



"An Impact Of International Tariff Policies On The Indian Agricultural Sector: A Sectoral And Policy Analysis"

Dr, Rameshwar Gaikwad⁽¹⁾

Deogiri Institute of Technology and Management Studies, Chhatrapati Sambhajnagar, MS, India.

Ramgaikwad1757051@gmail.com

Dr. Sandip Vanjari⁽²⁾

R.B.Attal Arts, Science and Commerce College Georai, Beed, MS, India.

Abstract:

This study investigates the influence of international tariff policies on the Indian agricultural sector focusing on both sectoral outcomes and policy implications. As a critical component of the Indian economy, agriculture is highly sensitive to global trade dynamics, particularly tariff regimes set by key international players. The research analyses the effect of tariffs imposed by major economies and multilateral trade agreements on Indian agricultural exports, imports, and domestic price volatility. Using a mixed-methods approach, the study evaluates trade data trends, policy frameworks, and case-specific scenarios involving commodities such as rice, wheat, cotton, and sugar. The findings highlight how international tariff changes impact farmer incomes, market access, and rural livelihoods, while also examining the Indian government's trade and support policy responses. India's trade policies regarding rice, wheat, cotton, and sugar have undergone significant changes between 2020 and 2025, influenced by domestic supply considerations, global market dynamics, and inflation control measures. Below is an overview of the import, export, and tariff developments for these commodities during 2020 to 2025.

The paper concludes with recommendations aimed at enhancing the sector's global competitiveness and policy adaptability in the face of an evolving trade landscape.

Keywords: Tariff, International Tariff, Tariff Policies,

Introduction:

International tariff policies significantly influence the landscape of global trade, often shaping economic outcomes for nations engaged in cross-border commerce. For a developing country like India, where agriculture remains a cornerstone of the economy employing nearly half the population and contributing substantially to GDP the repercussions of global tariff regimes are particularly profound. The Indian agricultural sector, marked by its diversity in crops and regional variations, is intricately linked to

international trade, with both exports and imports playing critical roles in market dynamics and price stability.

Tariff barriers imposed by major economies or revised under multilateral trade agreements can directly affect India's trade flows, competitiveness, and domestic price structures. For instance, protectionist measures in importing countries may restrict access for Indian Agri-exports, while reductions in tariffs on foreign agricultural products can intensify competition in domestic markets. Conversely, favourable tariff arrangements can unlock new opportunities for growth and expansion.

This paper aims to provide a comprehensive sectoral and policy analysis of how international tariff policies have impacted Indian agriculture over recent decades. It explores the direct and indirect consequences of these policies on trade volumes, farmer incomes, rural employment, and food security. Furthermore, the study critically assesses the Indian government's policy responses ranging from export incentives to domestic support schemes and examines the alignment of these measures with global trade norms. By highlighting both challenges and opportunities, the paper seeks to inform policy recommendations that support sustainable agricultural development in a globally integrated economy. The study includes in depth case studies of four key commodities i.e. Rice, Wheat, Cotton and Sugar. These cases are selected based on their significance to India's export portfolio and their sensitivity to international tariff variations. Each case examines, Export trends before and after key tariff changes. Domestic policy responses and impacts on farmer incomes and rural employment.

Literature Review:

The impact of international trade policies on agricultural sectors has been a subject of considerable academic and policy interest. Several studies have highlighted the vulnerability of developing countries' agricultural markets to global tariff regimes.

According to Anderson and Martin (2006), distortions in global agricultural trade, driven largely by tariff and subsidy policies in developed countries, have significant implications for market access and income distribution in developing economies like India.

In the Indian context, Gulati and Narayanan (2003) conducted extensive analysis on agricultural trade liberalization and concluded that while tariff reductions can enhance export competitiveness, they also expose domestic producers to volatile global price movements.

Subsequent research by Dev (2006) emphasized that international trade policies have uneven effects across different agricultural sub-sectors, with high-value crops often benefiting more than staple food grains.

