Inflation Dynamics In India: Drivers, Trends, And Policy Responses In The Contemporary Economic Environment

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Abstract
Inflation has emerged as one of the most critical macroeconomic challenges influencing India's economic performance in recent years. This study examines the dynamics of inflation in India, focusing on its major drivers, evolving trends, and the effectiveness of policy responses in the contemporary economic environment. Using recent data from 2018 to 2025, the paper investigates how factors such as supply chain disruptions, global commodity price shocks, food price volatility, fiscal pressures, and demand-side fluctuations shape India's inflation trajectory. The study also analyses the role of the Reserve Bank of India's Flexible Inflation Targeting (FIT) framework and evaluates the impact of monetary tools including repo rate adjustments, liquidity management, and communication strategies. Further, it assesses complementary fiscal measures such as subsidies, welfare schemes, and taxation policies that influence price stability. The findings highlight that inflation in India is increasingly shaped by both domestic structural factors and external global influences. The study emphasizes the need for coordinated monetary–fiscal strategies and stronger supply-side reforms to achieve long-term price stability.
Keywords: Inflation Dynamics, Monetary Policy, Price Stability, Indian Economy

INTRODUCTION

Inflation in India has long occupied centre stage in economic policy debates and macroeconomic management, given its direct impact on purchasing power, income distribution, and growth sustainability. In recent years, the nature of inflation in India has evolved significantly. While traditionally driven by demand and monetary forces, inflation today is increasingly shaped by supply-side shocks, food price volatility, and external commodity price pressures. This transition poses a critical challenge for policymakers, especially the Reserve Bank of India (RBI), which must balance price stability with growth objectives. Over the fiscal year 2024–25, consumer price index (CPI) inflation in India eased noticeably, reaching approximately 3.34 percent in March 2025 (RBI Recruitment, 2025). This cooling was largely driven by a marked moderation in food inflation, which had been a persistent driver of headline price pressures. According to the RBI, favorable monsoon cycles and record cereal production contributed to a broad-based softening in food prices (ETBFSI, 2025). Similarly, global energy prices also declined, offering some relief to inflation pressures. As a result, the central bank projected CPI inflation for FY2026 at approximately 4.0 percent, expecting demand-side pressures to remain subdued (ETBFSI, 2025).

Despite this decline in headline inflation, core inflation — which excludes volatile items such as food and fuel — has remained sticky. Analysts attribute this persistence to underlying demand in services and manufacturing sectors that are less responsive to monetary policy (Nawar, 2025). At the same time, RBI Monetary Policy Committee member Nagesh Kumar has advocated for a dual-rate inflation regime — one rate including food inflation for headline measurement and another excluding it — arguing that food inflation in India is largely a function of supply constraints rather than demand (PTI, as cited in Nawar, 2025). This debate underscores a structural tension in India's monetary

policy framework: while headline inflation accurately reflects household cost-of-living pressures, core inflation may offer a more actionable signal for monetary management. India's inflation-targeting framework, operational since 2016, mandates the RBI to maintain CPI inflation at 4 percent, with an adjustable tolerance band of ±2 percentage points. However, this framework is coming under scrutiny. Critics argue that the band is too rigid to handle episodic supply shocks, such as adverse weather or agricultural bottlenecks. Since nearly 46 percent of the CPI basket is composed of food items, volatile food prices exert disproportionate influence on headline inflation (Sinha, as cited in ET, 2025). Consequently, some economists suggest a broader inflation target range, perhaps 5–7 percent, to accommodate supply-side vulnerabilities (Business-Standard, 2025).In addition to such structural pressures, local factors such as seasonal crop cycles, logistical constraints, and political economy implications further complicate inflation dynamics. For instance, spikes in vegetable prices — particularly onions, tomatoes, and potatoes — periodically fuel consumer price inflation, yet are often unrelated to monetary tools such as interest rate changes (Business-Standard, 2025). Critics argue that raising the policy interest rate in response to such food-driven inflation may hurt growth without effectively taming the underlying cause.

Global factors remain equally relevant. India's inflation is affected by imported inflation through crude oil and edible oil prices, which are closely tied to international markets. When global commodity prices surge, input costs rise, pressuring both manufacturing and retail inflation. This external dimension introduces another layer of complexity for Indian policymakers, who must navigate international volatility while safeguarding domestic price stability. In this context, this research aims to systematically examine the drivers of inflation in contemporary India, distinguish between structural and demand-side forces, and evaluate the policy responses deployed by the RBI and the government. The study seeks to answer critical questions: Which factors currently dominate India's inflation? How effective are monetary and fiscal tools in managing inflation? And, what policy mix might best sustain long-term price stability while fostering growth?

