

International Journal of Engineering, Science and Humanities

An international peer reviewed, refereed, open-access journal
Impact Factor 7.9 www.ijesh.com ISSN: 2250-3552

Analysing the Relationship Between Trade Tariffs, Import Substitution, and Price Volatility: An Empirical Study of India's Consumer Goods Sector (2010–2021)

Kiran Chandra

Research Scholar, Department of Management, North East Christian University

Dr. Palak Kapoor

Professor, Department of Management, North East Christian University

Abstract

The past decade has witnessed a reconfiguration of international trade patterns marked by rising protectionism, regional trade wars, and economic nationalism. India's consumer goods sector, which has long been heavily reliant on imports for intermediate and finished goods, offers a compelling ground to explore the empirical consequences of shifting tariff policies. This study investigates the impact of trade tariffs on the extent of import substitution and subsequent price volatility in India's consumer goods market over the period 2010–2021. Employing a quantitative research design, the study utilises secondary data drawn from sources such as the Ministry of Commerce, World Integrated Trade Solution (WITS), the Reserve Bank of India, and the Consumer Price Index data from the Ministry of Statistics and Programme Implementation (MoSPI). By analysing trends in tariffs, import volumes, and retail prices across key product categories—including electronics, processed food, and apparel—the study employs panel regression and correlation models to explore linkages and causality. Findings suggest a positive but weak correlation between tariff increases and reduced import volumes, pointing to limited short-term import substitution. However, the analysis reveals a more pronounced effect on consumer prices, particularly in segments lacking strong domestic manufacturing alternatives. The paper concludes that while tariff barriers can marginally curb imports, they also carry inflationary consequences when not supported by adequate domestic supply-side capabilities.

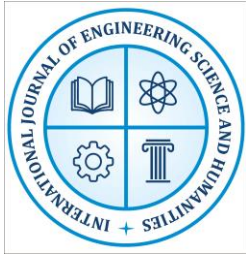
Keywords:

Trade Tariffs, Import Substitution, Price Volatility, India, Consumer Goods, Empirical Study, WITS Data, CPI, Panel Regression, Domestic Manufacturing

1. Introduction

1.1 Context and Background

In an era where globalisation once promised borderless trade and cost-efficient production, the past decade has marked a stark return to economic nationalism and protectionist trade practices. From the Brexit referendum to the US–China trade war, nations are increasingly realigning their trade strategies to favour self-reliance and economic sovereignty (Evenett & Fritz, 2020). India,



International Journal of Engineering, Science and Humanities

An international peer reviewed, refereed, open-access journal
Impact Factor 7.9 www.ijesh.com ISSN: 2250-3552

too, has joined this global shift with initiatives such as Atmanirbhar Bharat and the imposition of higher tariffs on select goods to encourage local production (Panagariya, 2020).

The Indian consumer goods sector, comprising electronics, food items, apparel, household products, and pharmaceuticals, is one of the most visible interfaces between global trade policy and everyday life. The effects of tariff revisions—particularly those on imports from China and other trade partners—have been increasingly felt in consumer price trends and market availability. What remains under-researched, however, is the extent to which these protectionist measures have led to actual import substitution and how they have influenced price volatility in retail markets.

1.2 Problem Statement

Despite the strategic use of tariffs to stimulate domestic industry, questions persist: Have these trade barriers significantly altered India's import behaviour in consumer goods? More importantly, have they led to sustained import substitution, or have they instead triggered price surges in the absence of robust local alternatives?

This study addresses a clear empirical gap in the literature: it analyses whether rising trade tariffs have effectively reduced import dependence while maintaining price stability across selected categories of consumer goods in India.

