxs*) was exogenised, ensuring that Russian oil does not leak into regions that have already imposed embargoes on Russian energy. This swap was applied to the United States (*usa*), Rest of North America (*xna*), the European Union (*eur*), Japan (*jpn*), and Oceania (*oce*).

6 Simulation Results

6.1 Geoeconomic Trilemma: Compliance versus Defiance

Our simulation results show a divergence between changes in Gross Domestic Product and national economic welfare, highlighting how weaponised interdependence can be operationalised through asymmetric trade networks. India has two broad policy choices: compliance with US demands to reduce imports of Russian oil (Scenario 1A) or defiance and paying a cumulative 35% tariff on exports to the US (Scenario 1B). While these scenarios represent India's responses during baseline oil price conditions, their counterparts during heightened oil prices are Scenario 2A and Scenario 2B.

Considering only GDP, the defiance strategy appears to be the better option: real GDP declines by only 0.25% compared to 0.42% under compliance. The lower decline in GDP is explained by Indian refiners' continued access to optimal crude sources, which avoids a supply shock in India's large petroleum products (*p_c*) sector. However, evaluating changes to national welfare paints a different picture. In the compliance scenario (1A), national welfare falls by \$19.8 billion, whereas in the defiance scenario (1B), welfare losses are \$21.5 billion.

Table 4: India's Policy Options (Baseline Oil Prices)

Indicator	Scenario 1A: Compliance	Scenario 1B: Defiance
Real GDP	-0.42%	-0.25%
National Welfare (EV)	-\$19.76 bn	-\$21.51 bn
EV/Base GDP	-0.54%	-0.59%

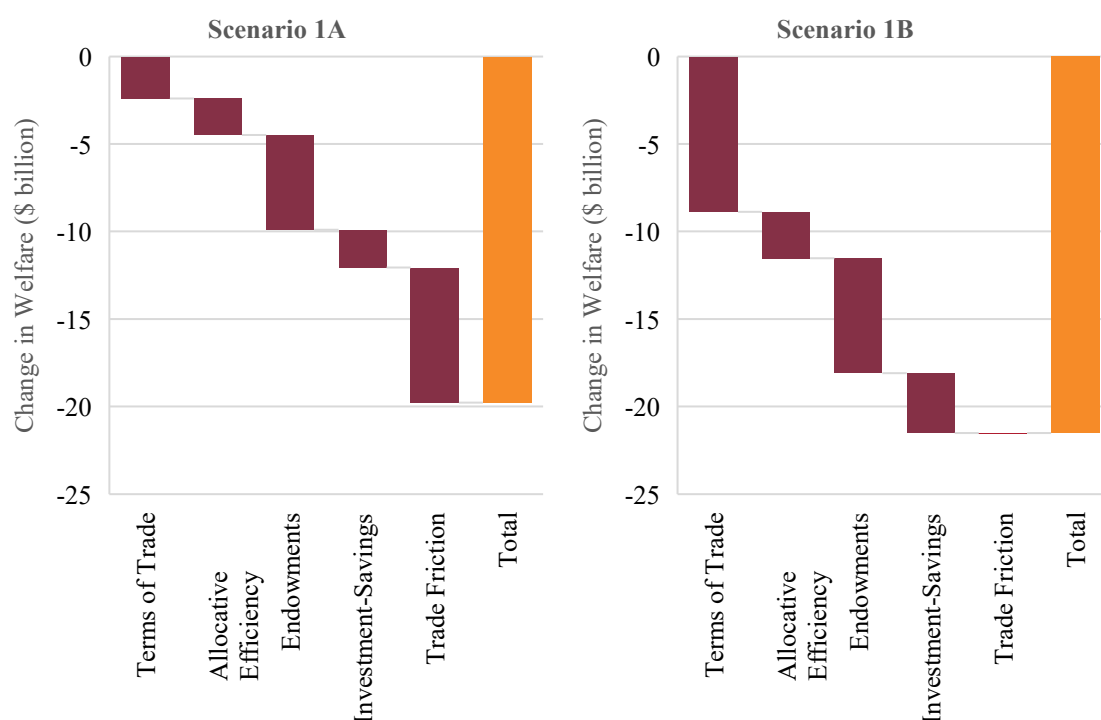
Source: Authors' computations

The mechanism and explanation for the divergence between GDP and EV can be understood when welfare changes are decomposed (Figure 6)²⁶:

