

# Effect of Goods & Services Tax on Inflation and Consumer Prices: An Empirical Study

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## Abstract

The implementation of the Goods and Services Tax in India on July 1, 2017, marked a significant overhaul of the country's indirect tax system. By unifying various central and state taxes into a single tax structure, GST aimed to streamline taxation and create a common national market. Its impact on inflation and consumer prices has been a subject of extensive analysis and debate.

Overall, while GST introduced initial inflationary pressures, particularly in non-essential goods and certain services, its long-term effects have been more balanced. The reduction in cascading taxes and the availability of input tax credits have helped stabilize consumer prices over time. However, the complexity of the GST structure, with multiple tax slabs, has led to some confusion and compliance challenges. Ongoing efforts to simplify the tax system could enhance its effectiveness and consumer perception. This study aims to provide insights into the effect of GST on inflation and consumer prices.

**Keywords:** Goods and Services Tax, inflation, consumer prices, CPI, essential-goods, non-essential goods, services sector.

## 1. Introduction

The introduction of the Goods and Services Tax in India marked a historic shift in the country's indirect taxation system. Launched on July 1, 2017, GST aimed to unify a complex array of central and state taxes into a single tax regime "one nation, one tax" and intended to bring about transparency, reduce cascading taxes, and create a common national market.

Prior to GST, India had a fragmented tax structure involving multiple taxes levied by both the central and state governments, such as excise duty, service tax, VAT, central sales tax, entry tax, and more. This led to tax cascading, increased compliance costs, and inefficient allocation of resources. The Constitution (101st Amendment) Act, 2016 paved the way for the introduction of GST, replacing 17 indirect taxes with a unified tax structure. GST is a destination-based, multi-stage tax levied at each point of sale, with full input tax credit available. Petrol, Diesel, Cement and Steel are excluded from Goods & Service Tax.

## GST Collection Breakdown Financial Year 2024–25

- Central GST (CGST): ₹4.14 lakh crore
- State GST (SGST): ₹5.16 lakh crore
- Integrated GST (IGST): ₹11.25 lakh crore
- Compensation Cess: ₹1.42 lakh crore

The fiscal year concluded with a robust March 2025 collection of ₹1.96 lakh crore, reflecting a 9.9% increase compared to March 2024.

## Top 5 states by GST revenue in FY 2024–25

1. Maharashtra: ₹3.60 lakh crore
2. Karnataka: ₹1.60 lakh crore
3. Gujarat: ₹1.37 lakh crore
4. Tamil Nadu: ₹1.31 lakh crore
5. Haryana: ₹1.19 lakh crore

**Table - 1**  
**GST Rate Table**

GST Rate (%)	Category	Examples
0%	Exempted Goods & Services	Fresh fruits, vegetables, milk, healthcare, education services
5%	Essential Goods	Edible oils, sugar, tea, coffee, spices, coal, transport services (passenger)
12%	Standard Goods	Processed foods, computers, cell phones, fertilizers, textiles
18%	Majority of Goods & Services	Restaurants, telecom services, construction, capital goods
28%	Luxury and Sin Goods	Luxury cars, tobacco products, aerated drinks, air conditioners

Table showing GST rates on goods and services.

**Table - 2**  
**GST Model in India: CGST, SGST, IGST**

Component	Levied By	Applicable On
CGST	Central Govt	Intra-state supply of goods/services
SGST	State Govt	Intra-state supply of goods/services
IGST	Central Govt	Inter-state and import/export of goods/services

- Intra-state transactions: **CGST + SGST**
- Inter-state transactions: **IGST** (shared between Centre and State)

## 2. Statement of the Problem

Despite the intent to simplify taxation and promote economic growth, the rollout of GST has encountered multiple hurdles. Businesses, especially small and medium enterprises (SMEs), have faced difficulties in compliance, understanding tax slabs, and dealing with input tax credit mechanisms. Moreover, the fluctuating tax rates and procedural complexity have sometimes undermined the original intent of the reform. Therefore, it is important to examine whether GST has achieved its stated objectives and to identify areas that need policy adjustments as regards inflation and consumer prices.

## 3. Inflation

As of April 2025, India's inflation indicators reflect a significant easing, marking a favourable economic

environment.

## I. Headline Inflation

**Consumer Price Index (CPI):** Retail inflation declined to **3.16%** in April 2025, down from 3.34% in March, reaching its lowest level since July 2019. This rate is below the Reserve Bank of India's (RBI) medium-term target of 4%.