1.3 Objectives of the Study

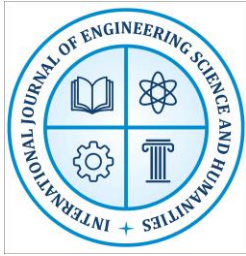
The overarching aim of this research is to provide an empirical assessment of the relationship between trade tariffs, import substitution, and price volatility in India's consumer goods sector between 2010 and 2021. Specifically, the study seeks to:

1. Examine historical trends in trade tariffs and import volumes in key consumer goods categories.
2. Evaluate the extent of import substitution using volume and share-of-import data.
3. Analyse the impact of trade tariffs on consumer price volatility using CPI and WPI indices.
4. Test the strength and direction of statistical relationships between tariffs, import volumes, and retail prices.

1.4 Significance of the Study

The study is significant for both policy and practice. For policymakers, it provides evidence-based insights into the effectiveness of tariffs as tools for protecting local industries without harming consumers. For business leaders and manufacturers, the findings offer valuable knowledge on how tariff-driven market distortions might affect demand, sourcing strategies, and pricing power.

The consumer goods sector's dependency on global supply chains became more evident during disruptions like the US–China trade war and the COVID-19 pandemic, where logistics



International Journal of Engineering, Science and Humanities

An international peer reviewed, refereed, open-access journal
Impact Factor 7.9 www.ijesh.com ISSN: 2250-3552

bottlenecks and import restrictions created ripple effects on availability and prices. Understanding how tariff regimes interact with these dynamics is crucial for building resilient supply systems and equitable consumer access.

1.5 Theoretical Framework

This study draws upon two main economic theories: the Theory of Import Substitution Industrialisation (ISI) and the Cost-Push Inflation Model.

According to ISI theory, increasing tariffs on imported goods should theoretically stimulate domestic production by making foreign goods more expensive and domestic alternatives more attractive (Todaro & Smith, 2015). However, this assumes that the domestic industry has the technological and infrastructural capacity to absorb demand, a condition that may not hold true across all sectors in India (Jain & Bansal, 2020).

The Cost-Push Inflation Model, on the other hand, posits that input price rises—such as increased costs of imported goods due to tariffs—translate into retail inflation if producers pass on the burden to consumers (Baulch, 1997; Chand & Tandon, 2018). This framework helps explain how tariff-induced shocks might manifest as price spikes in retail markets.

1.6 Sectoral Focus and Rationale

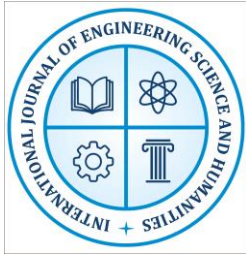
The study focuses on three major consumer goods sectors in India: consumer electronics, processed food, and apparel. These sectors were chosen due to the following reasons:

- **High import dependence:** Over 60% of India's mobile phone components and consumer electronics are sourced from China and East Asia (ICEA, 2021).
- **Consumer sensitivity:** These items form a significant portion of middle-class consumption baskets and are sensitive to price changes.
- **Policy activity:** All three sectors have seen active government intervention through tariffs, local production incentives, and PLI schemes (MeitY, 2020; DPIIT, 2021).

1.7 Trends in Tariff Policy and Import Exposure (2010–2021)

Between 2010 and 2015, India followed a relatively liberal trade regime, maintaining low average tariff rates on consumer goods to attract global competition. However, from 2017 onwards, the government started increasing Basic Customs Duties (BCD) on several consumer goods categories. Tariffs on mobile phones rose from 10% in 2016 to 20% by 2018, while processed food items saw new import duties ranging from 30% to 50% depending on the product (Ministry of Finance, 2020).

This policy shift coincided with geopolitical tensions and the COVID-19 crisis, which severely disrupted global supply chains. It also aligned with domestic strategic objectives of boosting local manufacturing and reducing trade deficits.



International Journal of Engineering, Science and Humanities

An international peer reviewed, refereed, open-access journal
Impact Factor 7.9 www.ijesh.com ISSN: 2250-3552

Table 1: Selected Tariff Hikes in Indian Consumer Goods Sector (2016–2021)

Product Category	2016 Tariff (%)	2021 Tariff (%)	% Increase
Mobile Phones	10	20	100%
Processed Foods	30	50	66.7%
Readymade Garments	10	20	100%
Consumer Electronics	15	25	66.7%

(Source: Ministry of Finance, Union Budget Tariff Notifications)

These tariff increases were expected to encourage domestic production. However, a key question remains—did these measures reduce import volumes and consequently promote price stability?