- Terms-of-Trade (ToT): The cumulative 35% tariff under defiance (1B) severely degrades India's terms-of-trade (*totr*). The ToT is the ratio of a country's export prices to its import prices – a deterioration means that India must export a larger volume of goods to pay for the same volume of imports, reducing the domestic purchasing power and transferring household wealth overseas. The ToT component accounts for a \$8.9 billion welfare loss in 1B, compared to a relatively minor \$2.4 billion contraction in 1A. Indian manufacturing exporters are forced to reduce export prices to offset higher tariffs, leading them to export more to maintain the same level of imports. Such losses in terms of trade lead to a transfer of wealth from the Indian to the US regional household.
- Trade Friction: Conversely, when complying (1A), India's ToT reduction is less severe, but it faces a high trade friction (*ams*) of \$7.7 billion. This deadweight loss is the economic cost of India cutting oil trade links with Russia and forcing refiners to replace discounted Russian crude with sub-optimal alternatives.

²⁶ https://www.gtap.agecon.purdue.edu/resources/res_display.asp?RecordID=308

Figure 6: Welfare Decomposition - Scenarios 1A and 1B



Source: Authors' computations

We have separately simulated the impacts of a symmetric, unilateral tariff response by India as a potential policy option.²⁷ The results showed that, in both the compliance and defiance cases, the country would face worse macroeconomic outcomes than the non-retaliation baseline, as counter-tariffs increase US import prices, leading to higher intermediate input costs and greater deadweight losses.

6.2 Oil Price Shock

When a global oil shock is introduced in Scenarios 2, 2A, and 2B, with a 15% increase in the price of Middle Eastern crude, the economic penalty of compliance increases.

Table 5: India's Policy Options (Heightened Oil Prices)

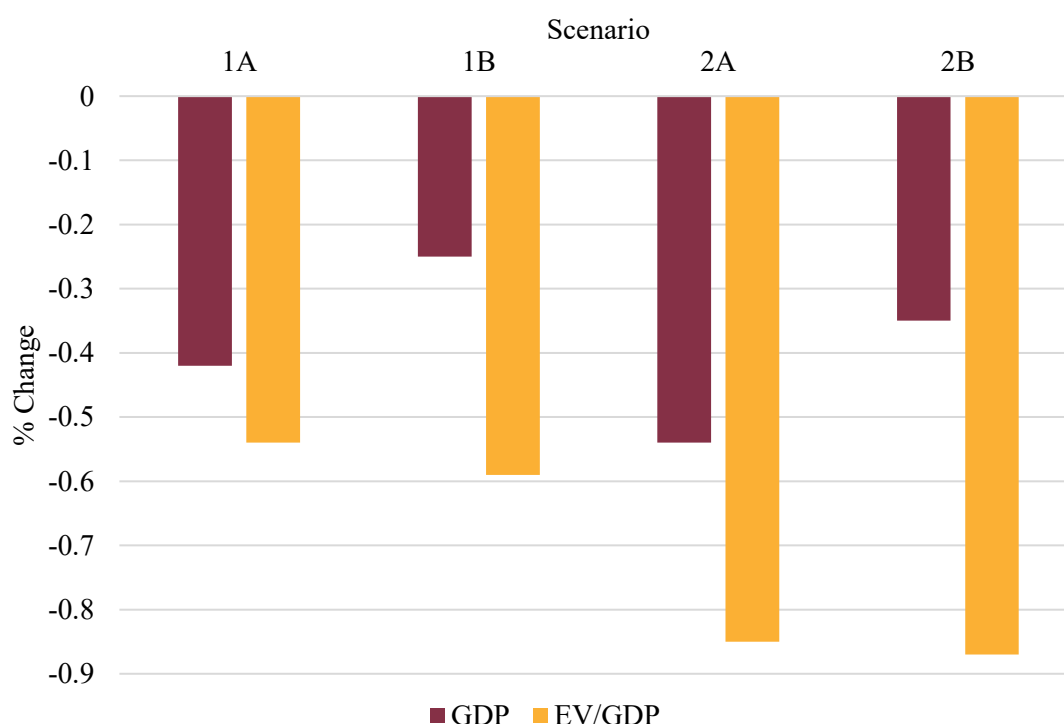
Indicator	Scenario 2: Energy Shock	Scenario 2A: Compliance	Scenario 2B: Defiance
Real GDP	-0.18%	-0.54%	-0.35%
National Welfare (EV)	-\$16.17 bn	-\$30.78 bn	-\$31.48 bn
EV/Base GDP	-0.44%	-0.85%	-0.87%

²⁷ Results not reported in this paper.