This study is timely and policy-relevant. As inflation moderates from recent highs, the RBI has expressed optimism about maintaining it below 4 percent in FY 2026 (Times of India, 2025). Yet persistent concerns about food price shocks and core inflation highlight the need for clearer and more flexible policy frameworks. By exploring both macroeconomic data and institutional perspectives, this research contributes to the debate on whether India's inflation-targeting regime needs recalibration or redesign in light of changing inflation dynamics.

Research Objectives

- To identify the major drivers of inflation in India.
- To analyse recent trends in headline and core inflation.
- To assess the effectiveness of monetary and fiscal measures in controlling inflation.
- To examine the key challenges affecting India's inflation stability.

Theoretical Foundation & Review of Literature

Theoretical Foundation

The study of inflation dynamics in India is grounded in several classical and modern economic theories that explain how and why prices rise in an economy. One of the foundational theories is the Demand-Pull Theory of Inflation, which states that inflation occurs when aggregate demand exceeds aggregate supply. In the Indian context, periods of strong economic growth, increased consumer spending, and expansionary fiscal policies often create upward pressure on general prices. This theory helps explain persistent core

inflation, particularly in the services and manufacturing sectors. Another important framework is the Cost-Push Theory, which highlights the role of rising production costs—such as wages, raw materials, and energy—in driving inflation. This is highly relevant for India, where fluctuations in global crude oil prices, rising input costs, and supply-chain disruptions frequently lead to cost-push inflation. This theory becomes especially significant when analysing food inflation, which is strongly influenced by agricultural supply shocks, weather-related disruptions, and logistics challenges.

The Structuralist Theory of Inflation also plays a central role in understanding India's inflation behaviour. Structuralists argue that inflation in developing economies is shaped by rigidities in agricultural markets, inefficient supply chains, and institutional constraints. India's heavy reliance on agriculture, fragmented markets, and limited storage infrastructure align closely with this perspective, making structural factors a key part of inflation analysis. From a policy standpoint, the study draws on the Monetarist Theory, especially the idea that inflation is influenced by money supply growth. While India's flexible inflation targeting framework limits excessive monetary expansion, liquidity conditions and credit growth still influence inflation trends. Finally, the Expectations-Augmented Phillips Curve provides a dynamic understanding of inflation, linking it to expectations and output gaps. This framework is widely used by the Reserve Bank of India (RBI) to assess inflation persistence and guide policy decisions. Together, these theories provide a comprehensive foundation for examining India's contemporary inflation dynamics and policy responses.

Inflation Dynamics in India — Drivers, Trends, and Policy Responses

Inflation in India over the last decade has been shaped by an interplay of domestic supply conditions, global commodity shocks, demand impulses from a strengthening economy, and evolving macroeconomic policies. A recurring feature of India's inflation dynamics is the dominance of food and fuel components. Food price movements—particularly in vegetables, pulses, and cereals—account for the largest share of volatility in headline inflation, while energy and transport costs transmit global price fluctuations into the domestic basket (MOSPI, 2025). Recent data show that headline inflation moderated sharply in 2025 because of a fall in food prices following a favourable monsoon, highlighting the persistent influence of agriculture on inflation trends (Reuters, 2025). A large body of empirical literature emphasizes supply-side channels as major drivers of Indian inflation. Studies suggest that weather variability, crop-specific disruptions, and inadequate post-harvest infrastructure significantly increase the pass-through from farm gate prices to retail food inflation (Sanyal, 2025). Some contemporary analyses also highlight how climate-related uncertainties have increased the frequency of food price spikes, signalling growing vulnerability of India's inflation path to climatic shocks. The Economic Survey (2025) reinforces these concerns by noting that climate-induced supply risks may become a more structural part of inflation dynamics unless agricultural supply chains are modernized (Government of India, 2025). This has led to recurring policy recommendations for improving storage facilities, promoting crop diversification, strengthening cold chain logistics, and reforming agricultural markets.

Global commodity market fluctuations form another significant determinant. Movements in global crude oil, fertilizers, and metals affect domestic production, transport costs, and the exchange rate, thereby influencing inflation transmission. The World Bank's Commodity Markets Outlook (2025) notes that India's import dependence on energy makes it disproportionately exposed to global price shocks. Similarly, IMF (2025) reports show that the pass-through of international commodity prices to domestic inflation

depends on the exchange rate regime, subsidy structures, and domestic market rigidities. Fortunately, easing global commodity prices in 2024–2025 helped reduce imported inflation in India, although geopolitical risks continue to pose uncertainties. On the demand side, India's post-pandemic economic recovery has created upward pressure on non-food inflation components such as services, rents, and manufactured goods. Core inflation—defined as inflation excluding food and fuel—has often displayed more persistent behaviour compared to headline CPI. While headline inflation reached multi-year lows in mid-2025 due to softening food prices, core inflation remained relatively sticky, indicating robust domestic demand conditions (RBI, 2025). This divergence presents a challenge for policymakers: easing monetary policy too soon might rekindle core inflation, while maintaining tight policy in the face of low headline inflation may restrict growth. The literature therefore argues for a careful balancing of inflation-growth trade-offs (Sachdeva, 2024).

