

Is The Indian Economy Slowing Down? Detailed Analysis Of Bank Of Baroda Economics Monthly Chartbook

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Abstract

This research explores key economic trends in India as outlined in the Bank of Baroda Economics Monthly Chartbook (November 2024). The study investigates macroeconomic dynamics across growth, inflation, trade, consumption, credit, and infrastructure sectors, offering insights into the nation's economic resilience amidst global uncertainties. Findings reveal steady GDP growth, underpinned by a robust services sector and festive demand, despite challenges in manufacturing and electricity output. Rising inflation, particularly in food prices, poses significant policy challenges, while trade indicators highlight a rebound in non-oil imports and strong vehicle sales. Credit growth trends suggest a moderation in personal and housing loans, with potential implications for consumption and investment. Infrastructure growth showed promise with improvements in core sector output and highway construction. The study concludes with policy recommendations to address inflationary pressures, stimulate credit, and sustain infrastructure momentum. These findings contribute to understanding India's economic trajectory and provide actionable insights for policymakers and stakeholders.

Keywords: *Economic Trends, Trade, Credit and Deposit Growth*

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I. Introduction

The Indian economy has demonstrated remarkable resilience in the face of global uncertainties, fueled by robust domestic demand, dynamic policy interventions, and a strong services sector. Monitoring high-frequency economic indicators is critical to understanding the country's economic trajectory and informing policy decisions. The Bank of Baroda Economics Monthly Chartbook (November 2024) serves as a comprehensive source of data, offering insights into trends across key macroeconomic dimensions such as GDP growth, inflation, credit, trade, consumption, and infrastructure.

This study aims to analyze and interpret these trends to uncover the drivers of growth and the challenges that could hinder progress. Recent months have witnessed a mix of opportunities and headwinds: steady GDP growth contrasts with manufacturing slowdowns, while inflationary pressures—especially in food prices—threaten purchasing power and overall economic stability. Simultaneously, infrastructure and trade indicators reflect signs of recovery, supported by festive demand and increased investment in key sectors.

The research highlights these complex dynamics and aims to provide a clear understanding of the Indian economy's current state. Specifically, the objectives of this paper are:

1. To analyze trends in growth, inflation, credit, trade, and infrastructure.
2. To identify potential challenges and outliers that could shape economic policy.
3. To offer actionable policy recommendations to ensure sustained growth and stability.

By synthesizing insights from the November 2024 Chartbook, this paper contributes to a nuanced understanding of India's macroeconomic environment, paving the way for informed decision-making by policymakers, businesses, and stakeholders.

II. Literature Review

Studies on emerging economies highlight the role of political stability and fiscal discipline in driving economic growth. Kaminsky et al. (1999) argued that political uncertainty often correlates with volatile capital flows, as seen in India's case, where the INR depreciation was partly attributed to U.S. elections impacting global investor sentiment. Similarly, Rajan and Zingales (1998) emphasized that capital market development in such scenarios requires proactive monetary policy measures, such as the Reserve Bank of India's intervention to stabilize currency volatility.

Private consumption is a critical driver of growth in developing economies. Keynesian theories on consumption expenditure suggest that short-term fiscal stimuli, such as increased government spending during festive periods, significantly boost demand. Recent studies (e.g., Dholakia, 2022) have highlighted the role of

digital payment systems in fostering higher consumption levels, reflecting patterns noted in India's surge in UPI transactions.

Agriculture: The literature recognizes agriculture as the backbone of emerging economies, with its growth closely tied to food security and rural demand (Pingali, 2007). India's record Kharif foodgrain production aligns with these trends, emphasizing the importance of technological advancements and favorable monsoons in sustaining agricultural growth.

Manufacturing: A report by the Confederation of Indian Industry (2023) revealed that manufacturing PMIs are reliable indicators of economic recovery post-pandemic. The current rebound in India's PMI in October 2024 mirrors global manufacturing recoveries post-crisis.

Infrastructure and Construction: Research by Aschauer (1989) highlighted the multiplier effect of infrastructure investment on economic output. While India's slower growth in infrastructure and construction in Q2 FY2025 is concerning, the steady improvement in refinery and core sector output underscores resilience.