Source: Authors' computations

Scenario 2 isolates the impacts of the US's universal tariffs during the hypothetical oil crisis. Under this new distressed-oil-markets baseline, India sees a real GDP contraction of 0.18% and a welfare loss of \$16.17 billion. However, when US coercive measures are applied, the macroeconomic impacts compound. Indian refiners face a double blow under Compliance (Scenario 2A), with Russian crude imports terminated while Middle Eastern oil prices rise. The changed scenario leads to a 0.54% contraction in GDP and a welfare loss of \$30.78 billion. Conversely, under defiance (Scenario 2B), the petroleum sector is protected from the Middle Eastern price shock. However, labour-intensive exports face a higher 35% cumulative tariff, resulting in a 0.35% GDP contraction and a \$31.48 billion welfare loss. In this distressed oil market, the economic rationale of India complying with US demands weakens: the welfare gap between compliance and defiance narrows, while defiance better stabilises the GDP. In this high-oil-price environment, Russian crude becomes an important buffer for India against inflationary supply shocks, rather than a strategy to take advantage of discounts.

Figure 7: Impacts on India's GDP and Welfare (Scenarios 1A, 1B, 2A, 2B)



6.3 Impacts on Employment and Wages

Since the macroeconomic closure has been modified in this study, where unskilled labour is in surplus in India with fixed real wages, contractions in trade-exposed sectors lead directly to job losses.

Table 6: Impacts on Employment and Wages (Baseline Oil Prices)

Indicator	Scenario 1A: Compliance	Scenario 1B: Defiance
-----------	-------------------------	-----------------------

Unskilled Employment	-0.54%	-0.65%
Skilled Wages	-0.44%	-0.22%

Source: Authors' computations

Compliance penalises capital-intensive sectors, reducing skilled wages by 0.44%, while defiance puts the burden on factory jobs. Demand for unskilled labour reduces by a greater 0.65% in defiance, compared to a more moderate 0.54% contraction in compliance. The 35% cumulative additional tariff affects India's labour-intensive manufacturing sectors – particularly textiles (*tex*), wearing apparel (*wap*), and other manufacturing (*omf*) – as export competitiveness falls. The distressed oil market conditions compound the impacts on the labour market. The energy shock alone (Scenario 2) leads to a 0.44% drop in unskilled employment, which increases to 0.84% under compliance and 0.93% under defiance.

6.4 Sectoral Reallocations under Defiance

Since the US tariff orders include specific sectoral exemptions, the modelling results show how resources are reallocated across India's manufacturing sectors when facing both the universal and punitive tariffs under the defiance scenario. Non-tariffed industries become more productive and expand as they absorb labour and capital shed by the tariffed sectors.

