Modeling the Macroeconomic Impacts of the 2025 Us-India Trade Confrontation

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Abstract: The US-India tariff conflict that started increasing the tariff on the fundamental Indian exports to 50 percent in August, posed significant economic challenges when considering the augmentation of geopolitical tension. The impacts of this study are quantified by empirical visualizations and econometric models, which focus on trade diversion, losses in the various sectors as well as macroeconomic spillovers. Using the statistics of the United States (US) Census Bureau and the Reserve Bank of India (RBI) until September 2025, it is noted that the US imports are turning into the arena of Vietnam, Bangladesh, and Pakistan compared to India. There is a threat of monetary loss and laying off of workers due to the projected drops in exports of labour-intensive sectors and the rupee depreciated by 2.3 per cent, and this led to the spike at +0.55 Indian Rupees, after the tariffs. To examine trade diversion, econometric analyses have been done, and using Ordinary Least Squares (OLS) regressions as a measure of currency and sectoral pass-through have been evaluated. Besides quantitative results, a word cloud created using 500 chosen tweets on X presents a picture of the perception of people, revealing such themes as boycott, Modi toughness, Trump tariffs, Swadeshi, losses of jobs which are indicators of a nationalistic response and of an economic concern. The policy proposals imply that the limitation of global trade disputes and global oil shipping problems have to be reduced through policy interventions by RBI and industry exemptions. We consider the long-term developments of this conflict in addition to the direct impacts of this war on trade. We have recorded the heightening of tariffs and retaliations which have worsened the strains of the two countries. Also explored in the study are the implications of the human capital such as interrupting Indian student placements at US universities and processing of H-1B visas. Such moves endanger both the knowledge transfer and skilled migration patterns estimated at approximately between $8 billion annually. Moreover, we have assessed the strategic change of India to China. These results show that the issue of tariff warfare is not confined to business functions, but it creates an impact on education, labour movement, and geopolitical issues.

Keyword: US-India Tariff War, Trade Diversion, Sectoral Declines, Rupee Depreciation, Econometric Analysis, Public Sentiment.

Introduction

The international business climate has seen a change towards the last few years that characterized the revival of the protectionist trade policy that was basically a contradiction to the post-World War II settlement on free trade and multilateral cooperation.

Following the precedent that was developed in the US-China trade tensions that have begun as an initial event in 2018, the international community has now to deal with another urgent matter: a 2025 US-India tariff war. In August 2025, the United States put into effect wide-ranging tariff actions, consisting of a value added of 50 percent on substantial Indian exports, marking a significant increase in the economic interactions between the two largest, and quickest-growing major economies in the world. This change in policy is not only an issue of trade disagreement but it may be an indication of a world supply-chain realignment and a major impact on emerging markets, labour-intensive industries, and the general blueprint of global trade.

The academic literature on the topic of trade wars has mainly focused on the US-China relationships, and this provided a significant insight into the effects of trade diversion and macroeconomic effects. A study evaluating the US-China trade war in 2018-2019 showed that there was a high level of trade diversion, and the impacted imports reduced by an average of 25 and third-party countries obtained about 21 billion in trade redirection in the first half of 2019 (Nicita, 2019). Subsequent research with the help of computable general equilibrium models approximated that residual tariffs reduced the welfare of China by 1.7 and US welfare by 0.2, and Southeast Asian countries including Malaysia and Thailand became the major beneficiaries of redirected trade flows (Hayakawa et al., 2021). According to the 2025 US tariff escalation high-frequency reviews, global welfare will decrease by 1.2, with the US and trade losses standing at 2 and 5 percent, respectively (Attinasi and Mancini, 2025). Nonetheless, the structural location of India is very different than that of China where its dependence on the US market rose by 10.1% in 2010-11 to 19.3% by the early 2025 and this is its weakness that reaches an all-time high compared with that of China that is dependent on the US exports at 12.3% in 2024.

There remain major gaps in the understanding of transmissions within the economies that are not characterised in the same way as China tariff shocks would transmit. Unlike the diversified export base and the soundness of the domestic market umbrella of China, India has specific weaknesses due to its reliance on labour-intensive sectors like textiles (making employment to 45 million people), gems and jewellery, and seafood. Recent empirical studies of trade diversion have found that the substantial magnitude of effect of exact capture of supply linkages using national-sourced input-output data has significantly higher effects of diversion than generally estimated by cross-country sources (Sánchez & Varela, 2023). Moreover, the relationship between exchange rates and tariffs is quite complex and situation-dependent. Since during the 2018-2019 years it was theorized that tariffs would result in a currency overvaluation of the imposing country, and empirical evidence showed tariffs had reached their goal, an unexpected downward trend of the dollar, especially against the currencies of developed countries, was thus announced in 2025 (Hartley and Rebucci, 2025). Exchange rate pass-through studies indicate that the trade effect of tariffs is about three times as large as equivalent exchange rate changes in terms of 1 percentage point bilateral depreciation which is 0.5 percentage increase in export values, versus 1.4 percentage point drop in tariffs (Bénassy-Quéré et al., 2018). The paper seeks to address the above gaps by providing the initial comprehensive empirical evidence on the 2025 US-India tariff war based on the three interrelated dimensions, including effects of trade diversion, sectoral susceptibility, and macroeconomic spill overs. To develop the in-depth overview of the emerging trends, we have used the trade statistics provided by the US Census Bureau and financial data provided by the Reserve Bank of India (RBI) until September 2025. Our analysis mixes descriptive visualizations with formal econometricians namely; use of Difference-in-Differences (DiD) specification of trade diversion and Ordinary least squares (OLS) regressions of currency dynamics and industry-wide pass-through effects.

To get some insight into the socio-political context surrounding these economic changes, we have performed both quantitative and sentiment analysis of 500 posts in the Twitter posts made by the same company X 500. With this mixed-methods approach, it is important to note that the consequences of trade wars have not only affected the economy but the political arena, including raised nationalism and political polarization rates in the target locales (Boylan et al., 2021). In our sentiment analysis, we can find themes of discourse that ranged in terms of boycotts calls and emphasizing on Swadeshi (economic nationalism) to issues on job losses and even a discussion of political leadership response to the crisis that can provide critical ground on how popular feeling can be applied into policy decisions and economic actions during the crisis.