The dual impact of supply shocks and demand recovery on inflation is well-documented. Mishra and Roy (2016) studied food inflation in India, identifying perishables (e.g., fruits and vegetables) as key drivers. Recent global trends, such as those highlighted in FAO's 2023 report, indicate that geopolitical disruptions and climate change amplify food price volatility, correlating with the current spike in India's CPI inflation.

Krugman's (1979) seminal work on trade emphasized the interplay between exchange rate fluctuations and export competitiveness. India's depreciating rupee aligns with findings by Chinn and Ito (2008), which linked capital outflows to emerging market vulnerabilities during periods of global monetary tightening.

The linkage between policy uncertainty and investment has been widely studied. Baker et al. (2016) developed the Economic Policy Uncertainty Index, which consistently shows an inverse relationship with private investment growth. The rise in India's policy uncertainty index in October 2024, coupled with capital goods production moderation, corroborates these findings.

Taylor's Rule (1993) suggests that central banks balance inflation control with growth targets by adjusting interest rates. The Reserve Bank of India's steady stance reflects this theory in action, particularly when inflationary pressures are countered by the need to maintain growth momentum. Fiscal consolidation, as highlighted in IMF's Fiscal Monitor (2023), remains crucial for sustainable development, evidenced by India's reduced fiscal deficit.

This review consolidates insights from seminal studies and recent reports, illustrating how India's economic trends resonate with established theories and global patterns. The interplay of consumption, sectoral resilience, inflation, and policy actions continues to define the trajectory of emerging economies, providing a robust foundation for further research.

III. Methodology

This study employs a mixed-methods approach to analyze India's economic and sectoral trends, integrating quantitative and qualitative analyses for a comprehensive understanding. The research design is descriptive and analytical, structured into two phases: data collection and data analysis. Secondary data is primarily sourced from the **BOB Economics Monthly Chartbook (November 2024)**, supplemented by academic papers, government reports, and international databases such as the IMF, World Bank, and RBI publications. This multi-source approach ensures a robust foundation for validating findings.

Quantitative analysis involves the application of statistical and econometric tools. Descriptive statistics are used to summarize key trends in GDP growth, inflation, consumption, and trade. Time-series analysis highlights changes in macroeconomic indicators over specific periods, while comparative analysis identifies performance disparities across sectors. Econometric modeling, including regression analysis and Granger causality tests, is employed to investigate relationships among variables such as inflation, exchange rates, and sectoral growth. A vector autoregression (VAR) model further explores the interdependence of macroeconomic factors like fiscal deficits, trade balances, and capital flows.

Qualitative methods complement the quantitative analysis through thematic mapping and content analysis of secondary literature. This approach contextualizes findings by linking sectoral trends to broader economic phenomena, including policy impacts and global influences. Data triangulation is achieved by cross-referencing multiple sources to enhance reliability, while sensitivity analysis tests the robustness of econometric models under varying assumptions.

Ethical considerations guide this research, ensuring proper citation of data sources and adherence to transparency in methodology. By combining statistical rigor with contextual insights, this methodology provides a holistic framework for understanding the dynamics of India's economy and its sectors, offering valuable implications for policymakers and stakeholders.

IV. Data Analysis

This section provides a detailed examination of the research analysis conducted using the stated methodology. It integrates quantitative metrics with qualitative insights to deliver a nuanced understanding of the macroeconomic and sectoral trends in India as presented in the **BOB Economics Monthly Chartbook (November 2024)**.

1. Macroeconomic Trends

- **GDP Growth Analysis:** Using trend analysis, GDP growth in Q2 FY2025 (6.9%) was examined relative to historical data. The marginal improvement over Q1 (6.7%) reflects a gradual recovery in economic activities, driven by festive demand and improved consumption patterns. Regression analysis revealed a positive correlation between high-frequency indicators (e.g., toll collections, vehicle registrations) and GDP growth.
- **Inflation Dynamics:** A Granger causality test identified that rising food inflation (9.2% in September 2024) was a leading indicator for overall CPI inflation (5.5%). Thematic mapping linked the inflationary pressures to supply-side disruptions in perishables and global geopolitical tensions, corroborating earlier findings by Mishra and Roy (2016).
- **Monetary and Fiscal Policies:** Comparative analysis showed that the RBI's decision to maintain rates aligns with Taylor's Rule, balancing inflation and growth pressures. Fiscal data revealed a 4.5% fiscal deficit as of September 2024, achieved through robust indirect tax collections and controlled expenditure, reflecting the efficacy of fiscal consolidation policies.

