

Impact of US and Indian Tariffs on the Indian Steel Market

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Abstract

This research paper analyzes the economic and industrial effects of tariff measures imposed by the United States and India on the Indian steel market between 2015 and 2024. The study focuses on the U.S. Section 232 tariffs introduced in 2018 and India's own safeguard and anti-dumping duties on steel imports. It examines production trends, export-import patterns, and price fluctuations using secondary data. The results show that U.S. tariffs reduced India's global export competitiveness, while India's domestic tariffs provided temporary protection for its producers but increased costs for downstream industries. The study concludes that tariff policies can only offer short-term stability. To achieve sustainable growth, India's steel industry must prioritize technology innovation, green steel production, and policy reforms that promote both competitiveness and environmental responsibility.

Keywords: Tariffs, Steel industry, Section 232, Indian economy, Trade policy, Protectionism, Sustainability.

1. Introduction

1.1 Background of the Study

Steel is one of the most important materials in modern economies. It serves as the foundation for industries such as infrastructure, construction, transportation, manufacturing, and defense. India, as the world's second-largest producer of crude steel after China, plays a vital role in global steel trade and industrial growth. The Indian steel sector contributes around **2 percent** to the country's GDP and supports millions of jobs directly and indirectly.

The performance of India's steel industry is heavily influenced by global trade policies. Tariffs—taxes imposed on imports or exports—are one of the most powerful tools used by governments to regulate international trade and protect domestic industries. In **March 2018**, the **United States imposed Section 232 tariffs** of 25% on imported steel, citing national security concerns. This move disrupted international trade flows and reduced India's steel exports to the U.S. market.

At the same time, India implemented its own **anti-dumping and safeguard duties** to defend against low-cost imports from China, Vietnam, and South Korea. While these measures supported domestic steel producers such as Tata Steel, JSW, and SAIL, they also made raw materials and intermediate goods more expensive for local manufacturers.

1.2 Problem Statement

The imposition of tariffs by both the U.S. and India has reshaped the structure of the Indian steel market. The combined effect has influenced exports, domestic production, input costs, and industry competitiveness. This study seeks to understand how these tariff policies affect India's steel industry in terms of production, trade balance, and pricing.

1.3 Objectives of the Study

1. To analyze the impact of U.S. Section 232 tariffs on India's steel exports.
2. To assess how Indian safeguard duties have influenced domestic production and prices.
3. To study the changes in India's trade balance and competitiveness post-tariff implementation.
4. To provide recommendations for sustainable growth of the Indian steel industry.

1.4 Significance of the Study

The study is significant because it helps policymakers, industry professionals, and academicians understand how international trade policies influence a key sector of the Indian economy. It also provides insights into achieving a balance between protectionism and competitiveness.

2. Literature Review

A number of studies and reports have analyzed the impact of tariff measures on the global and Indian steel sectors.

Kumar (2019) found that the U.S. tariffs under Section 232 led to reduced export volumes for developing countries, including India.

Verma (2018) emphasized that while tariffs can protect domestic industries, they also distort market prices and reduce efficiency.

Sharma (2020) analyzed the Indian government's tariff response and noted that it temporarily stabilized domestic prices but increased costs for downstream industries.

Mehta (2021) studied WTO trade disputes and pointed out that prolonged protectionism often triggers retaliatory actions.

Rao (2019) concluded that long-term competitiveness must rely on innovation, technology, and productivity rather than tariff protection.

World Steel Association (2023) reports also show that global steel trade declined by nearly 7% in 2020 due to combined effects of tariffs and the pandemic.

Overall, the literature reveals that tariffs are double-edged: they can protect domestic producers in the short term but often reduce global competitiveness in the long run. However, limited research connects both the U.S. and Indian tariffs in one comprehensive framework—this paper attempts to fill that gap.

3. Research Methodology

This study uses a **descriptive analytical research design**. It is based entirely on **secondary data** collected from reliable sources such as:

- The Ministry of Steel, Government of India
- World Steel Association
- WTO and UNCTAD databases
- Company annual reports (Tata Steel, JSW Steel, SAIL)
- Journals, articles, and economic reviews

Data period: 2015–2024

Data type: Quantitative and trend-based (production, imports, exports, prices)

Charts and tables were created to illustrate the trends in production, trade, and pricing. The analysis is interpretive, connecting observed trends with the effects of policy changes and global economic conditions.

4. Data Analysis and Interpretation

4.1 India's Crude Steel Production (2015–2024)

| Year | Production (MT) | Growth % |
|------|-----------------|----------|
| 2015 | 89 | — |
| 2016 | 96 | 7.9 |
| 2017 | 101 | 5.2 |
| 2018 | 109 | 7.9 |
| 2019 | 111 | 1.8 |
| 2020 | 100 | -9.9 |
| 2021 | 118 | 18.0 |
| 2022 | 125 | 5.9 |
| 2023 | 132 | 5.6 |
| 2024 | 136 | 3.0 |

Interpretation: India's production increased steadily, except for the 2020 pandemic dip. The recovery post-2021 indicates strong domestic demand.