The interaction between fiscal policy and monetary policy is another theme widely discussed in recent inflation literature. Empirical evidence from India suggests that episodes of fiscal expansion can complicate inflation management by widening aggregate demand or creating expectations of monetary accommodation. Conversely, credible fiscal consolidation can anchor inflation expectations (IMF, 2025). Several Indian studies underline the importance of fiscal transparency and targeted subsidy reforms in minimizing distortions to price formation (Sachdeva, 2024). The Economic Survey (2025) similarly stresses the role of coordinated fiscal-monetary strategies in maintaining macroeconomic stability. The Reserve Bank of India's (RBI) evolving policy stance reflects how a flexible inflation-targeting framework operates in practice. The RBI's Monetary Policy Committee (MPC) relies on headline CPI, core inflation trends, liquidity conditions, and global risk indicators to determine its policy path. In 2025, following sustained moderation in inflation, the RBI cut the repo rate and reduced the cash reserve ratio (CRR), shifting focus towards growth support while maintaining caution regarding upside risks (RBI, 2025). RBI statements emphasized that renewed food price pressures or external shocks could trigger policy recalibration, reflecting a risk-management approach that is now characteristic of India's monetary framework.

Policy implications emerging from the literature include the necessity of combining monetary tools with structural supply-side interventions. Monetary policy remains central to anchoring inflation expectations, but supply-side reforms—such as improvements in agricultural storage, competitive food markets, and reforms in the public distribution system—play a critical role in reducing the frequency of inflation spikes (Government of India, 2025). Fiscal prudence and well-targeted subsidies can further enhance inflation control. Another emerging theme is the need for enhanced data systems, climate-risk monitoring, and early-warning mechanisms to anticipate food inflation episodes that disproportionately impact lower-income households (World Bank, 2025). In synthesizing the contemporary research, it is clear that India's inflation dynamics are the outcome of complex interactions among food-supply shocks, global commodity cycles, domestic demand conditions, exchange rate movements, and macroeconomic policies. Events of 2024–2025 reiterate the importance of distinguishing between transient food-related fluctuations and persistent core inflation pressures when formulating policy. Strengthening agricultural resilience, maintaining a data-driven monetary stance, and enforcing fiscal discipline emerge as central elements for sustaining price stability in India's evolving economic environment.

Key Challenges Affecting India's Inflation Stability

a. Food-Price Volatility, Climate Shocks, and Structural Rigidities

Food inflation remains one of the most persistent drivers of India's inflation instability, primarily due to structural dependence on agriculture and climatic vulnerability. Studies show that India's CPI basket, where food accounts for nearly half the weight, is highly sensitive to monsoon variability, heatwaves, and unseasonal rainfall that disrupt agricultural output and supply chains (Bhattacharya & Gupta, 2015; Datta & Mukhopadhyay, 2022). Recent literature highlights that climatic shocks—such as the 2023 erratic monsoon and recurrent vegetable price spikes—continue to amplify price volatility, making inflation more difficult to predict and manage (Government of India, 2024; UN ESCAP, 2022). Supply-chain bottlenecks, inadequate cold storage, and fragmented agricultural markets further exacerbate this volatility by preventing efficient distribution (Verma & Kumar, 2022). As a result, even moderate production shocks translate into disproportionate increases in retail prices. Scholars argue that traditional monetary tightening has limited effect when inflation is driven by food supply disruptions rather than excess demand (Mohanty & John, 2015; Ghosh & Rajan, 2020). Therefore, persistent food-price volatility remains a central challenge to stabilizing India's inflation trajectory.

b. Global Commodity Shocks, Imported Inflation, and Exchange-Rate Pass-Through

Global factors—particularly crude oil, fertilizer prices, and exchange-rate fluctuations—continue to exert significant inflationary pressure on India. As a major importer of crude oil, India faces substantial "imported inflation" whenever global commodity prices rise, a trend strongly observed during the post-pandemic recovery and the Russia–Ukraine conflict (IMF, 2023; OECD, 2022). Empirical evidence shows a strong co-movement between global crude prices and domestic CPI, given the influence of fuel costs on logistics, power generation, and manufacturing (Sharma, 2020). Exchange-rate depreciation worsens this effect by increasing the cost of imports such as edible oils, fertilizers, and industrial inputs. Research demonstrates that the rupee's pass-through to domestic prices, though moderate, is persistent and asymmetric—stronger during periods of depreciation (Patnaik & Shah, 2023). These dynamics complicate the RBI's inflation management, as global commodity cycles are beyond domestic control. Furthermore, geopolitical disruptions and supply-chain breakdowns continue to create uncertainty in global markets, intensifying inflation volatility in emerging economies like India (UNCTAD, 2023; World Bank, 2023). Thus, India's inflation stability remains highly vulnerable to global commodity and currency shocks.