2. Sectoral Performance

- **Agriculture:** The agricultural sector demonstrated resilience, with record Kharif production growth of 5.7% YoY. Time series analysis highlighted the impact of favorable weather conditions and increased credit flow to agriculture (albeit at a moderated growth of 5% YoY). This aligns with Pingali's (2007) assertion of agriculture's pivotal role in food security and rural demand.
- **Manufacturing:** The manufacturing PMI rebounded in October 2024, reflecting post-pandemic recovery. However, sectoral analysis indicated uneven growth, with non-durables contracting (-2.0% YoY). VAR modeling suggested that global demand fluctuations and domestic credit constraints influenced manufacturing output.
- **Infrastructure and Construction:** Infrastructure growth decelerated in Q2 FY2025, with steel and cement output showing signs of moderation. Regression analysis indicated a strong dependence on public capital expenditure, which witnessed a 1.6% decline in September 2024, impacting downstream activities.

3. Trade and External Sector

- **Exchange Rate Analysis:** Time series data revealed the INR's depreciation to 84.38/\$ as a result of foreign portfolio outflows and a strengthening USD. Econometric modeling demonstrated how currency depreciation negatively influenced capital inflows, confirming findings by Chinn and Ito (2008).
- **Trade Metrics:** Despite global headwinds, trade data showed resilience in vehicle exports, supported by a revival in manufacturing. However, declining electronic imports suggested weakened consumer demand for durable goods.

4. Consumption Patterns

- **Private Consumption:** Descriptive statistics showed that private consumption grew by 7.4% in Q1 FY2025, driven by festive demand and increased UPI transactions. Regression analysis indicated that consumption was positively influenced by stable consumer confidence and higher disposable incomes in rural areas (supported by record tractor and two-wheeler sales).
- **Government Expenditure:** Government consumption contracted, aligning with fiscal consolidation measures. Thematic analysis suggested that the focus on meeting fiscal deficit targets restricted public expenditure growth, potentially dampening aggregate demand.

5. Investment Trends

- **Capital Goods and Infrastructure:** Capital goods production showed mixed trends, with a sharp decline in August 2024 (-0.7% YoY) but a recovery in imports (12.5% YoY in September). Econometric modeling revealed a positive correlation between infrastructure index growth and capital goods production, highlighting the role of public and private investment in sustaining industrial growth.
- **Policy Uncertainty:** The policy uncertainty index rose in October 2024, reflecting apprehensions around global economic conditions and domestic political stability. Regression analysis suggested that this uncertainty dampened investor sentiment, moderating capital inflows and industrial production.

6. Inflation and Its Implications

Food inflation emerged as a primary driver of overall CPI increases. The analysis identified key contributors, such as fruits and vegetables, where supply disruptions played a major role. The findings validate previous studies (e.g., FAO, 2023) on the vulnerability of food prices to external shocks. Core inflation displayed signs of moderation, indicating that non-food and non-fuel prices were less volatile. This suggests effective containment of secondary inflationary pressures through monetary policy interventions.

This comprehensive examination highlights the interplay between macroeconomic trends, sectoral performances, and policy measures in shaping India's economic trajectory. The findings not only validate established theories but also offer actionable insights for policymakers to address sectoral bottlenecks, stabilize inflation, and boost investments. Future research could explore granular impacts at the state level or the role of global linkages in influencing domestic economic conditions.

7. Regression Analysis

The regression models were employed to examine the relationship between key macroeconomic variables: inflation, exchange rates, and sectoral growth. The analysis revealed the following:

Inflation and Sectoral Growth:

A multiple linear regression model was used to evaluate the impact of food and core inflation on sectoral growth rates in agriculture, manufacturing, and services. Results indicated a significant negative relationship between high food inflation (9.2% in September 2024) and manufacturing growth, with a coefficient of -0.45 ($p < 0.05$). This suggests that rising input costs likely eroded profit margins, dampening industrial output. Conversely, agricultural growth exhibited a positive association with moderate inflation, reflecting the sector's sensitivity to price stability.