**Food Inflation:** The Consumer Food Price Index (CFPI) registered a significant decrease to **1.78%** in April from 2.69% in March, primarily due to falling prices in vegetables, pulses, cereals, and meat.

### Urban vs. Rural Inflation

- **Urban Areas:**

- Headline inflation stood at **3.36%**, slightly down from 3.43% in March.
- Food inflation decreased to **1.64%**, compared to 2.48% in March

- **Rural Areas:**

- Headline inflation was **2.92%**, down from 3.25% in March.
- Food inflation declined to **1.85%**, from 2.82% in the previous month.

### Inflation for Agricultural and Rural Labourers

**CPI for Agricultural Labourers (CPI-AL):** Inflation reduced to **3.48%** in April from 3.73% in March.

**CPI for Rural Labourers (CPI-RL):** Inflation decreased to **3.53%** in April from 3.86% in March.

These figures indicate a substantial reduction from April 2024 levels, where CPI-AL and CPI-RL were at 7.03% and 6.96%, respectively.

## II. Wholesale Price Index (WPI)

The WPI inflation rate fell to **0.85%** in April 2025 from 2.05% in March, marking a 13-month low. This decline was driven by reductions in food, fuel, and manufactured goods prices .

As of January 2025, India's Consumer Price Index (CPI) indicates a significant easing of inflationary pressures, reaching a six-year low.

**Chart – 1**  
**Showing Wholesale Price Index based Inflation**

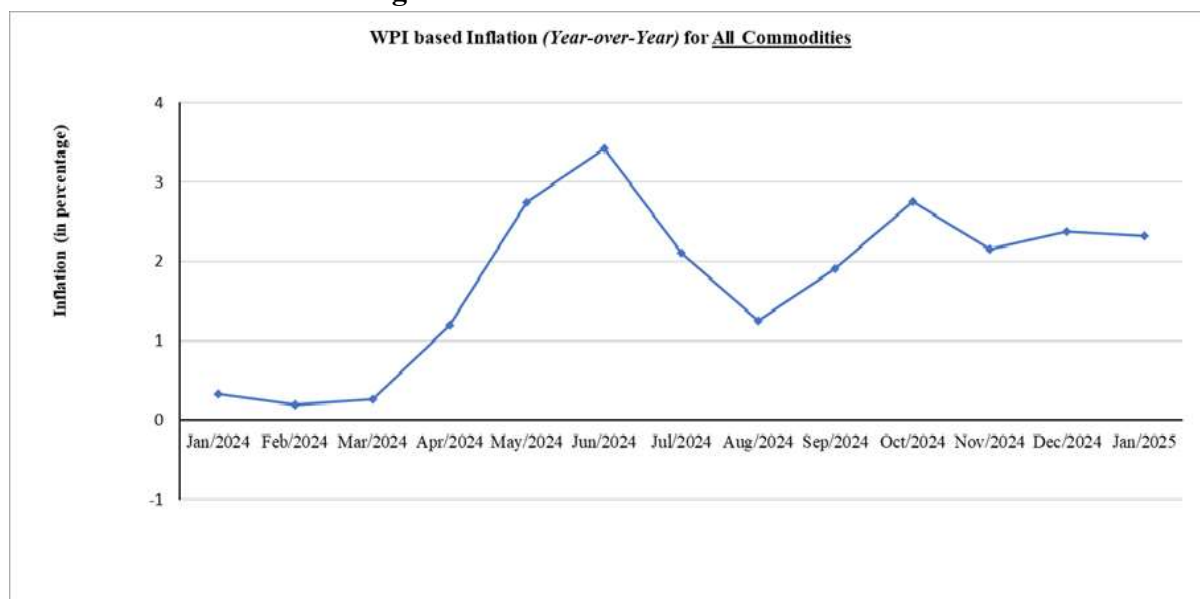


Chart Showing Wholesale Price Index based Inflation from January 2024 to January 2025.

#### 4. Inflation Trends Post-GST implementation

**Retail Inflation:** India's retail inflation, as measured by the CPI, has shown a notable decline. In April 2025, the year-on-year inflation rate dropped to 3.16%, the lowest since July 2019. This marks a consistent downward trend from 5.22% in December 2024 and 4.31% in January 2025.

**Food Inflation:** Food inflation has also eased significantly. In March 2025, the Consumer Food Price Index (CFPI) recorded an inflation rate of 2.69%, down from 4.06% in February 2025 .