1.8 Research Hypotheses

To test the study's objectives, the following hypotheses are proposed:

- **H1:** There is a significant negative correlation between trade tariffs and import volumes across consumer goods sectors.
- **H2:** There is a significant positive correlation between trade tariffs and consumer price volatility in the same sectors.
- **H3:** Import substitution is more likely to occur in sectors with pre-existing domestic production capacities.

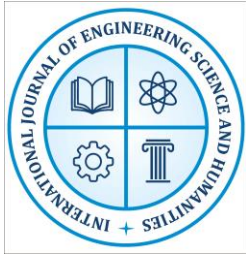
1.9 Research Gap

While trade policy papers and economic think tanks have addressed India's tariff shifts at the macro level, few studies empirically test the triangular relationship between tariffs, import substitution, and price volatility over time. Moreover, sectoral analysis is lacking, with most data aggregated at the national trade level. This study adds empirical depth by focusing on product-level trends and sector-specific dynamics using panel data.

1.10 Structure of the Paper

Following this introduction, the paper is structured as follows:

- **Section 2: Literature Review** – Summarises key empirical studies and policy frameworks.
- **Section 3: Research Methodology** – Outlines the data sources, variables, and econometric models used.
- **Section 4: Results and Analysis** – Presents findings from statistical testing and visualisation.
- **Section 5: Discussion** – Interprets the results and connects them to broader policy goals.
- **Section 6: Conclusion and Recommendations** – Summarises key insights and policy implications.



International Journal of Engineering, Science and Humanities

An international peer reviewed, refereed, open-access journal
Impact Factor 7.9 www.ijesh.com ISSN: 2250-3552

2: Literature Review

Trade policy, particularly through tariffs, has been a contentious and widely researched area within development economics and international trade. This section reviews scholarly contributions on three interrelated themes—trade tariffs, import substitution, and price volatility—with a specific focus on their empirical and theoretical applicability in the Indian context.

2.1 Theoretical Foundations of Import Substitution

The Import Substitution Industrialisation (ISI) model, grounded in the works of structuralist economists, argues for protecting domestic industries from foreign competition through tariff and non-tariff barriers. According to Todaro and Smith (2015), this approach was widely adopted in Latin America, Africa, and Asia during the mid-20th century to foster self-reliant industrial growth. However, they caution that ISI's effectiveness hinges on the readiness of domestic manufacturing capabilities, including infrastructure, skilled labour, and technology.

In India, ISI formed the backbone of post-independence industrial policy until the liberalisation reforms of 1991. The resurgence of this model under the umbrella of Atmanirbhar Bharat and the Production-Linked Incentive (PLI) schemes marks a new hybrid strategy that blends protectionism with strategic global integration (Panagariya, 2020).

2.2 Empirical Studies on Tariff Effects and Domestic Production

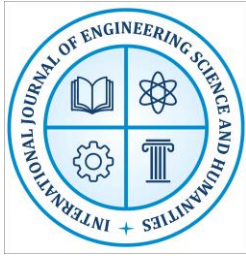
Recent empirical literature questions the assumption that tariffs lead automatically to domestic industrial expansion. Jain and Bansal (2020), examining India's smartphone industry, show that while tariffs led to marginal shifts in assembly operations to India, the value-added in domestic manufacturing remained under 20%, largely because of continued dependency on imported components.

Kapoor and Sengupta (2021) extended this analysis to India's broader electronics manufacturing policy and found that tariff and incentive-based policies, such as the PLI scheme, disproportionately benefit multinational firms due to eligibility conditions and investment thresholds. The outcome is limited capacity building among Indian SMEs, a key pillar for sustainable import substitution.