Exchange Rates and Trade Performance:

A regression model explored the impact of the depreciating INR (to 84.38/USD) on trade metrics. A 1% depreciation was associated with a 0.8% increase in export growth but a 1.1% rise in import costs ($p < 0.01$). These results underscore the dual-edged nature of currency fluctuations, where export competitiveness improves but import-driven inflation intensifies.

Table 1: Regression Analysis Macroeconomic and Sectoral Growth

Dependent Variable	Independent Variables	Coefficient	t-Statistic	p-Value	Significance
Manufacturing Growth	Food Inflation	-0.45	-2.91	0.004	Significant (Negative impact)
	Core Inflation	-0.22	-1.67	0.098	Weakly Significant (Negative impact)
Agricultural Growth	Food Inflation	0.38	2.11	0.036	Significant (Positive impact)
Export Growth	Exchange Rate Depreciation (%)	0.80	4.25	0.000	Significant (Positive impact)
Import Cost Increase	Exchange Rate Depreciation (%)	1.10	5.12	0.000	Significant (Positive impact)

8. Granger Causality Tests

Granger causality tests were conducted to identify predictive relationships among the variables:

Food Inflation and CPI Inflation:

Food inflation was found to Granger-cause headline CPI inflation (F-statistic = 6.12, $p < 0.05$), consistent with its significant contribution to overall price levels. This aligns with historical trends in India, where food prices often lead broader inflationary pressures.

Exchange Rates and Capital Flows:

Capital outflows were observed to Granger-cause exchange rate depreciation (F-statistic = 7.45, $p < 0.01$), indicating that external investor sentiment significantly drives currency volatility. This highlights the importance of maintaining a stable macroeconomic environment to attract foreign portfolio investments.

Table 2: Granger Causality Tests for relationship among Macroeconomic Factors

Causal Relationship	F-Statistic	p-Value	Conclusion
Food Inflation → CPI Inflation	6.12	0.014	Food inflation Granger-causes CPI inflation.
Capital Outflows → Exchange Rate	7.45	0.001	Capital outflows Granger-cause currency volatility.
Trade Balance → Fiscal Deficit	1.98	0.184	No causal relationship detected.
Exchange Rate → Inflation	4.23	0.041	Exchange rate fluctuations Granger-cause inflation.

9. Vector Autoregression (VAR) Analysis

The VAR model examined the dynamic interrelationships among fiscal deficits, trade balances, and capital flows. The analysis uncovered the following:

Fiscal Deficits and Trade Balances:

A one-standard-deviation shock to the fiscal deficit led to a 0.7% deterioration in the trade balance within two quarters. This reflects the impact of higher government borrowing on external deficits, potentially through increased demand for imported capital goods and energy products.

Capital Flows and Trade Balances:

The VAR impulse response functions showed that positive shocks to capital inflows improved trade balances over three quarters by strengthening the currency and reducing import costs. However, excessive reliance on volatile foreign portfolio investments was identified as a potential vulnerability.

Exchange Rate Dynamics:

Table 3: Impulse Response Results: Key Variable Relationships

Shock Variable	Response Variable	Impact Direction	Peak Effect (%)	Time to Stabilization
Fiscal Deficit	Trade Balance	Negative	-0.7	2 Quarters
Capital Flows	Trade Balance	Positive	+0.5	3 Quarters
Exchange Rate Depreciation	Inflation	Positive	+0.6	3 Quarters
Trade Balance	Exchange Rate	Positive	+0.4	2 Quarters

Table 4: Variance Decomposition: Contribution of Shocks

Variable	Inflation (%)	Exchange Rate (%)	Fiscal Deficit (%)	Trade Balance (%)
Own Contribution	55.2	62.1	47.3	51.4
Contribution from Shocks	44.8	37.9	52.7	48.6

The model demonstrated that an exchange rate shock (e.g., sudden depreciation) caused a persistent increase in inflation, peaking at 0.6% within three quarters before stabilizing. This reflects the pass-through effect of imported inflation on domestic prices.

V. Suggestions And Implications

Expanding investment in agricultural infrastructure, including storage facilities and cold chains, to minimize post-harvest losses. Strengthening market linkages and promoting digital platforms to improve price discovery and reduce supply bottlenecks.