Table 7: Changes to India's Sectoral Output under Defiance – Select Sectors

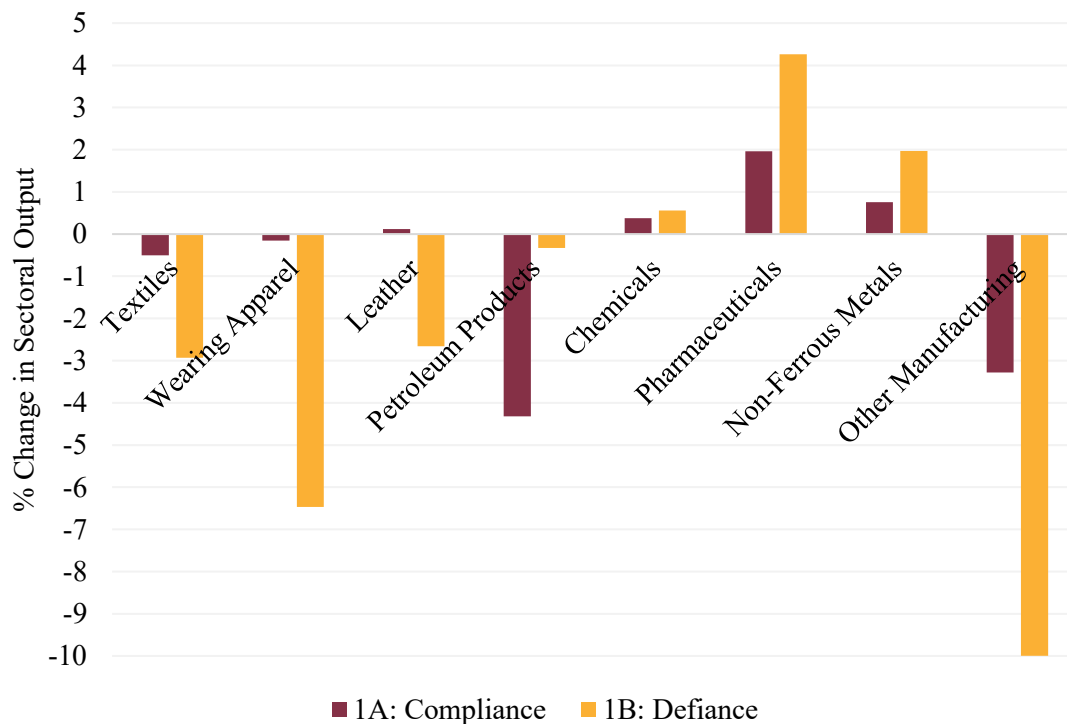
Non-Exempt Sectors		Exempt Sectors	
Other Manufacturing (<i>omf</i>)	-10.00%	Pharmaceuticals (<i>bph</i>)	+4.26%
Wearing Apparel (<i>wap</i>)	-6.47%	Non-ferrous Metals (<i>nfm</i>)	+1.97%
Textiles (<i>tex</i>)	-2.93%	Chemicals (<i>chm</i>)	+0.56%

Source: Authors' computations

Non-exempt, labour-intensive manufacturing sectors see large reductions under defiance. India's other manufacturing (*omf*) output (*qo*) contracts by 10.00%, wearing apparel (*wap*) by 6.47%, and textiles (*tex*) by 2.93%. Such contractions are primarily driven by the collapse in exports to the US, with both wearing apparel and textiles exports to the US falling by around 75%.

Conversely, the sectors exempted from the US tariffs absorb the capital and labour displaced from affected manufacturing sectors. Pharmaceuticals (*bph*) output expands by 4.26%, driven by an increase in exports to the US of 12.28%. Non-ferrous metals (*nfm*) and chemicals (*chm*) similarly see their outputs rise as their exports to the US increase. The mobile capital and labour shed by non-exempt sectors are reallocated to these exempt industries at relatively lower costs, thereby increasing their cost competitiveness in the US market.

Figure 8: Changes in India's Sectoral Outputs - Compliance vs Defiance



Source: Authors' computations from the GTAP mode

The results also reveal that the petroleum products sector (p_c) slightly contracts by 0.33% in output, despite being mostly exempt from additional tariffs – in fact, exports to the US rise by 3.31%. However, since other energy-intensive manufacturing sectors see output reductions, their demand for petroleum products has consequently also contracted. The expansionary and contractionary forces lead to a marginally reduced sectoral output.

6.5 Addressing the “Optimal Tariff” Theory

One of the rationales underpinning the US' trade actions is the “optimal tariff” theory.²⁸ Large consumer economies can leverage their market size by imposing unilateral tariffs to improve terms-of-trade at the expense of trading partners.²⁹ As shown in the simulation results, global exporters are forced to reduce prices and absorb some of the costs, thus facing deteriorating terms of trade. At the same time, terms-of-trade gains improve for the US regional household. The baseline simulation (Scenario 1) shows that the US can extract \$31.52 billion in economic welfare – albeit with a 0.06% contraction in GDP – by imposing a unilateral 10% tariff.