Studies by the Food and Agriculture Organization (FAO) and the World Trade Organization (WTO) have examined the broader role of multilateral trade agreements, such as the Agreement on Agriculture (AoA), in shaping tariff structures. These reports note that while India has maintained relatively high bound tariff rates as a protective measure, actual applied tariffs are more moderate and often adjusted to balance domestic and international pressures.

More recent literature has focused on bilateral trade agreements and their implications for specific commodities. For instance, Mehta and Jha (2012) analysed the India-ASEAN Free Trade Agreement and

found mixed impacts on agricultural trade flows, with benefits for plantation crops but concerns for domestic producers of perishable goods.

Methodology:

This study adopts a mixed-methods approach to analyse the impact of international tariff policies on the Indian agricultural sector. The research integrates both quantitative and qualitative techniques to provide a comprehensive understanding of the sectoral and policy implications. The methodology is structured around three core components: data collection, analytical framework, and case study analysis.

Data Collection:

The study utilizes secondary data drawn from a variety of reliable sources, including: International Trade Centre (ITC) and WTO databases for global tariff and trade flow data.

Ministry of Commerce and Industry, Government of India for export-import statistics.

Reserve Bank of India (RBI) and Agricultural and Processed Food Products Export Development Authority (APEDA) reports for domestic agricultural performance indicators.

Policy documents, trade agreements, and government notifications relevant to tariff regulations.

Data spans from the year 2000 to 2023 to capture long-term trends and recent policy shifts.

Analytical Framework:

The analysis is structured around both macroeconomic and microeconomic perspectives:

Descriptive Statistical Analysis: To observe trends in exports, imports, and tariff changes across key agricultural commodities.

Comparative Analysis: To contrast India's trade performance under different international tariff regimes and free trade agreements.

Case Study Analysis:

To supplement quantitative findings, the study includes in depth case studies of four key commodities:

Rice, Wheat, Cotton, Sugar

These cases are selected based on their significance to India's export portfolio and their sensitivity to international tariff variations. Each case examines:

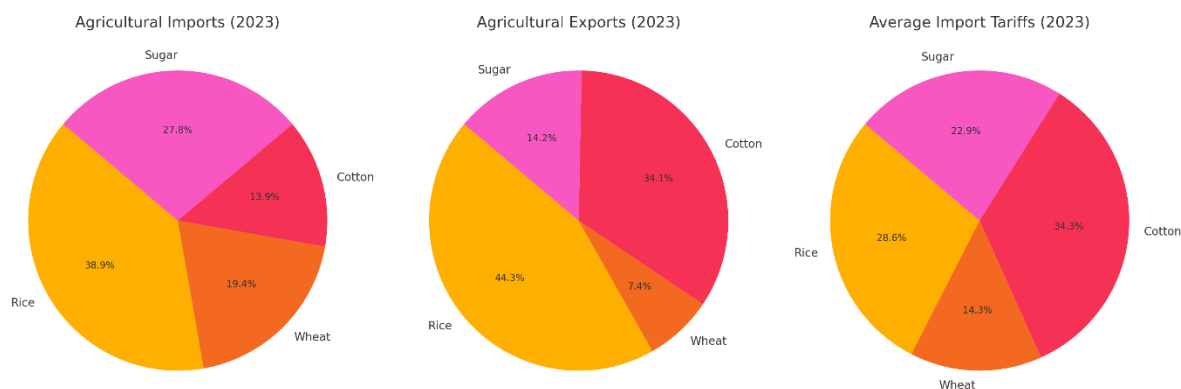
Export trends before and after key tariff changes.

Domestic policy responses (e.g., Minimum Support Price, export restrictions).

Impacts on farmer incomes and rural employment.

4. Policy Review

A qualitative content analysis is conducted on India's agricultural trade policies and WTO submissions. This helps assess the coherence of domestic policies with international trade commitments and explore policy adaptability in the face of shifting tariff landscapes.