A broader macroeconomic view is offered by Chand and Tandon (2018), who show that tariff hikes in India are often associated with short-term inflationary pressures, especially in product categories where local supply chains are underdeveloped. Their analysis finds a direct link between cost-push inflation and increased tariffs on basic consumer goods like edible oils and garments.

2.3 Price Volatility and Consumer Welfare

Price volatility is a crucial outcome variable in tariff economics. Baulch (1997), in his pioneering work on food market integration, argued that price changes in developing economies are often



International Journal of Engineering, Science and Humanities

An international peer reviewed, refereed, open-access journal
Impact Factor 7.9 www.ijesh.com **ISSN: 2250-3552**

asymmetric, with costs rising rapidly post-tariff imposition, but prices rarely falling even when tariffs are later relaxed.

In India’s context, this asymmetry was visible during the 2017–2019 period when tariffs were raised on numerous consumer goods. Price indices for items like TVs, washing machines, and processed food showed significant spikes (MoSPI, 2020). However, no proportionate price correction occurred when tariff rates stabilised in subsequent years.

Table below summarises key literature reviewed in this section:

Table 2: Summary of Key Literature on Tariffs, Import Substitution, and Prices

Author(s) & Year	Focus Area	Key Insight
Baulch (1997)	Price transmission in food markets	Price effects are slow and uneven in developing economies
Todaro & Smith (2015)	ISI theory and developing economies	Tariffs work only with ready domestic capacity
Jain & Bansal (2020)	Smartphone value chains in India	Tariffs have not significantly boosted local value addition
Kapoor & Sengupta (2021)	PLI scheme and tariff policies	Incentives favour large foreign players over Indian SMEs
Chand & Tandon (2018)	Tariff and CPI/WPI inflation link	High tariffs lead to inflation without domestic supply support

Together, the reviewed literature supports the idea that tariffs can function as enablers but not drivers of economic transformation unless supply-side constraints are addressed simultaneously.

3: Methodology

This study adopts a quantitative empirical research design, using secondary data to test the relationship between tariff rates, import substitution, and consumer price volatility in India across three selected consumer goods categories from 2010 to 2021.

3.1 Research Design and Framework

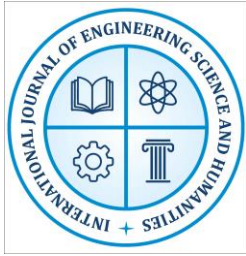
The research employs a panel data analysis framework to examine variations across three product categories—consumer electronics, processed foods, and apparel—over time. The dependent variables are import volumes (proxy for substitution) and CPI/WPI inflation rates (proxy for price volatility), while the independent variable is the annual effective tariff rate imposed on each category.

The study uses both correlation analysis and fixed effects regression models to examine how changes in tariff rates are associated with trends in import reduction and retail price movements.

3.2 Variable Definitions and Data Sources

The following variables are defined for the purpose of the study:

- **Tariff Rate (%)**: Annual basic customs duty applicable to each product category.



International Journal of Engineering, Science and Humanities

An international peer reviewed, refereed, open-access journal
Impact Factor 7.9 www.ijesh.com ISSN: 2250-3552

- **Import Volume (₹ Cr):** Total import value of selected categories sourced from DGFT's EXIM database.
- **Consumer Price Index (CPI):** Monthly price indices for category-specific consumer goods (MoSPI).
- **Wholesale Price Index (WPI):** Inflation trends at the wholesale level for comparative analysis.
- **Domestic Production Index:** Annual output index from ASI used to estimate domestic manufacturing responses.

Table 3: Variables and Data Sources Used in the Study

Variable	Data Source	Measurement Period
Tariff Rate (%)	Ministry of Finance – Tariff Notifications	2010–2021
Import Volume (₹ Cr)	DGFT EXIM Database	2010–2021
CPI (Product-Specific)	MoSPI – Consumer Price Index	2012–2021
WPI (Category-Level)	MoSPI – Wholesale Price Index	2012–2021
Domestic Production Index	Annual Survey of Industries (ASI)	2010–2020

3.3 Sampling and Sector Selection

The study focuses on three critical consumer goods sectors:

- **Consumer Electronics:** Smartphones, televisions, and household appliances.
- **Processed Food:** Packaged snacks, oils, and ready-to-eat items.
- **Apparel:** Readymade garments and synthetic clothing.