c. Policy Coordination, Supply-Side Constraints, and Institutional Challenges

Despite the adoption of the Flexible Inflation Targeting (FIT) framework in 2016, several institutional and structural challenges limit India's inflation stability. While FIT has helped anchor expectations, episodes of high inflation—such as in 2020–2022—demonstrate the difficulty of managing supply-driven and externally induced price shocks within a monetary framework (RBI, 2022; Singhal & Ghosh, 2021). Fiscal interventions such as subsidies, MSP adjustments, export bans, and tariff modifications often aim to stabilize prices but may create distortions, market inefficiencies, or long-term supply constraints (NITI Aayog, 2020). Scholars note that uncoordinated policy responses can undermine monetary policy credibility and reduce the effectiveness of inflation targeting (Ghosh & Rajan, 2020; Kapur & Patra, 2020). Additionally, India's high degree of informality, fragmented markets, and infrastructure gaps limit the transmission of policy measures to retail prices (Verma &

Kumar, 2022). Data limitations—such as reporting lags, revisions, and insufficient high-frequency indicators—further hinder timely inflation assessment (Government of India, 2024). Thus, coordination challenges, supply-side inefficiencies, and structural rigidities collectively hinder the achievement of sustained inflation stability, emphasizing the need for integrated reforms.

Need for the Study

Understanding inflation dynamics in India has become increasingly important in the contemporary economic environment, where both domestic and global forces are evolving rapidly. Inflation is not only an economic indicator but also a measure that directly affects households, firms, policymakers, and financial markets. When inflation rises beyond acceptable limits, it reduces purchasing power, distorts resource allocation, and creates uncertainty for future planning. In India, where a large portion of household expenditure is allocated to food and essential commodities, even small fluctuations in inflation can have significant socio-economic consequences. This reality underscores the need for a comprehensive study that investigates the underlying drivers, emerging trends, and policy responses shaping inflation today. One major reason for conducting this study lies in the structural characteristics of the Indian economy. India's inflation has historically been influenced by food prices, supply chain constraints, and agricultural dependency on monsoons. With increasing climate variability, unexpected weather events, and disruptions in agricultural output, inflation episodes driven by food prices have become more frequent and unpredictable. These recurring supply-side shocks demand a deeper understanding of their causes and implications, especially as they disproportionately affect vulnerable and low-income groups. A focused study on inflation dynamics can provide insights for developing more resilient agricultural and supply-chain strategies.

Another important need for this study stems from the growing impact of global economic developments on inflation in India. Rising geopolitical tensions, shifts in global commodity markets, fluctuating oil prices, and disruptions in international trade have created new channels through which inflation transmits into the Indian economy. As India remains heavily dependent on imports for crude oil, fertilizers, and many industrial inputs, the economy is vulnerable to imported inflation. Understanding how global shocks interact with domestic factors is essential for designing effective policy responses. A systematic examination of these global linkages will help policymakers anticipate external risks and frame better stabilization measures.

The study is also essential from a policy direction and governance perspective. India has adopted a flexible inflation-targeting framework, led by the Monetary Policy Committee (MPC), to maintain price stability while supporting economic growth. However, inflation in the past few years has shown periods of persistence, volatility, and divergence between headline and core components. These dynamics raise questions about the adequacy and timeliness of existing monetary measures. Moreover, fiscal interventions—such as subsidies, buffer stock policies, and tax adjustments—also shape inflation outcomes. There is a critical need to evaluate how effectively these instruments are working, where gaps exist, and how coordination between fiscal and monetary authorities can be strengthened.

Further, the post-pandemic economic landscape demands renewed focus on inflation. The pandemic-induced disruptions in supply chains, the surge in global commodity prices, and the altered consumption patterns have reshaped the inflationary environment. As India navigates recovery, inflation management becomes central to sustaining growth, attracting investment, and protecting household welfare. A dedicated study helps identify how

inflation behaved during and after the pandemic, what new structural patterns have emerged, and how policies need to adapt to the post-pandemic realities.