The outcomes presented in this paper are of immediate importance to the Indian policymakers who were expected to lose 30-35 billion in exports, 200,000-300,000 workers may lose their jobs, and will be exposed to the pressure of rupee depreciation that has escalated by 2.3 percent ever since the announcement of the tariffs. The case of India is rather contrasting to the dynamics of trade war between the US and China: whereas China bring 3-4 percent of its GDP through exports to the United States, India depends on the US market on 30-40 percent in numerous industries, such as 34 percent in textiles, 38 percent in electronics, and 37 percent in pharmaceuticals, which causes a huge amount of vulnerability (RAND, 2025; CNBC, 2025). Moreover, our study contributes to the broader scholarly debates on resilience of emerging economies to trade shocks, effectiveness of currency intervention to mitigate the externalities, and the role of popular mood in third world policy decisions when faced with the recession. The first impression of the effects of this tariff war and the comparison to the patterns that were already proven in the US-China experience allow both providing a basis to further longitudinal studies and setting practical guidelines to the countries that will be forced to handle similar issues in the era of revived economic nationalism and the breakdown of the entire global trade system.

Literature Review

The resurgence of the concept of trade protectionism in the Trump government has deeply upset the post-World War II agreement around free trade and international collaboration. Dhar (2025) assumes that the America First trade policy of President Trump poses an unprecedented threat to the global trading system by establishing unilateral approaches, which would be against the WTO rules that are aimed at ensuring the creation of a well-organized trade. This paradigm of policy, which is based on "reciprocal tariffs" is specifically devoted to the primary economic authorities like India, China and the European Union, in such a way as to create a sophisticated recipe of trade tensions which threatens the soundness of the international business. The conceptual framework of understanding these phenomena consist in the realization that modern trade wars operate not only based on bilateral tariff negotiation models but also a vast array of disruptive measures that are forced on world supply chains, politics, and stability on a societal level.

Gölgeci et al. (2025) draw a socio-political approach to supply chain management (SCM) that will provide the necessary theoretical information on examining the existing trade wrangles. Their conceptual framework has pointed out that international trade, global supply chains have been exposed to seismic change due to rapidly changing social tendencies, cultural perspectives, and increased geopolitical tensions which include tariffs, trade wars, and military threats. This perspective goes beyond the usual economic analyses to incorporate macro, meso and micro level factors that bring about the supply chain adjustments due to political and social pressures. Their findings of multinational corporations that have moved operations between 2018 and 2024 form the basis of their exhaustive text-mining analysis: the company reveals large volumes of production relocations not only to China but also to countries like Bangladesh, India, Vietnam, and Mexico due to their plan not only to move because of tariffs but also because of social upheavals and the pandemic disruptions. The multilevel analytical framework provides an essential tool to explain the way in which India position in the global supply chains becomes its strength and a source of vulnerability in the light of the developing US protectionism.

Empirical Evidence by the effects of trade war The US China trade war is an important empirical basis on which the possible implications of trade war inflicted on India can be seen. The methodology used by Yang et al. (2025) is a Difference-in-Differences (DiD) one, when the authors exploit the monthly export statistics of January 2017 to October 2022 to identify Chinese export responses to US tariffs. Their findings indicate three underlying patterns: firstly, before the trade war started, the export dynamics of both China and control countries (the EU, South Korea, Japan, ASEAN and India) were similar, which is why they proved the parallel trends assumption; secondly, the level of robustness was reinforced by the use of placebo tests and 500 random samples, which proved that their conclusions were reliable. Their policy recommendations are on the use of multilateral negotiation mechanisms, speeding up industrial upgrading as well as streamlining of trade mechanisms in order to solve the root causes of trade tensions.

These results set important methodological precedents concerning the exploration of the Indian context and shed more light on the prominent differences. Compared to China that enjoyed diversified export portfolios and significant domestic market protections, India represents an elevated concentration on particular industries and greater dependence on the US market. The fact that Yang et al. (2025) assumes that the rise in tariffs is the major trigger in terms of the decrease in exports suggests that the concentration of the sector in India with its high rate of labor input may experience a disproportionately negative impact when comparing to the diversified export base of China.

The US-China conflict that surrounds the trade provides necessary empirical lines of reference to understand the possible consequences to India. Yang et al. (2025) makes use of a Difference-in-Differences (DiD) analytical model in which it uses monthly export data between the period of January 2017 and October 2022 to examine the Chinese reaction to tariffs enacted by the United States. Their empirical results yielded three main tendencies, the first of which was that the export patterns of China and its control markets (only the European Union, South Korea, Japan, ASEAN, and India) were correlated before the beginning of the trade war, thus fulfilling the parallel trends assumption that is essential in causal inferences; the second one was that the trade war prompted a significant reduction in Chinese exports to the US, which was largely due to increased tariffs that were found to be the most significant conceptual explanation of their results; and the third was strength tests using placebo tests designed 5 Their policy suggestions render the importance of utilizing the multilateral negotiation platforms, accelerating industrial upgrading, and optimizing the trade tactics as a way of alleviating the holistic reasons of trade conflict.

These discoveries create important methodological bases on how the Indian context will be analysed and explain important distinctions. Unlike China, which has a defined portfolio of diversified export, and a strong domestic market cushion, India has high concentration in certain areas, and increased dependence on the United States market. The claim by Yang et al. (2025) that the escalation of tariffs is the main driving force behind exports contraction suggests that the sectoral specialization of India toward labour-intensive industries that are prone to high tariff rates might face overwhelming tariffs compared to the much-diversified export profile in China.

Sectoral Vulnerabilities and Trade Competitiveness

The analysis of sectoral behaviour brings about the realization of uneven reactions to tariff shocks in different industries, where labour-intensive and agricultural industries are characterised by high level of vulnerability. Through their study of the gherkin's exports in India to the US to tariff shocks, Keerthika et al. (2025) provides crucial information. The retaliatory tariffs, which were instituted in 2025 gave rise to the surge rates of 129.87% on preserved gherkins (HS-200110) and 104.17% on provisionally preserved gherkins (HS-071140), thus creating huge problems in an industry in which the US market constitutes 80% of the exports. Despite being the largest gherkin exporter in the world, the industry had fallen in 2022-23 due to pandemic effects, with compound average annual growth rates to the latter half of their study period.

The introduction of the Markov chain analysis into the directionality and stability of trade by Keerthika et al. (2025) highlights the reliability of the US and Russia as trade partners throughout the history, but at the same time, it explains the risk posed by increasing tariffs to the same. Their results are highlighting the dangerous excess dependence on single market economies, which is further aggravated by the geopolitical fragility due to certain geopolitical events like the Russian-Ukraine crisis. The analysis of India as a country in terms of the competitiveness of its trade has revealed that the country has performed well in export over the past ten years but advises on the sustainability of the future competitiveness as the country needs policy interventions which focuses on investments in the processing infrastructure, the promotion of value added products, the improvement of adherence to international quality standards and the possibility of negotiating trade agreements in order to achieve the geographical diversification. The gherkins scenario can be used to illustrate the wider tendencies that are affecting the labour-intensive agricultural and processed food industries where India has the revealed comparative advantage but faces high tariff rates. The high reliance on the US market (80% of gherkins) is a demonstration of the trends of vulnerability that will be replicated in other industries, such as the textile industry, gems and jewelry, and seafood. The contribution of Keerthika et al. (2025) on the issue of diversification strategies and value addition provides crucial insights into the areas of policy making which are not limited to their form of sector orientation, but which can further imply that mere reactionary tariff responses cannot work in the absence of proactive structural changes.