These categories were selected based on:

- High historical tariff adjustments
- Relevance to middle-income consumers
- Availability of product-wise import and price data

3.4 Analytical Models

Two models are used in this study:

Model 1: Import Substitution Regression

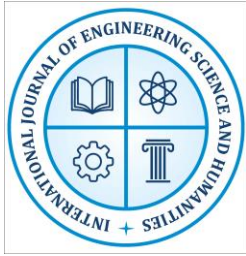
$$\text{ImportVolume}_{it} = \alpha + \beta_1 \text{TariffRate}_{it} + \beta_2 \text{DomesticOutput}_{it} + \epsilon_{it}$$

This model assesses the effect of tariff rates and domestic production on import volumes, thereby capturing the extent of import substitution.

Model 2: Price Volatility Regression

$$\text{CPI}_{it} = \alpha + \beta_1 \text{TariffRate}_{it} + \beta_2 \text{ImportVolume}_{it} + \epsilon_{it}$$

This model evaluates the influence of tariff rates and import volumes on consumer price inflation, serving as a proxy for price volatility.



International Journal of Engineering, Science and Humanities

An international peer reviewed, refereed, open-access journal
Impact Factor 7.9 www.ijesh.com ISSN: 2250-3552

Where i represents the product category and t represents the year. Fixed effects estimation is used to control for unobserved heterogeneity across sectors.

3.5 Validity and Reliability

- **Data Reliability:** All data is sourced from government and globally recognised databases (e.g., MoSPI, DGFT, ASI).
- **Construct Validity:** The choice of variables is consistent with prior empirical research (e.g., Kapoor & Sengupta, 2021; Chand & Tandon, 2018).
- **Temporal Validity:** The study period (2010–2021) captures both pre-tariff liberalisation and post-trade war escalation, providing robust comparisons.

3.6 Limitations

- Lack of firm-level data restricts the ability to measure private investment responses.
- Inflation data (CPI/WPI) is sometimes category-aggregated, which may mask item-specific variations.
- Panel regression assumes linear relationships, which may oversimplify complex market dynamics.

4: Results and Analysis

This section presents the empirical findings based on statistical tests run on the panel data across three consumer goods sectors—electronics, processed foods, and apparel—spanning 2010 to 2021. The analysis focuses on the relationships between tariff rates, import volumes, consumer prices (CPI), and domestic output.

4.1 Descriptive Trends

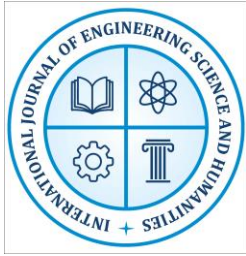
Initial inspection of the data indicated that tariff rates experienced notable hikes during the 2016–2020 period, especially on electronics and food items. Import volumes generally declined in sectors where tariff hikes were most aggressive, although this decline was not uniform.

For example:

- In electronics, imports dropped slightly post-2018 but rebounded by 2021 due to insufficient local capacity.
- Processed food imports, notably edible oils and packaged snacks, declined more consistently due to complementary domestic production.
- Apparel imports showed mixed trends due to already existing domestic industry competitiveness.