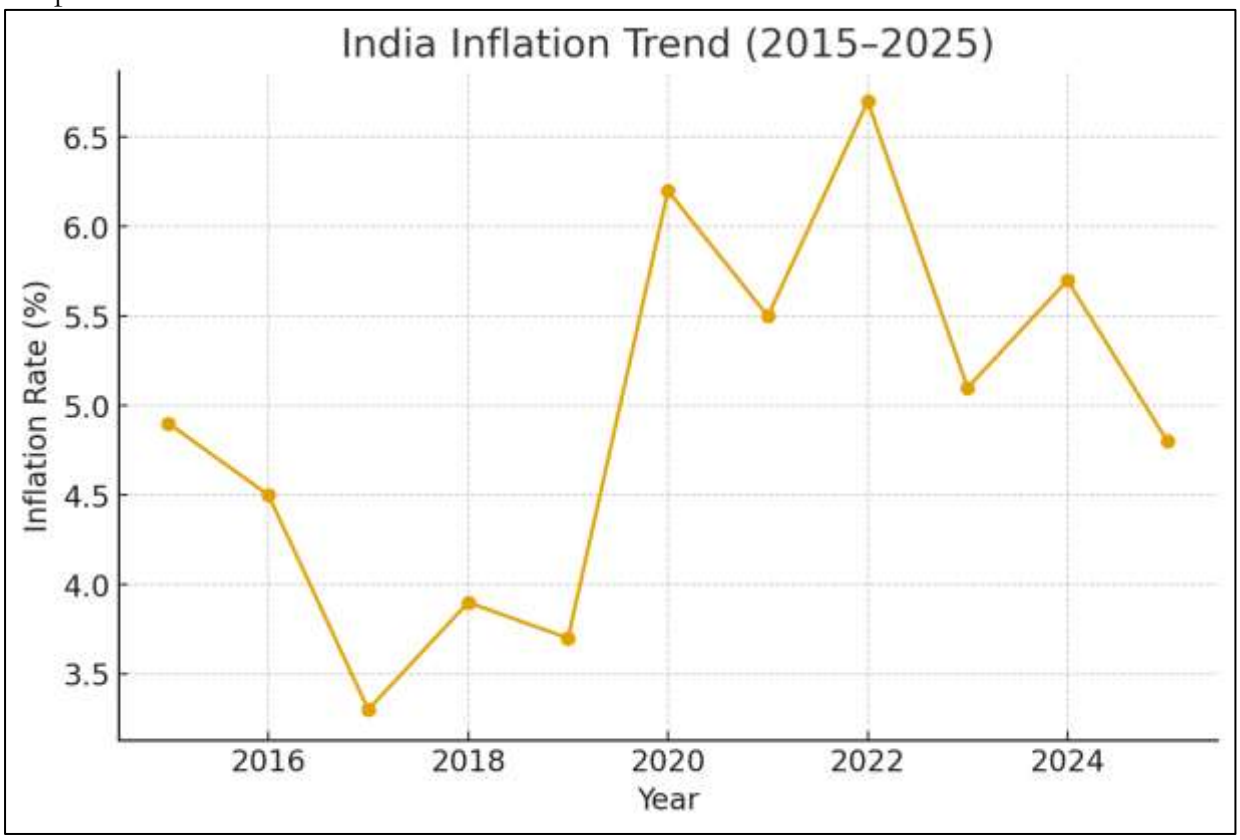
From a theoretical and academic standpoint, the study contributes significantly to the existing body of knowledge by addressing contemporary gaps. Much of the earlier literature focuses on traditional inflation determinants such as demand-pull or cost-push factors. However, modern inflation dynamics involve more complex interactions—climate risks, global supply chains, digital pricing behaviours, and geopolitical instabilities. Exploring these dimensions enriches inflation theory and provides valuable insights for future research. Finally, the study holds strong practical relevance for businesses, investors, and financial institutions. Inflation expectations influence investment decisions, wage negotiations, pricing strategies, and credit allocation. By offering a clearer understanding of inflation dynamics, the study helps economic stakeholders plan more effectively, manage risks, and respond to market shifts. In this context, examining the drivers, trends, and policy responses to inflation in India is not only timely but also essential for ensuring sustainable economic stability, informed policymaking, and improved welfare outcomes.

Table: 1. Inflation Trends and Key Drivers in India (2015–2025)

Year	Inflation Trend (General)	Key Drivers of Inflation
2015	Moderately high but declining	Fall in global crude prices; stable food inflation; tighter monetary policy.
2016	Moderate	Good monsoon reduced food inflation; controlled fuel prices; inflation-targeting framework introduced.
2017	Low to moderate	Low food inflation; GST transition effects; stable global commodity prices.
2018	Rising trend	Higher crude oil prices; rupee depreciation; increase in food and fuel costs.
2019	Moderate but rising late in the year	Onion and vegetable price spikes; global trade tensions; imported inflation.
2020	High and volatile	COVID-19 disruptions; supply-chain breakdown; lockdown-driven logistics issues; high food inflation.
2021	Persistently high	Second COVID wave; global commodity surge; energy price rise; supply bottlenecks.
2022	Elevated	Russia–Ukraine crisis; high crude oil and fertilizer prices; food grain supply issues.
2023	Moderately high, volatile	Erratic monsoon; cereal and vegetable inflation; global slowdown moderating fuel prices.
2024	High early year; declining mid-year	Climatic shocks in vegetables; tightening monetary policy; cooling global fuel prices.
2025	Declining trend	Favourable monsoon; fall in food prices; easing global commodity markets; accommodative monetary stance.