The welfare decomposition of Scenario 1 (Table 10) highlights an important element of the optimal tariff theory: capital extraction. While the US gains \$27.48 billion in terms-of-trade effects, it also receives a substantial \$19.84 billion from the investment-savings component,

²⁸

https://www.hudsonbaycapital.com/documents/FG/hudsonbay/research/638199_A_Users_Guide_to_Restructuring_the_Global_Trading_System.pdf

²⁹ <https://www.aeaweb.org/articles?id=10.1257/aer.98.5.2032>

driven by changes in the price of capital goods. When the US imposes tariffs on all regions, the global prices of capital goods fall relative to US domestic prices, leading to increased purchases by US regional household.

The counter to the optimal tariff theory is collective countermeasures. In this paper, we introduce two multilateral strategies: Coordinated Retaliation (Scenario 3i) and Coordinated Retaliation with Non-Agricultural Plurilateral Liberalisation, i.e., Systemic Pushback (Scenario 3ii).

Table 8: Countering the Optimal Tariff Theory Impacts

Indicator	Scenario 1: Unilateral US Tariff	Scenario 3i: Coordinated Retaliation	Scenario 3ii: Systemic Pushback
US Terms of Trade (%)	+1.21	-0.60	-0.71
US Welfare (\$bn)	+31.52	-42.13	-46.16
US EV/Base GDP (%)	+0.11%	-0.15%	-0.17%
India Welfare (\$bn)	-5.69	-2.72	-0.63
India EV/Base GDP (%)	-0.16%	-0.07%	-0.02%
Net Global Welfare (\$bn)	-21.38	-40.26	-19.50

Source: Authors' computations

Through a coordinated, symmetric tariff retaliation, the impacts of the US optimal tariff theory can be negated. The increased tariffs applied by all regions on the US lead to the ToT gains reversing from +1.21% to 0.60%. Additionally, the welfare extracted by the US from other regions turns into a net welfare loss of \$42.13 billion. For India, domestic macroeconomic variables are more stabilised, with real GDP contracting by only 0.04% and the welfare loss almost halved to \$2.72 billion.

Scenario 3ii builds on the spirit of multilateral trade liberalisation by combining the initial coordinated retaliation with a plurilateral 10% tariff reduction on all non-agricultural goods across all regions, excluding the US. By lowering their trade barriers among themselves, regions can reduce their dependence on the US market. India sees its real GDP change rise by 0.02% and its unskilled labour market expand by 0.05%, compared with a marginal 0.08% reduction in Scenario 3i. US welfare losses further fall to \$46.16 billion as other regions trade more efficiently.

These simulations show that while India may not be able to withstand US trade coercion through unilateral retaliation, a coordinated multilateral response by all impacted regions would help protect economies from adverse impacts. These nations, in coalition, can neutralise weaponised interdependence by creating alternative trade networks. However, it should be noted that this coordinated retaliation might trigger the US to escalate further, leading to a trade war. Plurilateral liberalisation (part of Scenario 3ii) remains an effective way of decoupling from the US market without risking macroeconomic instability.

6.6 Sensitivity Analysis

To validate the robustness of the model, we ran a Systematic Sensitivity Analysis (SSA) using on Scenario 1A. We varied the Armington elasticity of substitution for domestic versus imported goods (ESUBD) for all 65 commodities by +/-50%. The SSA results are robust, with low variance across all sectors. The macroeconomic impacts are driven by tariff and trade shocks rather than by sensitivities in the Armington elasticity parameter.

Table 9: Impacts on Various Macroeconomic Indicators – India and the US

Country	Indicator	Base Tariff	Compliance	Defiance	Oil Shock	Compliance + Oil Shock	Defiance + Oil Shock	Coordinated Retaliation	Systemic Pushback
		(1)	(1A)	(1B)	(2)	(2A)	(2B)	(3i)	(3ii)
India	Real GDP (% change)	-0.06	-0.42	-0.25	-0.18	-0.54	-0.35	-0.04	0.02
	Welfare (EV) (\$ billion)	-5.69	-19.77	-21.51	-16.17	-30.78	-31.48	-2.72	-0.63
	EV/Base GDP (% change)	-0.16	-0.54	-0.59	-0.44	-0.85	-0.87	-0.07	-0.02
	Terms of Trade (% change)	-0.31	-0.39	-1.44	-1.04	-1.18	-2.18	-0.13	-0.18
	Unskilled Emp. (% change)	-0.15	-0.54	-0.65	-0.44	-0.84	-0.93	-0.08	+0.05
	Skilled Wages (% change)	-0.02	-0.44	-0.22	-0.34	-0.77	-0.52	-0.07	+0.03
USA	Real GDP (% change)	-0.06	-0.06	-0.07	-0.06	-0.06	-0.07	-0.09	-0.09
	Welfare (EV) (\$ billion)	+31.52	+32.41	+29.42	+36.84	+37.77	+34.68	-42.13	-46.16
	EV/Base GDP (% change)	+0.11	+0.12	+0.11	+0.13	+0.14	+0.13	-0.15	-0.17
	Terms of Trade (% change)	+1.21	+1.25	+1.26	+1.45	+1.49	+1.50	-0.60	-0.71