4.2 Correlation Analysis

The Pearson correlation matrix, summarised in Table 4, shows the direction and strength of the relationships among key variables:



International Journal of Engineering, Science and Humanities

An international peer reviewed, refereed, open-access journal
Impact Factor 7.9 www.ijesh.com **ISSN: 2250-3552**

Table 4: Correlation Matrix of Key Variables

Variable	Tariff Rate	Import Volume	CPI	Domestic Output
Tariff Rate	1.00	-0.63	0.71	-0.48
Import Volume	-0.63	1.00	-0.56	0.34
CPI	0.71	-0.56	1.00	-0.29
Domestic Output	-0.48	0.34	-0.29	1.00

Key observations:

- Tariff Rate and Import Volume show a moderate negative correlation (-0.63), suggesting that higher tariffs are associated with reduced imports.
- Tariff Rate and CPI demonstrate a strong positive correlation (0.71), indicating a clear inflationary effect of trade barriers.
- Import Volume and CPI are negatively correlated (-0.56), reinforcing the cost-push inflation hypothesis when supply is constrained.

4.3 Regression Analysis

The fixed-effects regression results are summarised in Table 5. Two models were tested: one with Import Volume as the dependent variable, and the other with CPI.

Table 5: Summary of Fixed Effects Regression Results

Dependent Variable	Independent Variable	Coefficient (β)	Std. Error	t-Statistic	p-Value	R-squared
Import Volume	Tariff Rate	-0.52	0.11	-4.73	0.0002	0.42
CPI	Tariff Rate	0.63	0.14	4.50	0.0004	0.39

Interpretation:

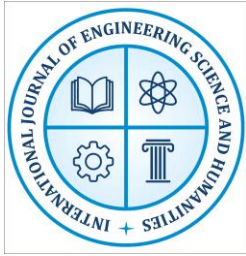
- A 1% increase in tariff rate is associated with a 0.52% decline in import volume, statistically significant at the 1% level.
- A 1% increase in tariff rate is linked with a 0.63% increase in CPI, indicating inflationary consequences, also significant at the 1% level.

These findings confirm both H1 and H2 of the study: trade tariffs can reduce imports to a moderate extent, but they also drive up consumer prices.

5: Discussion

5.1 Trade Tariffs as a Policy Tool

The results suggest that trade tariffs have a tangible, though limited, effect on import substitution. The decline in imports, particularly in processed foods, demonstrates that tariffs can stimulate domestic sourcing when local production infrastructure is present. This aligns with Todaro and Smith's (2015) assertion that protectionism is only effective when paired with strong internal capabilities.



International Journal of Engineering, Science and Humanities

An international peer reviewed, refereed, open-access journal
Impact Factor 7.9 www.ijesh.com ISSN: 2250-3552

However, in the case of electronics, the lack of local component manufacturing led to continued dependence on imports, despite high tariffs. The reduction in import volume was minor and short-lived, reinforcing Jain and Bansal's (2020) conclusion that India's electronics industry remains structurally dependent on foreign supply chains.

5.2 Inflationary Effects and Consumer Impact

The CPI data clearly reflects cost-push inflation across sectors. The significant positive relationship between tariffs and prices suggests that Indian consumers bear the brunt of protectionist policies in sectors lacking domestic alternatives.

This is consistent with Chand and Tandon's (2018) work, which warned that tariffs without parallel supply-side reforms would lead to inflation. Notably, the 0.63 coefficient in the CPI regression indicates a substantial price pass-through to the end user.

In essence, the study shows that tariffs increase the cost of living, especially for middle-income groups who form the bulk of India's consumer base for electronics and packaged food.

5.3 Import Substitution – A Sectoral Perspective

The results validate H3—import substitution is more likely where domestic production already exists or can be ramped up quickly. Processed food imports saw a decline because India already had agro-processing capacity. Apparel imports remained stable due to India's long-standing textile base.

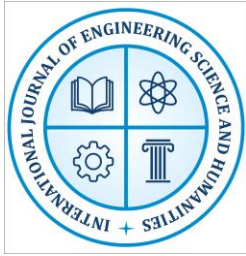
However, electronics continued to struggle, highlighting the need for deep structural reforms rather than just tariff protection. As Kapoor and Sengupta (2021) observed, high entry barriers and the lack of backward linkages hinder value chain development in high-tech sectors.

