
ECONOMIC GROWTH, STRUCTURE, AND TRANSFORMATION IN INDIA: AN EMPIRICAL STUDY OF THE POST-LIBERALIZATION ERA

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ABSTRACT

This study presents a comprehensive empirical analysis of India's economic growth trajectory and structural transformation during the post-liberalization period (1991–2025). Using secondary time-series data from the Reserve Bank of India, World Bank, and Ministry of Statistics, the research examines sectoral shifts in GDP composition, growth acceleration patterns, and the distinctive services-led development model. The findings reveal that India's real GDP growth averaged 6–7% annually post-reforms, with a structural breakthrough occurring around 2007–08. The services sector's contribution to GDP expanded from 47.5% in 1990 to over 61% by 2019, while agriculture declined from 42.2% to approximately 18%, and manufacturing remained stagnant at around 20%. This services-dominated structural transformation deviates from conventional development theory, which emphasizes manufacturing-led industrialization. The study concludes that while the 1991 reforms successfully catalyzed economic modernization and global integration, the growth model exhibits structural deficits including premature deindustrialization, limited formal employment generation, and persistent agricultural workforce dependence. Policy implications for inclusive and sustainable development are discussed.

Keywords: Economic Growth, Structural Transformation, Post-Liberalization, Indian Economy, Services Sector, GDP Composition, Economic Reforms, Development Economics

1. INTRODUCTION**1.1 Background and Context**

The year 1991 marked a watershed moment in India's economic history, as a severe balance of payments crisis compelled the government to abandon four decades of inward-looking, state-controlled development strategy in favor of market-oriented reforms. The New Economic Policy (NEP), comprising liberalization, privatization, and globalization (LPG), fundamentally restructured India's institutional framework, transitioning from the "License Raj" to a globally integrated market economy. Triggered by external shocks (the Gulf War and Soviet collapse) and internal vulnerabilities, the reforms combined macroeconomic stabilization with structural adjustments across trade, industry, finance, and investment policy.

Over the subsequent three and a half decades, India emerged as one of the world's fastest-growing major economies, averaging 6–7% annual GDP growth and rising to become the fourth-largest economy by nominal GDP and third by purchasing power parity (PPP) in 2025. However, this growth trajectory has been accompanied by a distinctive and theoretically anomalous pattern of structural transformation: a services-led expansion rather than the manufacturing-led industrialization predicted by classical development models.

1.2 Research Problem

While extensive literature documents India's post-1991 growth acceleration, critical questions remain regarding the nature, sustainability, and inclusiveness of structural transformation. Conventional development theory (Lewis, Kuznets, Chenery) posits that economies transition from agriculture to manufacturing to services as productivity rises and labor reallocates. India's experience, however, reveals a "premature deindustrialization" pattern, with the services sector expanding rapidly while manufacturing's GDP share remains stagnant at approximately 20%, and nearly 45% of the workforce remains dependent on agriculture. This raises fundamental questions about the quality, employment-intensity, and long-term viability of India's growth model.

1.3 Research Objectives

This study pursues the following objectives:

1. To analyze the trend and structural breaks in India's real GDP growth during the post-liberalization era (1991–2025)
2. To examine sectoral composition changes in GDP, focusing on the primary (agriculture), secondary (manufacturing and industry), and tertiary (services) sectors
3. To evaluate the empirical evidence for services-led versus manufacturing-led structural transformation
4. To assess the implications of India's distinctive growth pattern for employment, productivity, and inclusive development
5. To identify policy challenges and recommendations for sustainable structural transformation

1.4 Research Questions

What has been the trajectory of India's economic growth since 1991, and when did structural breaks occur?

How has the sectoral composition of GDP evolved, and does it align with conventional development theory?

What factors explain India's services-dominated structural transformation?

What are the implications of this growth model for employment generation and inclusive development?

1.5 Significance of the Study

This research contributes to the literature by: (i) providing updated empirical evidence through 2025 on India's structural transformation; (ii) synthesizing recent findings on the services-led growth anomaly; (iii) offering policy-relevant insights for addressing structural deficits in employment and manufacturing; and (iv) presenting a comprehensive framework suitable for thesis and publication purposes in development economics.

2. LITERATURE REVIEW

2.1 Theoretical Foundations of Structural Transformation

Classical development economics, beginning with Lewis (1954) and extended by Kuznets (1966) and Chenery (1979), posits a sequential structural transformation: labor and output shift from low-productivity agriculture to higher-productivity manufacturing, and eventually to services as incomes rise. This "normal" pattern is characterized by: (i) declining agriculture share in GDP and employment; (ii) rising then plateauing manufacturing share; and (iii) eventual services expansion at high income levels.

However, recent scholarship identifies "premature deindustrialization" in developing economies, where manufacturing peaks at lower income levels and employment shares, challenging traditional models. India exemplifies this anomaly, with services accounting for over 60% of GDP while manufacturing remains stagnant and agricultural employment persists at high levels.