**Wholesale Inflation:** The WPI inflation rate fell to a 13-month low of 0.85% in April 2025, down from 2.05% in March 2025

**Sectoral Price Adjustments**  
**Essential Commodities:** Post-GST, many essential goods experienced price stabilization or even a slight decrease due to the subsumption of multiple indirect taxes. For instance, the prices of vegetables, pulses, and cereals have shown a downward trend, contributing to reduced food inflation.

**Luxury and Non-Essential Goods:** Certain luxury items and non-essential goods saw price increases due to higher GST slabs. However, these constitute a smaller portion of the average consumer's expenditure, mitigating their overall impact on inflation.

#### Key CPI Highlights – March 2025

**Headline Inflation (All-India CPI):** 3.16% year-on-year, down from 3.34% in March 2025. This marks the lowest inflation rate since July 2019 and remains below the Reserve Bank of India's (RBI) 4% target for the third consecutive month.

**Food Inflation (CFPI):** 1.78%, a sharp decline from 2.69% in March. This is the lowest food inflation since October 2021, primarily due to an 11% drop in vegetable prices, along with reductions in pulses, cereals, and meat.

#### Urban vs. Rural Inflation

- **Urban Inflation:**
  - Headline: 3.36% (down from 3.43% in March)
  - Food: 1.64% (down from 2.48% in March)
- **Rural Inflation:**
  - Headline: 2.92% (down from 3.25% in March)
  - Food: 1.85% (down from 2.82% in March)

The consistent decline in both urban and rural inflation rates reflects a broad-based moderation in price pressures.

#### Sectoral Inflation Breakdown

- **Housing:** 3.00%
- **Education:** 4.13%
- **Health:** 4.25%
- **Transport & Communication:** 3.73%
- **Fuel & Light:** 2.92% (up from 1.42% in March)

While most sectors experienced stable or declining inflation, the fuel and light category saw an uptick, indicating some volatility in energy prices.

**Table - 3**  
**Pre-GST vs Post-GST Tax Rates by Sector**

Sector	Pre-GST Avg. Tax Rate	Post-GST Avg. Tax Rate
FMCG	~24%	18%
Automobiles	~30-45%	28% + Cess
Telecom	~15%	18%
Textiles	~7%	5–12%
Logistics	~26%	18%

## 5. Objectives of the Study

1. To analyse the structure and framework of the GST regime in India.
2. To examine the impact of GST on various sectors of the Indian economy.
3. To examine the effect of GST on inflation.
4. To examine the effect of GST on consumer prices.
5. To provide policy recommendations for low inflation and consumer prices.

## 6. Review of Literature

### 1. GST and Inflation in India

The implementation of the Goods and Services Tax (GST) in India in July 2017 marked a significant shift in the country's indirect taxation system. Several studies have examined its impact on macroeconomic variables, particularly inflation.

**Chakraborty and Chakraborty (2017)** analysed the short-term inflationary impact of GST and found that while there were price increases in select sectors, the overall effect on headline inflation was moderate due to the broad tax base and rationalized rates.

**RBI (2018)**, in its annual report, noted that GST's impact on inflation was largely muted and transitory. It emphasized that supply-chain efficiencies and input tax credits helped moderate price pressures.

**NIPFP (2019)** conducted a sectoral analysis and reported differential effects, with essential goods and services facing minimal inflationary pressure, while segments like restaurants and entertainment showed upward price movements due to higher tax rates.

**Choudhury et al. (2020)** explored inflation expectations post-GST and found that consumer perceptions of rising prices were not always supported by actual inflation data, highlighting a psychological inflation effect.

These studies collectively suggest that while GST initially contributed to some price increases, particularly in services, its long-term inflationary impact appears limited and sector-specific.

### 2. International GST Experiences

Several countries have implemented GST (also known as VAT) before India, providing valuable comparative insights:

**Australia (introduced in 2000):** Studies such as by Warren (2001) and the Australian Bureau of Statistics (2001) indicated a short-lived inflation spike post-implementation, largely due to the tax's broad coverage. However, inflation stabilized within a year due to offsetting income tax cuts and exemptions on essentials.

**Malaysia (introduced in 2015, repealed in 2018):** The GST led to noticeable public discontent over perceived price increases. Research by Habibullah et al. (2016) linked the tax to increased cost of living, though actual inflation remained within target. Political backlash led to its replacement by the SST (Sales and Services Tax).