Table 10: Welfare Decomposition – India and the US

Country	Welfare Decomposition (\$ billion)	Base Tariff	Compliance	Defiance	Oil Shock	Compliance + Oil Shock	Defiance + Oil Shock	Coordinated Retaliation	Systemic Pushback
		(1)	(1A)	(1B)	(2)	(2A)	(2B)	(3i)	(3ii)
India	Terms of Trade	-1.89	-2.40	-8.87	-7.31	-8.24	-14.40	-0.74	-1.07
	Allocative Efficiency	-0.68	-2.09	-2.66	-1.54	-2.92	-3.48	-0.86	+0.41
	Endowments	-1.52	-5.41	-6.56	-4.44	-8.51	-9.35	-0.77	+0.47
	Investment-Savings	-1.60	-2.16	-3.42	-2.46	-3.01	-4.25	-0.35	-0.44
	Trade Friction	0.00	-7.71	0.00	-0.42	-8.05	0.00	0.00	0.00
	Total	-5.69	-19.77	-21.51	-16.17	-30.78	-31.48	-2.72	-0.63
USA	Terms of Trade	+27.48	+28.49	+28.59	+34.61	+35.62	+35.63	-18.98	-21.77
	Allocative Efficiency	-15.81	-15.70	-20.24	-15.41	-15.31	-19.84	-25.97	-26.32
	Endowments	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Investment-Savings	+19.84	+19.62	+21.07	+17.64	+17.46	+18.89	+2.81	+1.92
	Trade Friction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Total	31.52	32.41	29.42	36.84	37.77	34.68	-42.13	-46.16

Source: Authors' computations using GTAP Model v7 and Database v12

7 Policy Recommendations & Concluding Remarks

This study examines India's policy options in the face of a fragmented and skewed global trading order. The simulation results show that neither absolute compliance nor absolute defiance of US coercion will offer India long-term economic stability and growth. While compliance protects manufacturing jobs, it leaves the economy vulnerable to periods of external oil shocks, such as the 2026 Strait of Hormuz crisis. On the other hand, defiance allows India to maintain optimal oil sourcing from countries of its choice. However, it triggers a deterioration in terms-of-trade and passes the economic costs of strategic autonomy onto factory workers as labour-intensive industries slow down.

Table 11: Policy Recommendations

	Policy Recommendation	Quantitative Evidence
Short-Term	Waiver Diplomacy India should seek waivers from the US to import Russian crude without facing punitive tariffs. India can frame its need to import Urals crude as a measure to stabilise global oil prices amid geopolitical volatility, thereby protecting consumers across all regions from inflationary shocks. → Ministry of External Affairs	Scenarios 2A and 2B show that compliance during a period of heightened oil prices will lead to a large welfare loss, almost equal to the loss under defiance.
	Supporting Labour-Intensive Industries Non-exempt, labour-intensive industries (such as wearing apparel, textiles, and leather products) can be provided additional support to lessen the impacts of the tariffs. The Remission of Duties and Taxes on Exported Products (RoDTEP) scheme refunds manufacturers with previously non-refundable central, state, and local taxes on exported goods. This WTO-compliant scheme can help counteract the terms-of-trade deterioration by increasing the tax refund rates for the most affected sectors. → Ministry of Commerce and Industries	Scenario 1B shows that defiance leads to significant output drops in various non-exempt manufacturing sectors. Providing these affected sectors with higher tax remission would reduce their price competitiveness in the global market.