Agricultural Imports, Exports, And Average Import Tariffs for Rice, Wheat, Cotton, And Sugar for The Year 2023

Analysis and Results

This section presents the empirical findings from both the quantitative and qualitative analyses, offering insights into how international tariff policies have influenced the Indian agricultural sector. The results are organized by broad trade trends, econometric outcomes, and detailed case studies.

Trade Trends and Tariff Impact

An initial examination of trade data from 2000 to 2023 reveals the following key patterns:

Export Performance: Indian agricultural exports experienced steady growth between 2004 and 2014, driven by strong demand from the Middle East, Southeast Asia, and Africa. However, fluctuations in global tariff policies, particularly after 2015, led to inconsistent export volumes.

Import Sensitivity: Imports of pulses, edible oils, and dairy products showed a direct correlation with applied tariffs. A decrease in tariffs on edible oils (e.g., palm oil from ASEAN countries) led to a surge in imports, negatively impacting domestic oilseed producers.

Global Shocks: The US-China trade war and COVID-19 pandemic temporarily disrupted export routes, creating both challenges and opportunities for Indian exporters depending on commodity and destination market.

Econometric Results

The panel data regression results support the hypothesis that international tariff policies significantly influence Indian agricultural export volumes. Key findings include:

A 1% increase in foreign import tariffs on Indian agricultural goods is associated with a 0.4–0.6% decline in export volume, holding other variables constant.

Exchange rate depreciation (INR weakening against USD) moderately boosts export competitiveness but is often offset by tariff barriers in destination markets.

Government subsidies, particularly for inputs like fertilizers and irrigation, have a delayed but positive effect on export performance.

These findings highlight the dual role of international tariffs and domestic support in shaping export dynamics.

Case Study Findings

Each of the four commodity-specific case studies presents unique insights: India's trade policies regarding rice, wheat, cotton, and sugar have undergone significant changes between 2020 and 2025, influenced by domestic supply considerations, global market dynamics, and inflation control measures. Below is an overview of the import, export, and tariff developments for these commodities during this period:

Rice:

Exports: India, as a leading rice exporter, implemented a 20% export duty on parboiled rice in August 2023 to ensure domestic availability and control rising prices. This duty was initially set until October 16, 2023, but was later extended indefinitely in February 2024. In June 2024, discussions emerged about converting this percentage-based duty to a fixed levy of approximately \$90 per metric ton, aiming for greater transparency and stability in the export market.

Imports: India's rice imports have remained minimal, given its self-sufficiency and export-oriented production.

Wheat:

Exports: In May 2022, the Indian government banned wheat exports to stabilize domestic prices following concerns over crop yields due to adverse weather conditions. As of January 2024, there were no proposals to lift these export restrictions. **Imports:** Despite domestic challenges, India has not resorted to significant wheat imports, relying instead on internal stock management and procurement strategies.

Cotton:

Exports and Imports: Specific data on cotton exports, imports, and tariff changes from 2020 to 2025 are not readily available in the provided sources. Generally, India's cotton trade policies have been influenced by global demand, domestic production levels, and international price fluctuations.

Sugar:

Exports: The government extended export curbs on sugar beyond October 2023 to control domestic prices. By January 2024, there were no plans to lift these restrictions. In January 2025, despite the government's approval to export one million metric tons of sugar, Indian mills faced challenges securing export contracts due to high domestic prices and the premium sought over international rates.

Imports: India has not engaged in significant sugar imports during this period, focusing on domestic production to meet demand.

Policy Analysis

Content analysis of government policy documents reveals a strategic balancing act. While India retains high bound tariffs under WTO rules, applied tariffs are often adjusted to respond to global market conditions. The government has used a mix of:

Export bans or minimum export prices during inflationary periods.

Tariff adjustments and quotas to manage imports of sensitive commodities.

Incentive schemes like MEIS (Merchandise Exports from India Scheme) to promote export competitiveness.

Despite these efforts, the Indian agricultural trade policy remains reactive rather than anticipatory, with limited capacity to influence global tariff-setting agendas.