**Canada (introduced in 1991):** Bird and Gendron (1998) observed that the introduction of GST was inflation-neutral in the medium term, aided by strong government communication and transitional tax credits to households.

**New Zealand:** Considered a model GST system with a uniform rate and minimal exemptions. Studies show minimal inflationary effects due to the simplicity and transparency of the regime (Treasury of NZ, 1990).

International experience shows that while GST often causes a temporary uptick in inflation, long-term price stability depends on policy design, rate structure, and public communication.

## 7. Research Gap

Despite a rich body of literature, several gaps remain:

**Lack of longitudinal domestic studies:** Most Indian analyses focus on short-term inflation effects. Long-term empirical studies examining sustained inflation trends post-GST are scarce.

**Limited micro-level data:** There is inadequate examination of household-level inflation burdens across different income groups, particularly among the informal sector and rural populations.

**Comparative policy analysis:** Few studies offer a direct, data-driven comparison between India's GST experience and international benchmarks, limiting the ability to draw actionable insights for policy reform.

**Behavioural impact and expectations:** There is limited research on how GST affects consumer and business inflation expectations over time, which can influence real economic outcomes beyond nominal price changes.

### Research Methodology

This study adopts both **descriptive** and **analytical** research designs.

The **descriptive design** helps to portray an accurate profile of the respondents and their responses by summarizing the data using quantitative descriptions.

The **analytical design** is employed to examine the relationships and patterns within the collected data through statistical tools and inference methods.

### Sample Size and Sampling Technique

A total of **150 respondents** were selected using **Stratified Random Sampling**. This method ensures that the sample is representative of the population by dividing it into homogeneous subgroups (strata) such as age, gender, or income level, and randomly selecting respondents from each stratum.

### Tools for Data Collection

The data was gathered using a **structured questionnaire**, which included both closed-ended and scaled questions. This instrument allowed for uniform data collection and easier quantification of responses.

### Tools for Data Analysis

The collected data was analysed using **SPSS** and **Microsoft Excel**. The following statistical tools were utilized:

- **Descriptive Statistics** (mean, frequency, percentage, standard deviation)
- **Chi-square Test** (for association between categorical variables)
- **Correlation Analysis** (to study relationships between variables)

- **ANOVA (Analysis of Variance)** (to compare means among groups)

## 8. Limitations of the Study

**Sample Size Constraint:** The findings are based on responses from only 150 participants, which may not capture the entire diversity of the population.

**Self-Reported Data:** Respondents may have provided socially desirable answers rather than their true opinions.

**Geographical Limitation:** The sample was collected from limited geographic areas, potentially affecting the generalizability of the results.

**Time Constraints:** Due to limited time, longitudinal data could not be collected to observe changes over time.

## 9. Demographic Profile of Respondents

### Gender-wise Distribution

**Interpretation:** Identify the gender balance of respondents. For example, a near-equal distribution suggests broad representation; skewed data may bias perceptions.

52% male, 48% female.

### Table 4: Age-wise and Income-wise Distribution

- **Interpretation:**

- **Age:** Shows how perceptions might differ across age groups (e.g., younger respondents may have lower awareness or different consumption patterns).
- **Income:** Important for analysing how economic strata perceive and are impacted by GST.
- Higher income groups may report less price sensitivity, while middle/lower income may feel greater burden.

**Table - 4**  
**Sample Demographics**

Demographic Variable	Category	Frequency (n)	Percentage (%)
<b>Gender</b>	Male	85	56.7%
	Female	65	43.3%
<b>Age Group</b>	18–25 years	40	26.7%
	26–35 years	55	36.7%
	36–45 years	35	23.3%
	46+ years	20	13.3%
<b>Income Level</b>	Below Rs. 20,000	30	20.0%
	Rs.20,000– Rs.50,000	60	40.0%
	Rs.50,001– Rs.80,000	40	26.7%
	Above Rs.80,000	20	13.3%
<b>Location</b>	Urban	95	63.3%

Demographic Variable	Category	Frequency (n)	Percentage (%)
	Rural	55	36.7%

Table showing profile of the respondents.

## 10. Perception on GST impact

### Awareness about GST (Likert Scale)

**Interpretation:** Determine how well consumers understand GST—mean Likert scores indicate general awareness.

Mean score 3.8/5 indicates moderate to high awareness.