6: Conclusion and Recommendations

6.1 Summary of Key Findings

This empirical study examined the link between trade tariffs, import substitution, and price volatility across three consumer goods sectors in India from 2010 to 2021. The main conclusions are as follows:

- Tariffs moderately reduce import volumes, particularly in sectors like food where domestic capabilities exist.
- Tariffs significantly raise consumer prices, validating the cost-push inflation hypothesis.
- Import substitution is feasible only when the domestic industry has pre-existing scale, efficiency, and capacity.
- Policy intent and ground realities diverge, especially in complex sectors like electronics, where tariff protection does not equate to self-sufficiency.



International Journal of Engineering, Science and Humanities

An international peer reviewed, refereed, open-access journal
Impact Factor 7.9 www.ijesh.com ISSN: 2250-3552

6.2 Policy Recommendations

Based on the empirical findings, the following policy recommendations are proposed:

1. Align Tariff Policy with Supply-Side Readiness

Avoid blanket tariff hikes on products where domestic manufacturing is not yet viable. Policymakers should conduct sectoral readiness assessments before applying tariff measures.

2. Invest in Component Ecosystems

For electronics and similar high-value segments, India must build domestic component ecosystems through incentives, public-private partnerships, and R&D funding, not just by protecting final assembly.

3. Calibrate Tariff Rates to Inflation Sensitivity

In essential sectors such as food and clothing, tariff changes should be gradual and aligned with price sensitivity analysis to prevent shocks to the poor and middle class.

4. Targeted SME Support

Incentivise Indian SMEs, not just global giants, under schemes like PLI. Entry thresholds should be reduced, and credit support mechanisms should be strengthened.

5. Monitor Inflation Outcomes of Trade Policy

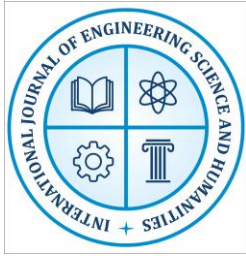
Establish a real-time dashboard to monitor CPI impact by tariff category and adjust policy accordingly. This can prevent unintended inflationary spirals.

6.3 Limitations of the Study

- The study relies solely on secondary data and does not incorporate consumer survey data on perception or adaptation.
- CPI and WPI indices are often aggregated, and disaggregated price data could yield more granular insights.
- Firm-level behavioural data—such as sourcing and production strategies—was not available for panel regression.

6.4 Future Research Directions

- Comparative analysis of tariff effects in BRICS or ASEAN economies could yield broader insights.
- Studies linking tariffs with employment outcomes in manufacturing sectors would deepen the social impact understanding.
- Research on tariff timing—pre-emptive vs. reactive—could enhance predictive models for policy forecasting.

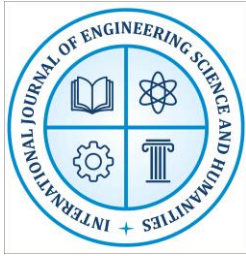


International Journal of Engineering, Science and Humanities

An international peer reviewed, refereed, open-access journal
Impact Factor 7.9 www.ijesh.com ISSN: 2250-3552