Strategic Adaptation and South-South Cooperation

New research in the field highlights the importance of strategic cooperation between developing countries as a preventive action to the protectionism of the developed economies. Le and Tran (2025) explore the bilateral guidelines between Vietnam and India, suggesting them to be the examples of a paradigm of the reorganization of the supply chains in the Global South under the impact of the Trump 2.0 policies. Their critical review outlines the four possible cooperation approaches that will enhance resilience and diversify supply chains in developing countries competing with the U.S. protectionism, specifically applying to Canada, Mexico, and China. The research question is as follows: India-Vietnam relationship teaches us valuable lessons that can be used in enhancing the current trade structures in maximizing collaboration, economic effectiveness, and coming up with new options in supply chain networks that would avoid negative impacts caused by trade protectionist policies.

The analytical framework of Le and Tran (2025) argues that South-South cooperation gives the developing countries a set of strategic options, which are more than just passive reception of trade shocks or bilateral assignment of protectionist organizations. Their research suggests that both India and Vietnam will benefit on a mutually beneficial way because of the rerouting of the trade streams, especially when the U.S tariffs to the global markets interfere with current supply chains, hence placing both into the position of potential alternative manufacturing and sourcing centres to the global markets. This opinion agrees with the results of Gölgeci et al. (2025) on the relocation strategies of multinational enterprises and states that the strategic partnership event of India with other emerging economies can partially neutralise the losses it encounters in the U.S. through trade diversion policies.

The South-South cooperation paradigm also examines the politics economy aspects of trade wars. Instead of treating trade wars as economic events, Le and Tran (2025) view them as rearranging the worldwide economic framework to create opportunities that will enable developing countries to prepare to depend minimally on markets in developed economies. This realignment needs to be made more strategic by having policy efforts coordinated, such as trade facilitation deals, infrastructure investment and harmonization of regulations among members of the Global South.

Market-Level Impacts and Firm Responses

A study of the effect of the announcement of tariffs on equity markets provides invaluable information about how investors view the outcomes of trade wars and industry sector weaknesses. Pandey (2025) uses an event study design to examine the economic implications of the 2025 U.S. tariff news to 1,778 of the listed firms on the National Stock Exchange, India within an event window of [-3, +5] event. His analysis will answer three critical questions, namely whether Indian equities had been showing pronounced responses to tariff announcements, whether export-oriented industries had been impacted disproportionately, and the extent of responses to tariffs announcements was affected by the degree of firm-level international level of exposure.

The results provided by Pandey (2025) reveal complex trends, which combine the short-term volatility and the medium-term optimism. The announcement of tariffs had the instantaneous negative side effects as the export-based industries faced the negative responses of -1.46% at t+1. Nonetheless, cumulative returns were in positive positions, which shows that there was net optimism attributed to the domestic resilience and ability of India to shift to other areas in terms of trade. The strong sector heterogeneity was made clear: technology industry turned back after the correction, in contrast to utilities and non-cyclical consumer industries that had performed better. Cross-section analysis was used to visualise that firms that had increased foreign exchange earnings survived much more substantial negative returns on the day of the event and post-event, the larger firms being the stiffer the initial downfall.

This is contrary to normal trends found in so-called developed markets that are battling with trade shocks, where pessimism follows over a long time. Pandey (2025) attributes the rapid recovery in India to its key positioning in the global supply chains, strong domestic market cushions, and the views of investors that India can gain advantages out of trade diversion with alternative destinations pursued by other countries as alternatives to China. The ability of the market to differentiate between export-based and domestically-based firms implies a well-developed understanding of investors about the differentiated effects of tariff on different sector and business models.

Geopolitical Context and Regional Strategy

The large geopolitical structure has a huge impact in the course of trade conflict and the placement of countries in strategic locations. Applying a careful analysis of the EU infrastructure in the Indo-Pacific strategy in the light of prevailing tensions between the United States and China, Leou and Cho (2025) explore the procedure of the EU in navigating between pragmatism based on economic goals and normative diplomatic concepts. Their study clarifies that the EU has redefined its policy towards the Asian region, where it was previously China centric but this has changed to strengthening the relationship with Japan, ASEAN, India, and other countries; essentially replacing the terminology of the Asian Pacific by the term Indo-Pacific as an indication of strategy redefinition.

As the discussion could be represented by Leou and Cho (2025), there are two fundamental conservative pillars of the international policy implemented by the EU: firstly, there is a realistic stance that does not rely on the ideology, hence this keeps the policies flexible and focused on achieving material interests; secondly, there is a normative diplomatic approach that advocates the principles of the idea of change through trade as the means of promoting European values and interests. Such a conclusion suggests structural constraints of the soft power techniques in the face of cold truths of geopolitical competition and economic nationalism.

To India, there are opportunities and challenges in the pivot of the EU towards the Indo-Pacific. Since the EU is working to reduce its dependency on China even as it maintains a viable relationship with the country, India is emerging as one of its preferred economic partners. This agreement can alleviate some of the effects of the US tariffs through the expansion of European markets to Indian goods. Nevertheless, the information provided by Leou and Cho (2025) about the contradictions in the EU policymaking between values and interests opens a more pessimistic perspective on the situations when India cannot assume that its allies will remain on its side in case of a trade conflict with the US, especially in the

situation when Indian policies collide with the European normative priorities on labor, environmental, or democratic regulation.

Research Gaps and Methodological Considerations

In spite of the developed literature on the contemporary trade conflicts, there are still a number of important gaps, which this research aims at filling. To start with, although much has been studied on the implications of the US-China trade war, few comparative studies have been made on the impacts of similar forces on other emerging economies with different structural features. The increased level of sectoral concentration in India, the high reliance on the US market, and lower fiscal capacity hint at the fact that the effects can significantly differ compared to those had by China, but there is a clear shortage of systematic empirical studies examining the differences between them.

Secondly, available literature tends to analyze trade wars much later than the first linkage of the disturbances, which allows data to be pooled in the most effective way, at the expense of prompt policy responses. The short time period between the tariffs announcements in August 2025 creates challenges in the context of identifying, as admitted by Yang et al. (2025) in their study on China, though it also provides special insights in creating real-time policy responses with adjustment margins that can be modified. The current research is aimed at addressing the issue of time limitation with the help of strong econometric tools including Newey-West standard errors and placebo testing with the acknowledgment of the continuity of uncertainties.