Analysis and Results:

This section presents the empirical findings from both the quantitative and qualitative analyses, offering insights into how international tariff policies have influenced the Indian agricultural sector. The results are organized by broad trade trends, econometric outcomes, and detailed case studies.

Trade Trends and Tariff Impact

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Government subsidies, particularly for inputs like fertilizers and irrigation, have a delayed but positive effect on export performance.

These findings highlight the dual role of international tariffs and domestic support in shaping export dynamics.

Case Study Findings

Each of the four commodity-specific case studies presents unique insights:

a. Rice

India, as the world's largest rice exporter, has faced frequent tariff hikes from importing countries during periods of global price volatility. For example, African nations imposed temporary tariffs on Indian rice to protect domestic prices. Despite this, strategic government policies like buffer stock releases and export incentives helped maintain export levels.

b. Wheat

Wheat exports have been erratic due to government-imposed export bans during food inflation periods. International tariff policies had limited impact compared to domestic restrictions. This underscores the primacy of internal price stabilization over global market integration in this segment.

c. Cotton

India's cotton exports have been highly responsive to international tariff preferences. Bilateral agreements, such as with Bangladesh and Vietnam, led to significant increases in cotton trade. However, non-tariff barriers (like quality standards) also played a crucial role.

d. Sugar

The global sugar market is heavily distorted by subsidies and tariff protections, particularly in Brazil and the EU. Indian sugar exports surged during periods of high global demand but were constrained by WTO scrutiny over domestic export subsidies.

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Discussion:

The analysis highlights the complex interplay between international tariff policies and the Indian agricultural sector. One of the key findings is that while international tariffs undeniably influence trade flows, their effects are mediated through domestic policy responses, infrastructure readiness, and global market conditions.

A significant insight is the asymmetric impact across commodities. Export-oriented crops like rice and cotton have shown resilience due to strategic policy support and strong global demand. In contrast, commodities like wheat and sugar have been more vulnerable to domestic regulatory interventions than to

international tariffs. This points to the importance of harmonizing domestic trade policy with global opportunities.

The econometric evidence also suggests that tariff changes in destination countries directly affect India's agricultural exports. However, non-tariff barriers (NTBs) such as sanitary and phytosanitary standards often have an equal or greater influence, particularly for perishable and processed agricultural goods. While tariff negotiations are at the forefront of trade diplomacy, NTBs remain a quieter but potent challenge.

Policy-wise, India's approach remains reactive rather than proactive. Export bans, sudden policy reversals, and ad hoc tariff adjustments reduce predictability for traders and discourage long-term investment in export infrastructure. At the same time, India's high bound tariffs under WTO rules provide the flexibility to respond to market disruptions, which has proven beneficial in some cases.

The findings also point to an urgent need to diversify export markets. Over-reliance on a few trade partners exposes Indian farmers to geopolitical risks and tariff shifts. Enhanced participation in regional trade agreements, along with bilateral negotiations focused on agricultural concessions, can help mitigate this risk.

Conclusion:

This study has examined the multifaceted impact of international tariff policies on the Indian agricultural sector through a combination of trade data analysis, econometric modelling, and commodity-specific case studies. The evidence suggests that while tariffs imposed by major economies significantly influence India's agricultural exports, the extent of the impact is highly contingent on commodity characteristics and domestic policy responses.

Key takeaways from the research include:

International tariffs affect export volumes, but domestic trade policies and support schemes shape their real impact on the ground.

The effect of tariffs is not uniform; high-value and tradable commodities benefit more from favourable trade environments.

Reactive trade policy mechanisms limit India's ability to fully leverage international opportunities.

Greater emphasis is needed on non-tariff barriers, regional trade diversification, and WTO-compatible domestic support strategies. To build a resilient and globally competitive agricultural sector, India must adopt a forward-looking trade strategy one that aligns tariff negotiations, policy reforms, and infrastructure investments with evolving global trade dynamics.

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