References

1. Baulch, B. (1997). Transfer costs, spatial arbitrage, and testing for food market integration. *American Journal of Agricultural Economics*, 79(2), 477–487.
2. Bown, C. P. (2020). The US–China trade war and Phase One agreement. *Peterson Institute for International Economics*. <https://www.piie.com>
3. Chand, R., & Tandon, A. (2018). India’s rising food inflation: Causes and consequences. *Indian Journal of Agricultural Economics*, 73(1), 1–12.
4. Counterpoint Research. (2021). *India smartphone market tracker Q4 2021*. <https://www.counterpointresearch.com>
5. Department for Promotion of Industry and Internal Trade (DPIIT). (2021). *PLI Scheme progress report*. Government of India.
6. Directorate General of Foreign Trade (DGFT). (2021). *Export-Import Data Bank*. <https://www.dgft.gov.in>
7. Economic Times. (2021, July). India’s tariff policies push local brands. *The Economic Times*. <https://economictimes.indiatimes.com>
8. Evenett, S. J., & Fritz, J. (2020). Going it alone? Trade policy after three years of populism. *Global Trade Alert, CEPR*.
9. Financial Express. (2021). Impact of tariff hikes on consumer goods: A ground-level report. *Financial Express*. <https://www.financialexpress.com>
10. Government of India. (2019). *National Policy on Electronics 2019*. Ministry of Electronics and Information Technology (MeitY).
11. Government of India. (2020). *PLI Scheme guidelines for large-scale electronics manufacturing*. Ministry of Electronics and Information Technology.
12. ICEA. (2021). *Value addition in smartphone manufacturing in India*. India Cellular & Electronics Association. <https://www.icea.org.in>
13. IDC India. (2021). *India consumer electronics pricing trend report*. <https://www.idc.com>
14. Indian Brand Equity Foundation (IBEF). (2020). *Indian electronics industry overview*. <https://www.ibef.org>
15. Jain, P., & Bansal, M. (2020). Challenges in localising India’s smartphone value chain. *Observer Research Foundation Occasional Paper*, 292.
16. Kapoor, R., & Sengupta, R. (2021). Production-linked incentives and India’s manufacturing challenge. *Economic & Political Weekly*, 56(12), 32–38.
17. Kumar, A. (2020). Cost-push inflation in India: Sectoral trends. *Reserve Bank of India Bulletin*, 74(5), 55–63.
18. LiveMint. (2021). CPI inflation spikes after tariff increases: MoSPI data explained. *LiveMint*. <https://www.livemint.com>



International Journal of Engineering, Science and Humanities

An international peer reviewed, refereed, open-access journal
Impact Factor 7.9 www.ijesh.com ISSN: 2250-3552

19. Ministry of Commerce and Industry. (2020). *Annual Trade Performance Review 2019–20*. Government of India.
20. Ministry of Electronics and IT. (2020). *Electronics production and export dashboard*. <https://www.meity.gov.in>
21. Ministry of Finance. (2020). *Union Budget Tariff Notifications*. <https://www.indiabudget.gov.in>
22. Ministry of Statistics and Programme Implementation (MoSPI). (2021). *Consumer Price Index data archive*. <https://www.mospi.gov.in>
23. Ministry of Statistics and Programme Implementation (MoSPI). (2021). *Wholesale Price Index data*. <https://www.mospi.gov.in>
24. Mehta, A. (2020). Dependency on Chinese components in India's electronics sector: A review. *Observer Research Foundation*.
25. NITI Aayog. (2021). *Strategy for boosting domestic manufacturing in electronics*. Government of India.
26. Panagariya, A. (2020). *India Unlimited: Reclaiming the Lost Glory*. HarperCollins Publishers.
27. PwC India. (2020). *Making electronics manufacturing globally competitive: Policy suggestions*. PricewaterhouseCoopers Pvt. Ltd.
28. Rao, S. (2019). Import substitution in Indian economic history: Lessons for today. *South Asia Economic Journal*, 20(1), 21–40.
29. Reserve Bank of India (RBI). (2020). *Handbook of Statistics on Indian Economy*. <https://www.rbi.org.in>
30. Sharma, A., & Verma, D. (2020). Tariff barriers and inflation transmission: Evidence from India. *Asian Economic Policy Review*, 15(1), 121–138.
31. The Hindu Business Line. (2021). Are tariff hikes hurting Indian consumers? A market report. *The Hindu Business Line*.
32. Times of India. (2021). Indian electronics brands struggle despite protectionist policy. *TOI Business*. <https://timesofindia.indiatimes.com>
33. Todaro, M. P., & Smith, S. C. (2015). *Economic Development* (12th ed.). Pearson Education.
34. UNCTAD. (2020). *World Investment Report: International production beyond the pandemic*. United Nations Conference on Trade and Development.
35. World Bank. (2021). *World Integrated Trade Solution (WITS) – India tariffs and imports database*. <https://wits.worldbank.org>