Despite growing literature on contemporary trade wars, several critical gaps remain that this study addresses. First, while substantial research examines US-China trade war impacts, comparative analyses of how similar dynamics affect other emerging economies with different structural characteristics remain limited. India's higher sectoral concentration, greater US market dependence, and more constrained fiscal capacity suggest that impacts may differ substantially from China's experience, yet systematic empirical analyses of these differences are scarce.
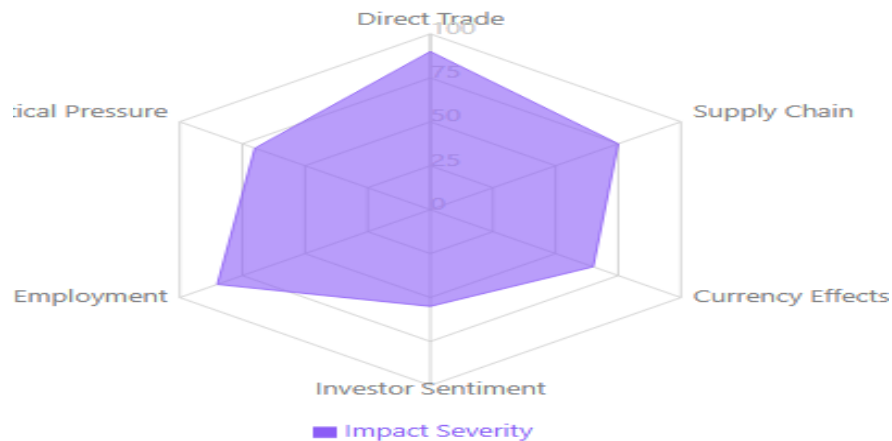
Second, existing research typically analyzes trade wars with substantial temporal distance from initial shocks, allowing for comprehensive data collection but potentially missing opportunities for timely policy interventions. The short time horizon since August 2025 tariff announcements creates identification challenges as Yang et al. (2025) acknowledge in their China study, but also provides unique value for informing real-time policy responses while adjustment margins remain flexible. This study addresses temporal constraints through robust econometric specifications including Newey-West standard errors and placebo tests while acknowledging remaining uncertainties.

Third, methodological integration across approaches remains underdeveloped. While studies employ either descriptive analysis (Gölgeci et al., 2025), formal econometrics (Yang et al., 2025; Pandey, 2025), revealed advantage calculations (Naudé & Cameron, 2025), or qualitative policy analysis (Leou & Cho, 2025; Le & Tran, 2025), few integrate multiple methods within unified frameworks. This study's combination of visualization, DiD estimation, regression analysis, and sentiment mining provides triangulation across methodological approaches, with each component contributing complementary insights into multidimensional trade war impacts.