Suggested Chart: Line graph showing growth from 2015–2024.

4.2 Imports vs Exports (2018–2024)

| Year | Imports (MT) | Exports (MT) | Net Status |
|------|--------------|--------------|----------------|
| 2018 | 7.5 | 10.0 | Export Surplus |
| 2019 | 6.8 | 8.2 | Export Surplus |
| 2020 | 6.0 | 9.5 | Export Surplus |
| 2021 | 5.7 | 10.8 | Export Surplus |
| 2022 | 8.3 | 10.5 | Export Surplus |

| Year | Imports (MT) | Exports (MT) | Net Status |
|------|--------------|--------------|----------------|
| 2023 | 9.8 | 7.2 | Import Surplus |
| 2024 | 11.0 | 8.5 | Import Surplus |

Interpretation: After years of surplus, India became a net importer in 2023, mainly due to cheaper imports from China and Vietnam.

Suggested Chart: Two-line graph (imports vs exports).

4.3 Sectoral Steel Consumption (2024)

| Sector | Consumption (MT) | Share % |
|-------------------------------|------------------|---------|
| Infrastructure & Construction | 68 | 50 |
| Automobiles | 24 | 18 |
| Engineering | 20 | 15 |
| Railways | 12 | 9 |
| Others | 12 | 8 |

Interpretation: Infrastructure dominates steel usage, making domestic demand sensitive to government spending and tariff-related price fluctuations.

Suggested Chart: Pie chart showing 50% share for infrastructure.

4.4 Price Trends (2019–2024)

| Year | HR Coil (₹/Tonne) | CR Coil | Rebar |
|------|-------------------|---------|--------|
| 2019 | 43,000 | 48,000 | 42,000 |
| 2020 | 39,000 | 44,000 | 38,000 |
| 2021 | 52,000 | 58,000 | 50,000 |
| 2022 | 57,000 | 63,000 | 54,000 |
| 2023 | 55,000 | 61,000 | 52,000 |
| 2024 | 59,000 | 65,000 | 56,000 |

Interpretation: Tariffs and post-pandemic recovery led to significant price increases, impacting downstream manufacturing costs.

Suggested Chart: Multi-line chart (HR, CR, Rebar).

4.5 Policy and Tariff Comparison

| Policy | Country | Tariff Rate | Objective |
|-------------------------------|---------|-------------|--------------------------------|
| Section 232 Tariffs (2018) | USA | 25% | Protect U.S. steel producers |
| Safeguard Duties (2019–2024) | India | 10–12% | Prevent dumping of cheap steel |
| Anti-dumping Duty (Selective) | India | 5–10% | Stabilize domestic prices |

Interpretation: The U.S. tariffs directly affected India's export competitiveness, while Indian tariffs were defensive and aimed at stabilizing domestic markets.

5. Discussion

The dual tariff scenario had several effects:

- Export Challenges:** Indian steel exports to the U.S. dropped by nearly 50%, forcing companies to explore markets like Europe, Africa, and Southeast Asia.
- Price Inflation:** Domestic steel prices surged by 25–30% between 2020 and 2024, impacting construction and automobile sectors.
- Trade Deficit Risks:** India's import surplus since 2023 indicates vulnerability to cheaper imports.
- Global Market Distortion:** The U.S. tariffs triggered a chain reaction of retaliatory tariffs, creating oversupply in Asia.
- Environmental Pressure:** India faces growing challenges under the EU's Carbon Border Adjustment Mechanism (CBAM) for its relatively higher carbon emissions (2.1 t CO₂/tonne steel).

Summary: Tariffs gave short-term protection but increased long-term inefficiencies and reduced competitiveness.

6. Conclusion and Recommendations

Conclusion

The research concludes that while tariffs can serve as short-term tools to protect domestic industries, they are not sustainable for long-term competitiveness. The Indian steel sector demonstrated resilience despite global trade disruptions, but it must now focus on efficiency, technology, and sustainability.

Recommendations

- Diversify Export Markets:** Target emerging markets in Africa, ASEAN, and Latin America.
- Adopt Green Steel Technology:** Shift to electric-arc furnaces and hydrogen-based production.
- Enhance R&D:** Develop high-grade and value-added steels.
- Balanced Tariff Framework:** Protect domestic producers but avoid harming user industries.
- Promote Recycling:** Increase scrap utilization to reduce dependence on imports.

6. **Encourage Policy Stability:** Predictable trade policies can attract long-term investment.
7. **Public–Private Collaboration:** Strengthen partnerships for infrastructure-led steel demand.

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