	Coordinated Response Regions affected by the universal tariff can plurilaterally coordinate to respond to trade practices that violate multilateral discipline. This grouping could synchronise retaliatory tariffs against any major economy that takes advantage of its market dominance and imposes unilateral tariffs.	Scenario 3i shows how coordinated retaliation can counter the impacts of the US universal tariff, converting the US welfare gain of \$31.52 billion to a welfare loss of \$42.13 billion, while cutting India's welfare reduction in half.
Medium-Term	→ Ministry of Commerce and Industries Trade Integration and Tariff Rationalisation India should initiate exploratory steps to join free-trade blocs, such as the Comprehensive and Progressive Agreement for Trans-Pacific Partnership (CPTPP), to reduce allocative inefficiencies, increase competitiveness, and create alternative trade networks that can help de-risk against asymmetric vulnerabilities. Deep bilateral Free Trade Agreements (FTAs) can also help meet some of these goals in the medium-term.	Scenario 3ii introduced a 10% tariff liberalisation among partners on non-agricultural commodities, leading to a marginal 0.02% increase in India's GDP and a 0.05% increase in unskilled employment, successfully countering weaponised interdependence.
Long-Term	→ Ministry of Commerce and Industries Asian Energy Sourcing Collaboration Just as the 1973 oil crisis led to the formation of the International Energy Agency (IEA), the geoeconomic fragmentation of 2025-2026 could be a catalyst for an alliance of Asian energy importers. This collective regional framework can negotiate to secure better supply terms, coordinate on alternate maritime routes, and strategise on collective decarbonisation to reduce oil dependencies.³⁰	As shown in Scenario 2, India is vulnerable to oil supply shocks. By collectively negotiating to secure better terms, this Asian alliance can reduce its oil supply risks.
	→ Ministry of Petroleum and Natural Gas; Ministry of External Affairs	

³⁰ <https://indianexpress.com/article/opinion/columns/after-the-hormuz-disruption-asia-should-build-an-energy-security-alliance-10671141/>

Crude Oil Sourcing Resilience India should pursue alternative sources of crude oil from diverse producers, including those in Western Africa (Nigeria) and South America (Guyana and Venezuela). The public-sector Strategic Petroleum Reserve's (SPR) capacity can be increased from 5.33 million tonnes to safeguard against longer disruptions. ➔ Ministry of Petroleum and Natural Gas	When complying with Scenario 1A, the welfare loss from switching away from optimal energy sources due to trade frictions is substantial, accounting for 39% of the total welfare loss. To protect households from geopolitical externalities, India must diversify its crude sourcing.
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Source: Authors' elaboration

While India's growing economy provides some theoretical leverage to weaponise its own interdependence, it would compromise on the principled multilateral stance. India must exercise patience in its strategy. India should seek to navigate geoeconomic coercion and oil volatility through diplomatic means rather than resorting to economic retaliation. If the US believes that global trade imbalances violate multilateral trade discipline, its grievances can be addressed by reforming and reinstating the WTO's Appellate Body, rather than unilaterally paralysing the rules-based system.

Simultaneously, India needs to continue exploring strategic opportunities in the current global trade environment to diversify its export basket and destination countries, and to ensure there are no significant reversals on the path to accelerating India's merchandise exports. While this study shows the mechanisms of how plurilateral liberalisation (Scenario 3ii) can counter the US's optimal tariffs, bringing together all these countries with differing geopolitical goals is highly unlikely. Therefore, while India should strive towards multilateral trade agreements as a long-term objective, in the medium-term, India should pursue deep bilateral FTAs to accelerate trade integration.

The strength of a country's exports depends on both domestic and global factors. While domestic factors include the efficient allocation of productive resources, supportive infrastructure, and the policy regime, global factors include the international trade policy environment, global demand, exchange rates, and participation in global value chains. While India has been undertaking internal policy reforms, it faces a world in which the multilateral WTO trade discipline has been diluted with the emergence of bilateral and plurilateral trade agreements.

Though India cannot exit the extant interdependence scenario alone, it can reshape its terms of reference through a calibrated, multi-layered geoeconomic strategy comprising waiver diplomacy, support for trade-exposed manufacturing sectors, coordinated multilateral tariff responses, and tariff rationalisation through the signing of FTAs and joining trade blocs.