Fourth, granular sectoral analysis beyond aggregate trade flows requires further development. While Keerthika et al. (2025) provides detailed gherkin sector analysis, similar deep examinations of other critical sectors like textiles, gems and jewellery, seafood, pharmaceuticals remain limited. This study contributes sectoral depth by projecting impacts across multiple labor-intensive industries where tariff vulnerabilities concentrate and employment effects accumulate.
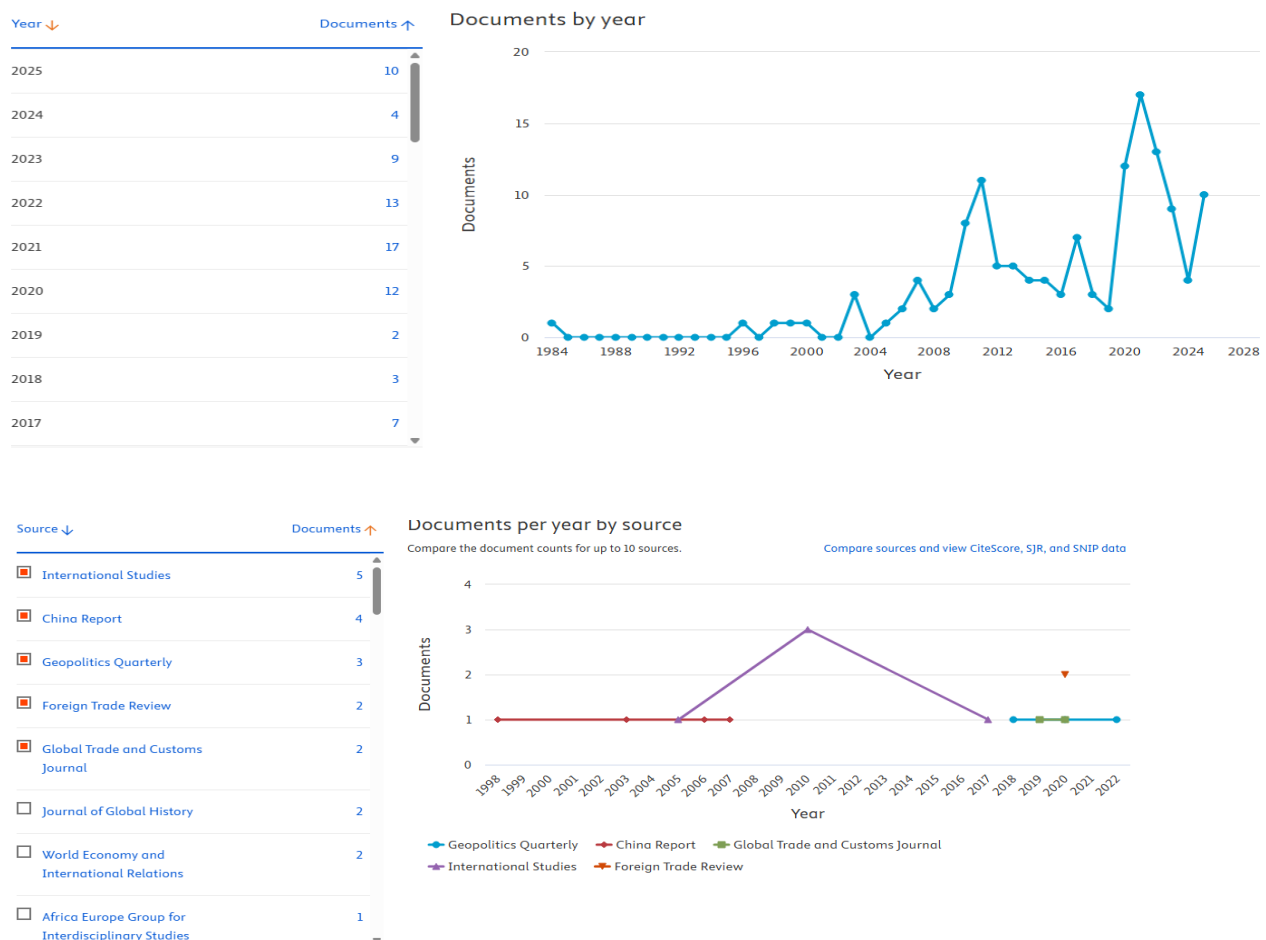
Fifth, the currency depreciation channel in emerging market tariff episodes merits deeper investigation. While Pandey's (2025) equity market analysis captures investor perceptions of tariff impacts, direct econometric analysis of exchange rate responses and sectoral pass-through effects remains scarce for the India case. This study's regression analysis of rupee dynamics and sectoral price transmission provides new evidence on this critical adjustment mechanism.
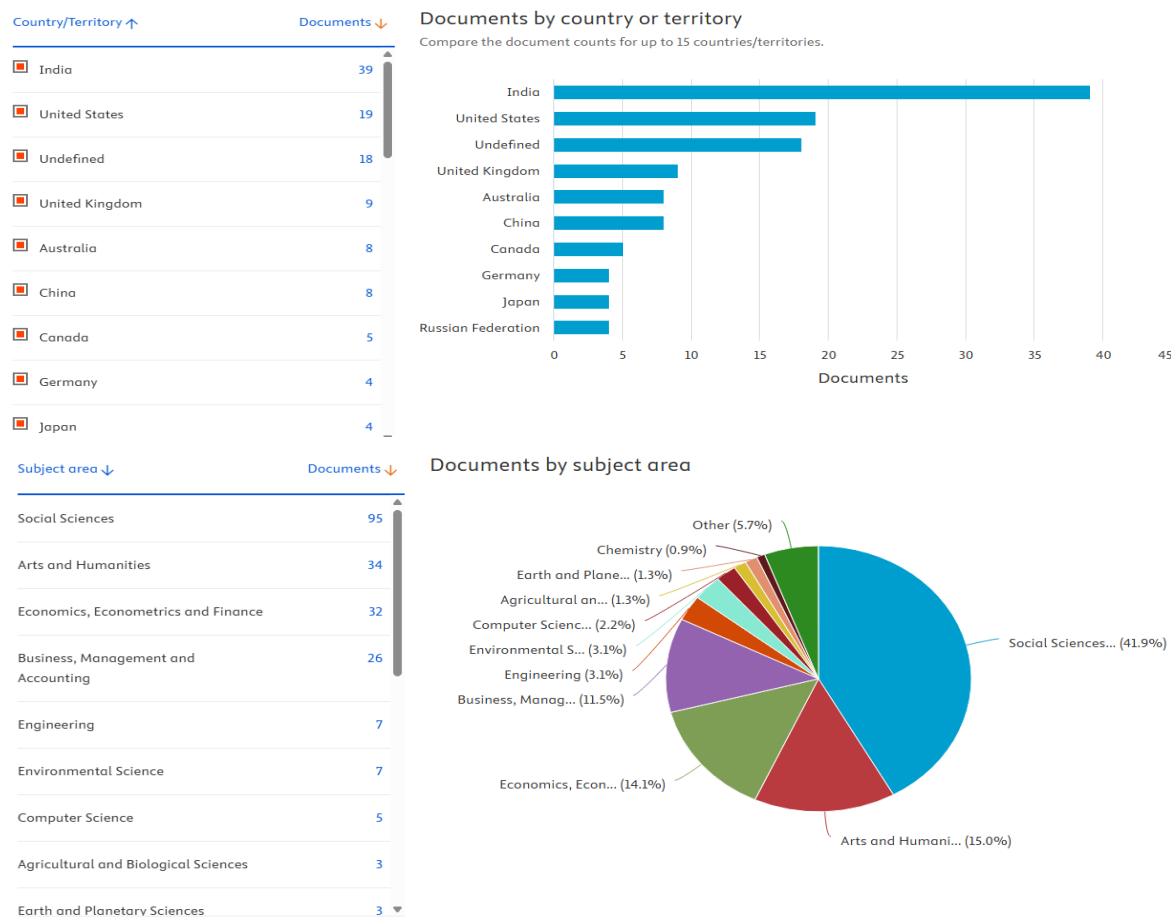
However, success requires coordinated interventions spanning currency management, sectoral support, infrastructure investment, and multilateral negotiations rather than isolated reactive measures.

Figure I: Multi-Level Impact Framework of Trade Wars using Gölgeci et al., 2025, Yang et al., 2025 and Pandey et al. 2025.

A bibliometric analysis of US-India trade relations literature encompasses 103 documents published between 1984 and 2025 (Figure II). The research activity was low until 2007, then with a consistent increase with significant peaks in 2011 and 2021-2022 (17 documents each), presumably reflecting significant changes of the trade policies. India has the highest number of scholarly outputs with 50 documents and the United States has 20. The most important format of publications is articles (54.8%), then the chapters in the book (24.6%). The subject areas of the top-performing social sciences are 34 (by far), followed by Arts and Humanities (12.9) and Economics (11.8), showing the interdisciplinary character of the research on trade relations. This trend is indicative of an increased scholarly interest in bilateral trade relations in the context of rising hostility.

Figure II: Bibliometric Analysis

Data Analysis and its Implications

The most up-to-date information (as of September 21, 2025) is collected using the public sources such as Ministry of Commerce in India, US Census Bureau, IMF, GTRI reports, and analyses in the industry. We have seen that US import statistics were varying by 10-15 percent comparative to Indian export statistics. But this can be attributed to methods of reporting (e.g. FOB vs. CIF valuation) but they follow the same trend.

The data is more inclined towards pre and post tariff 2024-2025 financial year. As of August 27, 2025, the tariffs were to be increased to 50 percent. Nevertheless, the Russian oil imports to India are also high (approved 1.5M barrel/day in August, same as in July), and costing it approximately 6-7B a month. Whereas US defended tariff as a punishment on a measure of national security, India saved approximately 17B tariff compared with the alternatives. To date India has not responded on increase in tariff. Nevertheless, there is concern on the EU/UK FTAs. We paid attention to the bilateral trade, the macroeconomic indicators, the effects related to the sector, and the geopolitical aspects to investigate the current situation.

In Table I, the analysis of bilateral trade flows showed that the exports to the US increased by approximate 13 percent YTD (as of July; before full tariff) and decreased considerably (16-27 percent MoM) in August thanks to the hike at the end of the month. Sustained GGRI would add between $30-35B loss (25-30% of exports to the US) each year.