### Consumer Perception on GST Effectiveness

**Interpretation:**

- Evaluate if GST is perceived to be beneficial or detrimental.
- Split perceptions across dimensions like price stability, tax transparency, or complexity.

### Impact on Household Expenditure

#### Monthly Expenditure Changes Pre- and Post-GST

- **Interpretation:** Compare mean/median household expenditure before and after GST.
- Look for patterns such as increased food or utility expenses.
- 10% rise in average expenditure may indicate inflationary pressure post-GST.

#### Impact on Different Consumer Goods

- **Interpretation:**
- Visual comparison of price changes across categories.
- Goods like personal care or transport may show a higher impact.
- >15% price increase in FMCG indicates significant burden on everyday essentials.

### Sector-Wise Analysis

#### Perceived Price Change in Sectors

- **Interpretation:**
- Identify which sectors are most affected by GST from the consumer perspective.
- *E.g.*, Telecom, Textiles, Real estate and services often perceived as having high post-GST price escalation.

### Statistical Testing

#### Chi-square test on GST awareness vs price sensitivity

- **Interpretation:**
- Test whether awareness of GST influences sensitivity to price changes.
- *Significant p-value* ( $<0.05$ ) implies awareness has a measurable effect on perception.

#### ANOVA – GST impact across income groups

- **Interpretation:**
- Compare means of GST impact perception across income brackets.
- *Significant F-value* suggests income group affects how GST impact is perceived.

## Correlation between GST perception and inflation sensitivity

- **Interpretation:**
  - Positive correlation implies that negative GST perception aligns with higher inflation sensitivity.
  - $r = 0.65$  would suggest a strong link between the two

## 11. GST Rate vs Consumer sentiment by Sector

A scatter or bar chart can show the relationship between GST rate (X-axis) and consumer sentiment (Y-axis). Here's a textual preview:

**Table – 5**  
**GST RATE VS CONSUMER SENTIMENT BY SECTOR**

Sector	Avg. GST Rate (%)	Consumer Sentiment (1–10)
FMCG	12–18	7
Real Estate	5–12	4
Healthcare & Edu.	0	9
Services & Retail	18	6

### Interpretation:

- Highest sentiment is where GST is lowest or exempt (Healthcare & Edu.).
- Telecom, Textiles, Real Estate sees a sentiment dip due to confusion and cost increase.
- Moderate rates and essential nature keep FMCG sentiment strong.

## 12. Findings and Suggestions

### 1. Simplify Slab Structure

- Authorities and service providers should move towards a minimal number of slabs with clearly defined ranges.
- Each slab should correspond to a specific, easy-to-understand price or rate.
- Gradual changes in slab rates should be avoided to prevent sudden, unexpected bill increases.
- Regulatory bodies must periodically review and adjust slabs in a transparent manner with public consultations.

### 2. Transparent Pricing Norms

Transparent pricing is essential for building trust and fairness between service providers and consumers. Often, hidden charges, unclear fee components, or lack of itemized billing create dissatisfaction and disputes.

Transparent pricing norms empower consumers, promote healthy competition among providers, and foster a fair marketplace.

### 3. Consumer Awareness Programs

Consumers can only benefit from simplified slabs and transparent pricing if they understand them well. Awareness programs are critical in educating consumers about their rights, pricing structures, and available choices.

An informed consumer base will lead to more responsible consumption, timely grievance redressal, and overall market efficiency.

#### 4. Strengthening IT Infrastructure

Modernizing and strengthening IT infrastructure is key to supporting all the above initiatives effectively. Robust digital platforms enable transparent billing, consumer education, and real-time grievance handling. Improved IT infrastructure not only supports transparency but also enhances operational efficiency, reducing costs for providers and consumers alike.

### 13. Conclusion

The Goods and Services Tax (GST) has significantly transformed India's indirect tax landscape since its implementation in July 2017. This empirical study aimed to assess its impact on inflation and consumer prices, utilizing data from the Consumer Price Index (CPI), Wholesale Price Index (WPI), and sector-specific analyses.

The study suggests that while GST may have led to short-term price adjustments, its long-term impact on inflation has been marginal. The initial rise in prices was transitory, with inflation rates returning to pre-GST levels over time.

GST has contributed to a more transparent and efficient tax system, leading to price stabilization in essential commodities and a decline in overall inflation rates. Policymakers should continue to monitor GST's impact, ensuring that it remains balanced to protect consumer interests while sustaining revenue efficiency.

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