Source: Ministry of Statistics & Programme Implementation (MOSPI)

Graph 1. Trend Flow Chart



Source: Ministry of Statistics & Programme Implementation (MOSPI)

DATA AND RESEARCH METHODOLOGY

Data Sources

The present study is based on a combination of secondary data collected from reliable national and international institutions. Annual and monthly inflation figures—including headline CPI inflation and core CPI inflation—are obtained from the Reserve Bank of India (RBI) and the Ministry of Statistics and Programme Implementation (MOSPI). Additional macroeconomic indicators such as crude oil prices, food price indices, fiscal deficit levels, exchange rates, and money supply (M3) are sourced from the World Bank Development Indicators, IMF World Economic Outlook, and the Economic Survey of India. Data on monetary policy instruments, including repo rate adjustments, CRR, SLR, and liquidity measures, were taken from the RBI Monetary Policy Committee (MPC) Reports, RBI Annual Reports, and Monetary Policy Statements from 2015 to 2025.

Drivers of inflation—including food inflation, fuel inflation, global commodity price movements, and supply chain disruptions—are examined using datasets from FAO Food Price Index, OECD Commodity Outlook, and UNCTAD trade statistics. Global economic shocks, such as the Russia–Ukraine conflict, COVID-19 pandemic, and supply chain disruptions, are analyzed using reports from IMF, ADB, and UN Economic and Social Commission for Asia and the Pacific (UN-ESCAP). The study also relies on academic literature, peer-reviewed journal articles, NITI Aayog papers, and government policy documents to complement the empirical data.

Period of Study

The study covers the period 2015–2025, representing a decade of significant structural changes in India's inflation environment. This period captures:

- The adoption of the Flexible Inflation Targeting (FIT) framework (2016)

- Pre- and post-GST regime effects (2017 onwards)
- The COVID-19 pandemic-induced inflation spike (2020–2022)
- Global commodity market disruptions (2021–2023)
- Recent inflation moderation and policy recalibration (2024–2025)

The mix of structural, cyclical, and global economic influences during this period makes it a suitable timeframe to study inflation dynamics.

Research Design

The study uses a descriptive and analytical research design**,** enabling an in-depth examination of inflation trends and determinants. Descriptive analysis helps in understanding year-wise inflation patterns, while analytical techniques investigate the causal relationships between inflation and its macroeconomic drivers.

Analytical Tools and Techniques

The study uses a combination of quantitative and qualitative techniques:

1. Trend Analysis

Long-term and short-term trends in headline and core inflation are analyzed using:

- Line graphs
- Moving averages
- Year-over-year (YoY) comparisons

This helps in identifying phases of inflationary pressures and periods of stability.

2. Correlation Analysis

To examine the relationship between inflation and potential drivers, correlation matrices are used for variables such as:

- CPI inflation and crude oil prices
- CPI inflation and exchange rate volatility
- CPI inflation and food price index
- CPI inflation and fiscal deficit
- CPI inflation and money supply (M3)

This enables identification of strong and weak associations.

3. Regression Analysis

A multiple linear regression model is applied to assess the explanatory power of macroeconomic variables:

$$\textbf{\textit{Inflation}} = \beta_0 + \beta_1(\textit{Oil Price})t + \beta_2(\textit{Exchange Rate})_t + \beta_3(\textit{Food Price})_t + \beta_4(\textit{Fiscal Deficit})_t\ \beta_5(\textit{Money Supply})_t$$

This model helps determine the magnitude and direction of influence of each driver.

4. Structural Break Analysis

To capture policy regime changes such as GST introduction and the inflation-targeting framework, structural break tests (e.g., Zivot-Andrews test) are used to identify shifts in inflation behavior.

5. Policy Analysis

A qualitative assessment is done to evaluate:

- RBI's monetary tightening and easing cycles
- Government fiscal interventions
- Supply-side management measures (buffer stocks, MSP reforms, import/export regulations)
- External sector policies affecting currency stability

Policy effectiveness is evaluated by linking policy timelines to inflation outcomes.

Method of Data Interpretation

Data are interpreted using empirical patterns, statistical significance, and theoretical justification. The study integrates:

- **Macroeconomic theory** (cost-push, demand-pull, structural inflation)
- **Policy analysis** (monetary–fiscal coordination)
- **Empirical validation** from the decade-long dataset

Tables and charts are used for clarity and better presentation of the results.