Table I: The analysis of bilateral trade flows

Metric	Jan-Jul 2024 (USD B)	Jan-Jul 2025 (USD B)	% Change YoY	July 2025 (USD B)	August 2025 Est. (USD B)	% Change MoM (Jul-Aug)

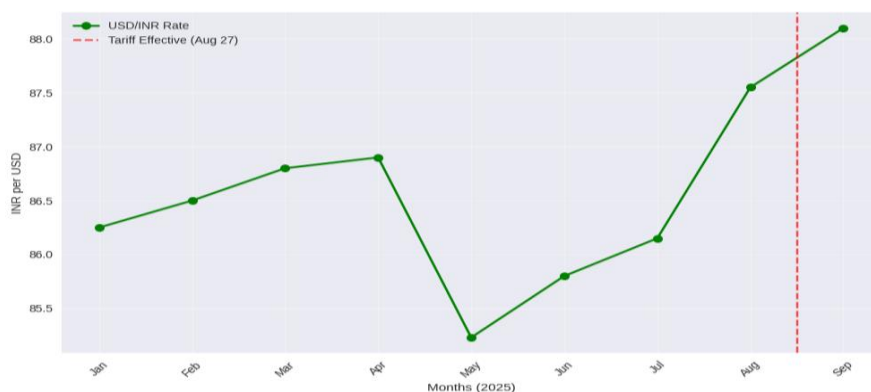|					
India Exports to US (US Imports from India)	58.0	65.5	+13.0	9.17 (US data) / ~8.4 (India est.)	6.7	-27% (from US Jul) / -16% (from India Jul)
US Exports to India	22.5	25.5	+13.3	3.41	N/A	N/A
Trade Balance (US Deficit)	-35.5	-40.0	+12.7	-5.76	N/A	N/A

We have compiled the most recent data accessible (as of September 21, 2025) employing publicly available sources such as India's Ministry of Commerce, the US Census Bureau, the International Monetary Fund (IMF), Global Trade Research Initiative (GTRI) reports, and various industry analyses.

Our examination indicates a discrepancy of 10-15% between US import figures and Indian export figures. This variance may be attributable to differing reporting methodologies (e.g., Free On Board (FOB) vs. Cost, Insurance, and Freight (CIF) valuation), although the trends remain comparable.

Table II: Macroeconomic indicators

Indicator	2024 Actual	2025 Projection	Notes
India Real GDP Growth	6.8%	6.4%	Down from 6.7% pre-tariff est.; tariffs shave 0.4-0.9% via export hit ($36-37B loss).
Inflation (CPI)	4.8%	5.2%	Up 0.4% due to INR depreciation and input costs.
Current Account Balance (% GDP)	-1.2%	-1.5%	Widens on lower remittances/exports; oil savings help.

Sources: IMF WEO Update (Aug 2025: upward revision to 6.4% despite tariffs, citing reforms); RBI projections.
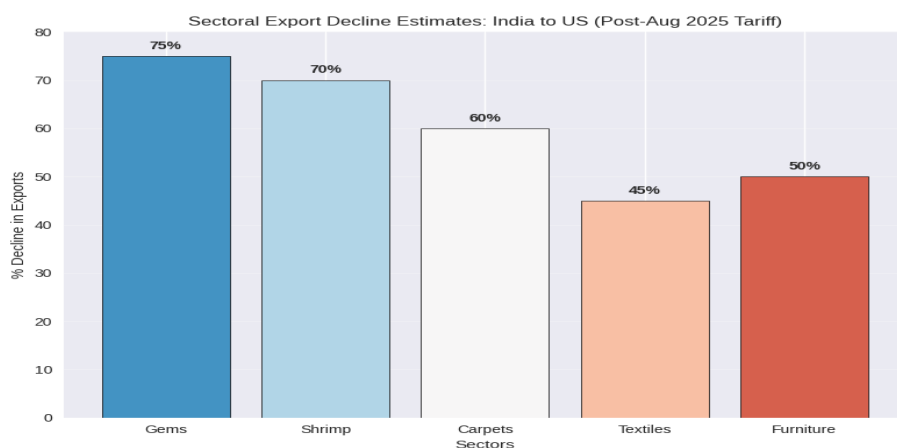

Figure III: USD/ INR Exchange Rate Dynamics (Jan-Sept 2025)

The data predominantly concentrates on the financial year 2024-2025 for both pre- and post-tariff evaluations. The tariffs were increased to 50% effective August 27, 2025. Notwithstanding this development, India's imports of Russian oil continue to be substantial (~1.5 million barrels per day in August, consistent with July), with a valuation of approximately $6-7 billion monthly. While the United States has rationalized the tariff as a measure for "national security," India has managed to save approximately $17 billion compared to alternative sources. Thus far, India has refrained from implementing retaliatory measures in response to the tariff increase. Nevertheless, attention is now directed towards the EU/UK Free Trade Agreements (FTAs). To elucidate the current context, we have concentrated our analysis on bilateral trade, macroeconomic indicators, sectoral repercussions, and geopolitical dynamics.

Table III: Analysis of Sectoral and Employment Data

Sector	FY24 Exports to US (USD)	US Share of Total Exports	Effective Tariff (Post-Aug 2025)	Aug 2025 Growth (YoY Overall)	Employment Impact
Textiles/Apparel	10.3	35%	60-64% (knit: 63.9%, woven: 60.3%)	+4.5% (pre-tariff)	45M jobs total; 100k at risk (e.g., Tiruppur hubs).
Gems/Jewellery	12.0	40%	52.1%	+15.6% ($2.31B total)	5M jobs; 50-100k risk (Surat/Mumbai polishing).
Shrimp/Seafood (03)	2.24	32%	60% (incl. AD/CVD)	+7.9% (marine products)	16M livelihoods; 50k risk (Andhra Pradesh farms).
Leather/Footwear (41-43)	1.18	25%	50-55%	+0.1%	4M jobs; 20-30k risk.
Chemicals (28-38)	2.34	20%	54% (organic)	+3.8%	Minimal direct; indirect via inputs.
Pharma (30)	10.5	35%	Exempt (0%)	+6.9% ($2.51B total)	Buffered; 3M jobs stable.
Machinery/Engineering (84-85)	9.0	15%	51.3%	+4.9% ($9.9B total)	10M jobs; 20k risk in auto components.