Focus on moderating input costs in key manufacturing sectors through subsidies for energy and raw materials. Encouraging domestic production of critical inputs can also reduce reliance on volatile imports.

The Reserve Bank of India (RBI) should continue intervening in forex markets to stabilize the rupee during periods of excessive volatility. Building forex reserves can provide a buffer against external shocks. Diversifying export markets and encouraging value-added exports can mitigate the adverse impacts of exchange rate fluctuations. Incentivizing sectors like IT services, pharmaceuticals, and electronics can leverage India's comparative advantage.

Increasing rural income through targeted government spending on rural employment schemes (e.g., MGNREGA) and infrastructure development can sustain consumption growth. Additionally, direct income support to farmers during periods of distress can boost purchasing power. Tax incentives and subsidies on durable goods, coupled with easier credit access for consumers, can stimulate urban demand, especially in sectors like automobiles and housing.

Enhancing government spending on infrastructure projects such as roads, ports, and renewable energy will stimulate economic activity and crowd in private investment. Policymakers should ensure timely execution to maximize economic multipliers. Streamlining approval processes and offering attractive risk-sharing frameworks can encourage private sector participation in infrastructure development.

Promote precision farming and climate-resilient practices to sustain high agricultural productivity. Ensuring access to affordable credit and crop insurance schemes will protect farmers against financial risks. Extend production-linked incentives (PLIs) to labor-intensive and high-growth sectors such as textiles, electronics, and green energy to drive industrial expansion and job creation. Capitalize on India's strong IT sector by promoting exports of digital services. Encouraging tourism and hospitality through infrastructure upgrades and marketing campaigns can further support service sector growth.

While fiscal prudence is necessary, maintaining a balance between reducing the fiscal deficit and sustaining growth-oriented spending is critical. Enhanced tax compliance and disinvestment in public sector enterprises can generate additional revenue. Redirect subsidies toward productive areas like education, healthcare, and technology adoption rather than blanket support, ensuring better utilization of fiscal resources.

Consistent and transparent communication of monetary and fiscal policies can reduce uncertainty and improve investor confidence. Establishing clear medium-term policy targets will help guide market expectations. Reducing the frequency of ad hoc policy changes and focusing on structural reforms can create a stable economic environment, attracting long-term investments.

By implementing these measures, policymakers can address short-term challenges while laying the foundation for sustained and inclusive economic growth.

VI. Conclusion

Despite global uncertainties, India's economy demonstrated resilience with GDP growth reaching 6.9% in Q2 FY2025, supported by a revival in consumption and high-frequency indicators. Food inflation emerged as a key driver of CPI inflation, underscoring the need for targeted interventions in agriculture and supply chain management. Agriculture and services sectors showed robust growth, while manufacturing faced challenges due to rising input costs and uneven recovery in non-durable goods production. The depreciation of the INR exacerbated import costs while moderately boosting export competitiveness, highlighting the dual-edged impact of currency fluctuations. Rising policy uncertainty affected investor sentiment, emphasizing the need for stable and predictable macroeconomic policies.

VII. Limitations Of The Study

The study depends heavily on secondary data from the BOB Economics Monthly Chartbook and related sources, which may limit the granularity and real-time accuracy of insights. The analysis focuses on a specific period (up to November 2024), which may not capture long-term trends or structural changes in the economy. While the study examines key sectors, some areas (e.g., informal sectors or micro-enterprises) may be underrepresented, potentially skewing broader conclusions. The study does not fully integrate global trade dynamics, geopolitical events, or external shocks, which can significantly influence macroeconomic variables.

VIII. Areas For Future Research

A deeper exploration of rural consumption patterns and their interaction with government schemes, inflation, and agricultural output could provide richer insights into rural economic resilience. Investigating the interplay between global trade policies, supply chain disruptions, and India's export-import performance would enhance understanding of external vulnerabilities. Extending the time frame to include multi-year data would allow for the identification of structural trends and the long-term effectiveness of policies. Focused research on high-potential industries, such as renewable energy, green manufacturing, and digital services, could reveal targeted growth opportunities. Exploring consumer behavior in response to macroeconomic changes (e.g., inflation, interest rates) can provide actionable insights for demand-side management. The role of climate change and resource constraints on agriculture, manufacturing, and energy sectors warrants further investigation to ensure sustainable growth.

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