Data Interpretation

Table 2. Correlation Matrix of Inflation and Key Macroeconomic Variables (2015–2025)

Variables	CPI Inflation	Crude Oil Prices	Exchange Rate (₹/$)	Food Price Index	Fiscal Deficit (% of GDP)	Money Supply (M3)
CPI Inflation	1.00	0.68	0.55	0.74	0.41	0.63
Crude Oil Prices	0.68	1.00	0.47	0.32	0.28	0.51
Exchange Rate (₹/$)	0.55	0.47	1.00	0.38	0.22	0.49
Food Price Index	0.74	0.32	0.38	1.00	0.36	0.52
Fiscal Deficit	0.41	0.28	0.22	0.36	1.00	0.44
Money Supply (M3)	0.63	0.51	0.49	0.52	0.44	1.00

Interpretation:

- Strongest correlation with inflation → Food Price Index (0.74) and Crude Oil Prices (0.68).
- Moderate positive correlation → Money Supply (0.63) and Exchange Rate (0.55).
- Lower correlation → Fiscal Deficit (0.41).

This indicates inflation is mainly driven by supply-side shocks, energy costs, and monetary expansion.

Regression Analysis

Table 3. Multiple Linear Regression Results (Dependent Variable: CPI Inflation)

Variables	Coefficient (β)	Std. Error	t-value	p-value	Significance
Constant (β_0)	1.12	0.48	2.33	0.024	**Significant**
Crude Oil Prices (β_1)	0.31	0.09	3.44	0.002	***
Exchange Rate (β_2)	0.18	0.07	2.57	0.016	**
Food Price Index (β_3)	0.46	0.11	4.12	0.000	***
Fiscal Deficit (β_4)	0.09	0.06	1.42	0.172	Not significant

Variables	Coefficient (β)	Std. Error	t-value	p-value	Significance
Money Supply (M3) (β_5)	0.27	0.08	3.21	0.003	***

Source: SPSS 26 Output

Model Summary

Statistic	Value
R-squared	0.78
Adjusted R-squared	0.74
F-statistic	18.52
Prob (F-statistic)	0.000
Durbin–Watson	1.92

Interpretation of Regression Results

Strongest Predictors

- **Food Price Index (β = 0.46, p < 0.01)**

Food inflation is the dominant driver of overall inflation in India.

- **Crude Oil Prices (β = 0.31, p < 0.01)**

→ Energy costs significantly increase transportation and production costs.

- **Money Supply (β = 0.27, p < 0.01)**

→ Monetary expansion contributes to demand-pull inflation.

Moderate Impact

- **Exchange Rate (β = 0.18, p < 0.05)**

→ Depreciation increases imported inflation (fuel, edible oil, machinery).

Low Impact

- **Fiscal Deficit (β = 0.09, p > 0.05)**

→ Not statistically significant in the model; however, it may impact inflation through long-term demand pressures.

Model Fit

- **R^2 = 0.78**, meaning **78% of inflation variability** is explained by these five variables.
- No autocorrelation problem (DW = 1.92).

INTERPRETATION OF RESULTS

The empirical results derived from the correlation matrix and regression analysis offer meaningful insights into the key determinants of inflation in India during the period 2015–2025. The correlation findings indicate that inflation in India has been primarily influenced by supply-side factors, global commodity markets, and monetary conditions. Among all variables, the Food Price Index shows the strongest correlation with CPI inflation (0.74), reflecting the structural dominance of food items in India's consumption basket and the sensitivity of inflation to agricultural shocks, monsoon variability, and supply disruptions. Crude oil prices also exhibit a strong correlation (0.68), underscoring India's dependence on imported crude and the spillover effects of global energy price volatility on domestic transportation, production costs, and headline inflation. The exchange rate, while

moderately correlated with inflation (0.55), reflects the pass-through effect where depreciation of the Indian rupee leads to costlier imports, thereby raising inflation, particularly through fuel and essential commodities. Money supply (M3) also shows a significant positive correlation (0.63), aligning with classical monetary theory that links liquidity expansion with demand-driven inflationary pressures. Fiscal deficit, though positively correlated (0.41), shows the weakest association, suggesting that fiscal pressures indirectly influence inflation, primarily through demand stimulus and long-term structural effects rather than immediate price changes.

The regression analysis strengthens these observations by indicating that the Food Price Index, crude oil prices, and money supply are statistically significant predictors of inflation. The Food Price Index ($\beta = 0.46$) emerges as the most influential factor, reaffirming that food inflation remains central to understanding overall price behaviour in India. Crude oil prices ($\beta = 0.31$) also significantly contribute, highlighting the pervasive influence of international energy markets on domestic inflation. Money supply ($\beta = 0.27$), another significant predictor, reinforces the notion that monetary conditions and liquidity expansion play a notable role in shaping inflationary outcomes. The exchange rate ($\beta = 0.18$) is significant at the 5% level, confirming moderate pass-through effects. In contrast, the fiscal deficit ($\beta = 0.09$) is not statistically significant, implying that fiscal imbalances do not directly impact inflation in the short term, although they may still influence long-term economic stability and expectations.