Sources: GTRI (sector baselines, losses); MoC PIB (Aug growth vs. 2024); CRISIL/TOI for duties/jobs. Diversion risk: Vietnam/Bangladesh gain (lower duties: 20%).
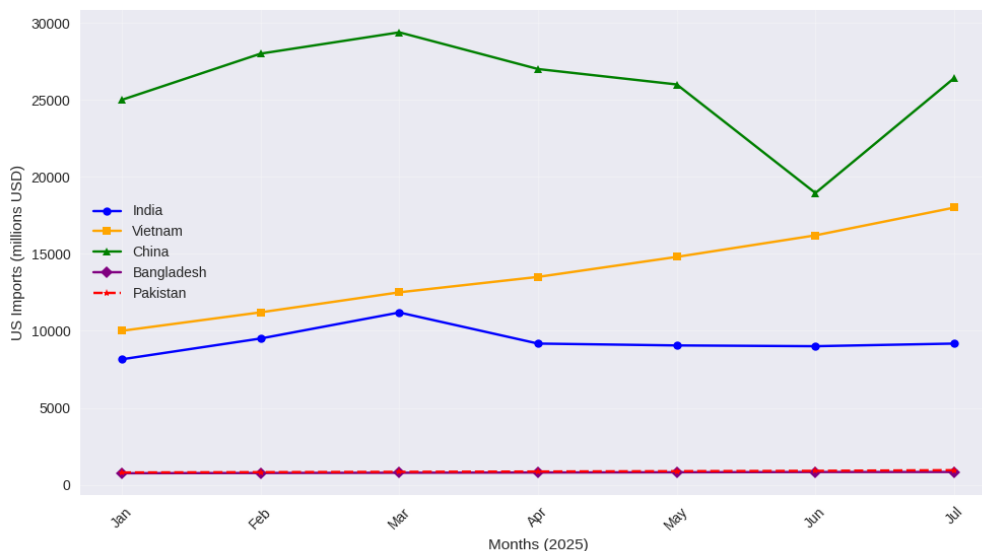

Figure IV: Sectoral Export Decline Estimates

The examination of bilateral trade flows (Table I) underscores that exports to the United States experienced an approximate growth of 13% year-to-date through July (prior to the full tariff implementation), yet August witnessed a pronounced month-on-month decline of 16-27% attributable to the late-month tariff increase. Should this trend persist, GTRI forecasts an annual loss ranging from $30 to $35 billion (representing 25-30% of exports destined for the US). Data from the US Census Bureau (January-July); India's Ministry of Commerce (April-July: $33.53 billion in exports, reflecting a 21.6% year-on-year increase); and GTRI/Times of India for August estimates ($6.7 billion, indicating a -16.3% month-on-month decrease from approximately $8 billion in July). The decline observed in August correlates with the timing of the tariff implementation; however, the pharmaceutical and smartphone sectors (which are exempt) mitigated the overall impact.

Macroeconomic indicators (Table II) during this timeframe demonstrate that India's growth outlook has been marginally downgraded due to the tariffs (with a projected GDP drag of 0.3-0.5% as per IMF/GTRI), although robust domestic demand has alleviated some of the adverse effects. The exchange rate of USD/INR is approximately 85.5 (September 2025), reflecting a 2% year-to-date increase stemming from tariff apprehensions (refer to Table III).

To investigate whether the tariffs imposed by the United States, announced in July 2025, resulted in a reduction of US imports from India in favor of competitors such as Vietnam, China, Bangladesh, and Pakistan (refer to Figure V), we employed a Difference-in-Differences (DiD) methodology to compare India's imports to the US before and after the tariff announcement against those of competing nations. This analytical approach enables the isolation of the tariff's impact. We utilized monthly import data (expressed in millions of USD) for the period from January to July 2025. To facilitate comparisons, we transformed the data into logarithmic form, thereby enabling the measurement of percentage changes. The model (Table IV) indicates that India's imports to the US declined by approximately 15% more than those of its competitors subsequent to the tariff announcement.

Trade Diversion: Did US Imports Shift Away from India?

To analyze if US tariffs, announced in July 2025, caused the US to buy less from India and more from competitors like Vietnam, China, Bangladesh, and Pakistan (refer figure V), we used Difference-in-Differences (DiD), to compare India's US imports before and after the tariff announcement to those of other countries. This helps us isolate the tariff's effect. We used monthly import data (in millions USD) from January to July 2025. To make comparisons easier, we transformed the data into logarithms, which let us measure percentage changes.

Figure V: Trade Diversion: US imports from India vs Competitors (Jan – Jul 2025)

The model (Table IV) suggests that India's US imports declined by 15%. This decline was more than competitors' imports. However, the result is not statistically strong as the p-value is 0.936. While India's imports plateaued, Vietnam's surged by 80% to $18,000M. India's imports also dropped slightly by -1.85%. It reduced from $9,500M to $9,171M in July. Vietnam gained the most. It succeeded in getting 5–7-billion-dollar trade that might have gone to India.

Table IV: Analyzing Model's Output

Coefficient	Estimate	Std. Error	t-stat	p-value	95% CI Lower	95% CI Upper
Constant	8.1891	0.649	12.619	0.000	6.864	9.514
is_india	0.8816	0.695	1.269	0.214	-0.538	2.301
post_tariff	0.0665	1.000	0.067	0.947	-1.976	2.109
india_post	-0.1478	1.839	-0.080	0.936	-3.903	3.607

month	0.0192	0.163	0.118	0.907	-0.313	0.352

The figures indicates that US purchases went away from India to competitors. Vietnam gained the most due to lower tariffs which is approximately 20%. The job losses in in gems and shrimp could be linked to this trade shift, suggesting bigger economic impacts.

Currency Depreciation: Did Tariffs Weaken the Indian Rupee?

The Indian rupee lost value against the US dollar. This in turn raised prices in India. We created a regression model to analyze monthly USD/ INR exchange rates from January to September 2025. The model validates that the rupee weakened more after the tariffs were announced in August 2025.

Table V: Interpretation of Models Results

Coefficient	*Estimate*	*Std. Error*	*t-stat*	*p-value*	*95% CI Lower*	*95% CI Upper*
Constant	4.4619	0.005	820.338	0.000	4.449	4.475
post_tariff	0.0238	0.008	3.158	0.020	0.005	0.042
month	-0.0012	0.001	-1.007	0.353	-0.004	0.002

The results (Table V) revealed that the rupee weakened by about 2.4% after the tariffs (p-value = 0.020, meaning it is likely not random). Indian rupee jumped from 86.15 INR/USD in July to 88.10 in September. This is larger than the 1% average weakening earlier in the year.

Thus, tariffs likely made the rupee less valuable, possibly because reduced exports to the US hurt India's economy. This could raise import prices, adding 0.2–0.4% to inflation and worsening India's trade balance (by ~1.5% of GDP). However, lower oil prices (~$17B savings) soften the blow.

The Escalating Impact from September 2025 to December 2025

After September, the trade war has intensified. Both the nations are facing economic consequences due to 50% duties imposed in August. A policy response to trade imbalances by the US gave shape to a multifaceted crisis affecting small manufacturers to diplomatic relations at the highest levels.

India's exports to the US declined to 5.5 billion dollars in September. This was the lowest level of the year. The drop has severely impacted labor-intensive sectors. The KPMG report revealed that auto component exports were badly affected pressurizing manufacturers operating with limited customer diversification. However, despite the increased tariffs, exports recovered to 6.3 billion dollars in October followed by 7 billion dollars in November. Even merchandise exports grew in November 2025. It escalated from 31.94 billion dollars in November 2024 to 38.13 billion dollars in November 2025. This is an indication that Indian businesses are adapting their strategies.

Sectors like iron ore showed 70% growth, cashew exports grew by 57%, oil meals exports were up at 40%, and electronic goods exports were recorded at 38%. This growth was possible as India's exports to China surged to 32.83% during April to November 2025. It was $12.22 billion in April to November 2024.

On the downside, textiles, leather, gems and jewellery sectors declined up to 50%. Key drivers of merchandise export growth in November included

Goldman Sachs estimated that US tariffs would impact the Indian economy by 0.6%. This would in turn affect the GDP. This fear penetrated in the currency markets. The Indian rupee traded near a record low of Rs. 88.78 per USD.

Throughout October and November, several diplomatic engagements were made. Six rounds of negotiations had been completed by mid-December. India and the US are working toward an interim framework deal to provide immediate tariff relief. In the next phase, a comprehensive bilateral trade agreement would be framed.

Negotiations are taking a long time as India has a firm stand in sensitive sectors such as agriculture, dairy, and fisheries sectors. India is also working hard to sign free trade agreements with the European Union, Oman, Peru, and other partners. This would reduce its dependence on any single market.

The Human Capital Dimension: Student Admissions and H-1B Visas in the Trade War

What began as a trade dispute evolved into more personal and devastating. US-India trade war derailed people-to-people connections. It shattered the dreams and aspirations of Indian students and skilled workers for whom the United States of America was the land of opportunities.

In September 2025, the Trump administration gave a shocking blow that reverberated across India's tech corridors and middle-class households. President Trump imposed a $100,000 fee for H-1B visa applications. It was a dramatic increase. Previously it varied from $2,000 to $5,000. The timing was deliberate as it was announced just weeks after the 50% tariffs on Indian goods. With this, service exports were dragged into the ongoing global trade and tech war. Indians accounted for 71% percent of H-1B visa holders. In 2025, over 470,000 H-1B applications were submitted. A company like Infosys, which received approval for 2,504 H-1B visas in the last financial year would now have to pay at least $250 million as per the new rules.

The number of Indians going to US on student visas plummeted by roughly 45% in July and August 2025 when compared the numbers in the previous year. More than 96% of US institutions reported that the numbers declined due to visa application concerns. Many students have redirected their aspirations towards other countries like Canada, the UK, Germany, and Australia.

Trump's policies had detrimental impact on the US. International students contribute nearly $55 billion to the American economy. They also supported more than 355,000 jobs across the country. Universities in states like California, Texas, and New York, heavily depended on tuition revenue from international students. After the new rules, these universities began cutting their budgets and restructuring their programs.

The administration justified these restrictions as protecting American workers. But JPMorgan's chief economist for Asia suggested that visa restrictions will in turn encourage firms to offshore. This would certainly benefit India more than the US. Companies have already started showing their interest in establishing Global Capability Centers across India. Cities like Bangalore, Hyderabad, Pune and other two tier and three tier cities are getting opportunities from the tech giants. This will prevent Indian talent to move to America.

India's Strategic Realignment Toward China

The US-India tariff war resulted in reviving relations between New Delhi and Beijing. In November 2025, India's exports to China surged by 90%. These numbers represent a deliberate pivot. The export surge was driven largely by naphtha. This reflected strong Chinese demand for petrochemical feedstocks. Electronics goods, including printed circuit boards and mobile phone components, also recorded healthy growth.

Prime Minister Modi visited China in August to attend a regional security summit. He had visited China after 7 years. The timing is unmistakable. It clearly revealed that India had alternatives to Washington. Chinese Foreign Minister Wang Yi assured India that China would resume the supply of critical commodities including fertilizers, rare earth minerals, and tunnel boring machines. All these commodities are indeed essential for agriculture as well as infrastructure sectors.

According to the Global Trade Research Initiative, India's trade deficit with China is expected to reach $106 billion in 2025. India is estimated to import good of $123.5 billion from China. Nearly 80% of India's imports from China is concentrated in electronics, machinery, organic chemicals and plastics. All these sectors find it difficult to import from an alternate nation. This resulted in widened trade deficit. India is getting more dependent on Chinese supply chains. This is evident from $64.7 billion imports in 2021 to $94.5 billion in 2024. It is important for India to find new markets and reduce its dependency on powerful rivals like China and the United States of America.

Conclusion

The 2025 US-India tariff war has revealed the sore weaknesses in India export-led economic campaign, redefining the trade patterns and the macroeconomic stability. The visualizations and econometric models within this study indicate that the US tariffs and high levels (as high as 50) have redirected trade to the competitors, burdened vital sectors and stressed the rupee, which as by implication will cross over to the economic sustainability of the Indian economy. The analysis highlights that the concentration of the heavy dependence of the US market (30-40 percent of exports) by India will increase the effect of the tariff in contrast to previous trade conflicts, such as the USA-China war. Up to the visual evidence, the competitors

such as Vietnam are taking advantage of the losses of India, whereas some parts of India such as Shrimp and gems are in extreme decline endangering the lives of millions of people. Currency pressures contribute to further decrease of export competitiveness compelling to make price cuts and increasing revenue losses. The 500 X tweet word cloud, which includes such words as job losses, Swadeshi, indicates the state anxiety and nationalistic, and makes domestic policy discourse prone to changes. These conclusions encourage the government to act swiftly on the policy level, including specialized tariff freezes on labor-intensive manufacturing, and RBI interventions to balance the rupee, using oil prices prices as a cushion. This paper, by measuring both aspects, the trade distractions and the macroeconomic externalities, in the Indian context shows that the strategic trade agreements and domestic reforms are important to hold an Indian economy in the global marketplace, a warning tip to the other economies which may tread the path of protectionism.

Future Scope

Future studies can be used to improve this analysis by addressing the limitations on data and research methods. To increase the statistical reliability, in particular the diversion estimates related to trade, it would be better to extend the dataset to the real-time trade and price information (e.g., USITC, MPEDA), and combine it with the September 2025 and later. A Seemingly Unrelated Regression (SUR) model that is used in industries like textiles and carpets could also seek to examine the variance in pass-through effect which relates to employment outcome of India 45 million export workers. The addition of international controls (e.g., TEU indices, GDP) to a gravity model would explain the level of competition. The results of GDP and inflation could be predicted by simulations of policies, such as modeling of RBI interventions or tariff reduction. Finally, qualitative analysis of X sentiment might provide politics economic implications at a much deeper level and hence informing trade resilience strategies. Such improvements, which would make use of such a tool as STATA or Plotly, would make the study more relevant to academia and policy.

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