Overall, the model explains 78% of inflation variability ($R^2 = 0.78$), indicating a strong explanatory power. The results collectively point toward a hybrid inflation structure in India, shaped by a combination of supply shocks, global linkages, and domestic monetary conditions, with food and energy components exerting the most immediate and substantial influence on price movements.

Contribution and Implication of the Study

This study makes a significant contribution to the existing literature on inflation dynamics in India by providing a comprehensive decade-long analysis (2015–2025) that integrates major structural, cyclical, and global disruptions, including the GST transition, COVID-19 pandemic, and global commodity shocks. Unlike earlier studies that focus on short, isolated periods, this research captures a broad macroeconomic landscape, combining domestic supply-demand factors with international price movements. The study also applies a robust analytical framework—incorporating correlation analysis, multiple regression modelling, and structural break assessment—to identify the relative strength of key inflation drivers such as food prices, crude oil prices, exchange rate volatility, and monetary expansion. This multidisciplinary approach enhances empirical understanding and offers updated evidence relevant for both policymakers and academics.

The implications of the study are multifaceted. For policymakers, the findings underscore the importance of strengthening agricultural supply chains, enhancing market integration, and improving monsoon forecasting systems to manage food inflation more effectively. The strong impact of crude oil prices highlights the need for diversified energy sourcing and strategic petroleum reserves. Monetary authorities, particularly the RBI, can use these insights to refine inflation-targeting strategies, calibrate liquidity management, and respond proactively to global shocks. For researchers, the study provides an empirical foundation for future comparative and sector-specific inflation studies.

CONCLUSION OF THE STUDY

The present study examined the inflation dynamics in India over the decade 2015–2025, a period marked by major structural reforms, macroeconomic transitions, and unprecedented global shocks. By analysing key determinants—such as food price movements, crude oil prices, exchange rate fluctuations, fiscal indicators, and money supply—the study provides a comprehensive understanding of the evolving nature of inflation in India. The findings from both correlation and regression analyses highlight that inflation during this decade has been predominantly driven by supply-side pressures, especially food inflation and global commodity price volatility, which continue to exert substantial influence on consumer prices. The strong association with crude oil prices and exchange rate movements further underscores India's vulnerability to external shocks due to its high import dependence.

The results also reaffirm that monetary liquidity conditions, represented by money supply (M3), play a meaningful role in shaping demand-pull inflation, even in a regime governed by flexible inflation targeting. Conversely, the fiscal deficit was found to have a relatively weak and statistically insignificant short-term impact, suggesting that fiscal pressures influence inflation more indirectly and over the longer term. Overall, the model demonstrates good explanatory power, indicating that the selected macroeconomic variables effectively capture the key forces behind inflation variation in India. The decade under study also reveals a shift in inflation behaviour, with policy reforms such as the adoption of the inflation-targeting framework, GST rollout, and coordinated fiscal–monetary interventions helping stabilize inflation expectations in later years. However, events such as the COVID-19 pandemic and geopolitical conflicts reiterate the persistent influence of global disturbances on domestic price levels. In conclusion, inflation in India remains a multidimensional phenomenon shaped by a combination of domestic structural factors, supply chain efficiency, global market fluctuations, and monetary conditions. Strengthening supply-side mechanisms, enhancing resilience to global shocks, and maintaining credible policy coordination will remain essential for sustaining long-term inflation stability.

Limitation and Future Directions

Although this study provides valuable insights into the inflation dynamics of India from 2015 to 2025, certain limitations must be acknowledged. First, the analysis relies primarily on secondary data from government and international agencies, which may contain reporting lags, revisions, or measurement inconsistencies. Second, the regression model includes key macroeconomic variables, but other influential factors—such as wage growth, market competition, climate shocks, global supply-chain indices, and behavioural expectations—were not incorporated due to data constraints. Third, the study focuses on national-level inflation trends and does not distinguish between rural and urban inflation, regional disparities, or sector-specific price movements. Additionally, the study does not apply advanced econometric models such as VAR, ARDL, or machine learning forecasting tools, which might capture dynamic and non-linear relationships more effectively. Future research could address these gaps by incorporating high-frequency data, expanding variable sets, and applying more sophisticated time-series approaches to improve predictive accuracy. Comparative studies across emerging economies may also provide deeper insights into how external shocks influence inflation differently across contexts. Furthermore, future work could explore structural transformations in agriculture, energy markets, and digital supply chains to better understand their long-term impact on inflation

stability. Overall, there remains significant scope for broader and deeper empirical exploration.

Declaration

Conflict of Interest

The author declares no conflict of interest. All analyses, interpretations, and conclusions are based solely on academic research and publicly available data, with no financial, institutional, or personal influences affecting the outcomes of the study.

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