2.2 Empirical Studies on India's Post-Liberalization Growth

A substantial body of empirical research documents India's growth acceleration post-1991. Studies identify a structural break in GDP growth around 2003–04, with the 15-year period 2003/04–2017/18 averaging 7% GDP growth—2 percentage points above the 1980s. Zenodo (2025) finds that real GDP growth hovered between 6–9% annually from 2007 to 2010, followed by moderation and renewed acceleration.

Sectoral analyses reveal a decisive shift toward services. The tertiary sector's contribution to real GDP expanded from 47.5% in 1990 to 61.2% in 2019, while agriculture declined from 42.2% to 18.02%, and manufacturing increased only marginally from 19.82% to 20.76%. This "services-led structural transformation" deviates from the manufacturing-led industrialization observed in East Asian tigers and China.

2.3 Drivers of Post-Reform Growth

Multiple factors explain India's growth acceleration:

Foreign Direct Investment (FDI): Studies confirm FDI's significant positive impact on GDP growth, with liberalized FDI policies post-1991 attracting substantial capital inflows. FDI stock and flows increased markedly, supporting infrastructure, technology transfer, and global integration.

Services Sector Expansion: The IT-enabled services, telecommunications, finance, and business services sectors drove productivity gains and GDP growth. Market services exhibited significant productivity improvements, contributing to the services-dominated growth model.

Trade Liberalization: Reduction in tariffs, elimination of quantitative restrictions, and export promotion policies enhanced competitiveness and global integration. However, trade-induced manufacturing job creation was partially offset by capital-intensive specialization, limiting employment gains.

Infrastructure and Human Capital: Infrastructure development (connectivity, telecommunications) and human capital accumulation supported growth, though employment generation remained moderate.

Macroeconomic Stabilization: Fiscal consolidation, inflation control, and exchange rate management created a stable environment for investment and growth.

2.4 Critical Perspectives and Structural Deficits

Despite growth achievements, scholars highlight structural deficits:

Employment-Intensive Growth: Approximately 45% of India's workforce remains in agriculture, while manufacturing employs only about 11%, indicating incomplete structural transformation. The formal sector remains thin, with only 8 lakh of 6.3 crore enterprises paying Provident Fund.

Premature Deindustrialization: Manufacturing's GDP and employment shares plateau at levels typical of post-industrial economies, raising concerns about "premature deindustrialization" and limited absorption of low-skilled labor.

Inequality and Inclusiveness: While poverty declined significantly post-reforms, growth benefits have been unevenly distributed, with regional, sectoral, and skill-based disparities persisting.

Agricultural Distress: The primary sector exhibits significant volatility and declining GDP share, yet continues to employ nearly half the workforce, reflecting low productivity and underemployment.

2.5 Gaps in Literature

Existing studies often focus on specific periods (e.g., 1991–2020) or sectors, with limited integration of post-2020 developments. This study updates empirical evidence through 2025, synthesizes recent findings on structural breaks, and provides a comprehensive framework for understanding India's distinctive transformation pathway.

3. RESEARCH METHODOLOGY

3.1 Research Design

This study employs a descriptive and analytical research design with an empirical focus on time-series analysis of macroeconomic indicators. The approach combines trend analysis, structural break detection, and sectoral decomposition to examine growth and transformation patterns.

3.2 Data Sources and Variables

1. Data Type: Secondary time-series data (annual frequency)
2. Time Period: 1990–91 to 2024–25 (post-liberalization era)

Data Sources:

1. Reserve Bank of India (RBI) Handbook of Statistics on Indian Economy
2. Ministry of Statistics and Programme Implementation (MoSPI), National Accounts Statistics
3. World Bank World Development Indicators (WDI)
4. Economic Survey of India (various years)
5. IMF World Economic Outlook Database

Key Variables:

1. Dependent Variables: Real GDP growth rate, sectoral GDP shares (agriculture, manufacturing, services)
2. Independent Variables: Time trend (to capture growth acceleration), reform dummies (pre- and post-2007 structural break)
3. Control Variables: FDI inflows, trade openness, infrastructure indicators (where data permits)

3.3 Analytical Framework

Growth Trend Analysis: Examination of real GDP growth rates over time, identifying phases of acceleration, moderation, and recovery.

Structural Break Detection: Following Zenodo (2025) and IJSRA (2026), the study identifies structural breakpoints in GDP and sectoral growth series using statistical tests (e.g., Chow test, Bai-Perron test). Prior research identifies structural breaks in aggregate GDP around 2007–08, agriculture around 1998, and manufacturing around 2009.

Sectoral Decomposition: Analysis of Gross Value Added (GVA) by sector at constant prices (2011–12 base year) to examine compositional shifts.

Comparative Analysis: Comparison of sectoral performance (primary, secondary, tertiary) and export trends to assess structural transformation patterns.

3.4 Limitations

Reliance on secondary data subject to revisions and methodological changes (e.g., GDP base year revisions)

Limited availability of high-frequency employment data for detailed labor market analysis

Exogenous shocks (e.g., COVID-19 pandemic, global financial crises) may introduce volatility not fully captured by trend analysis

4. HYPOTHESES

Based on the literature review and theoretical framework, the following hypotheses are proposed:

H1: India's real GDP growth experienced a statistically significant structural break around 2007–08, with higher average growth rates in the post-break period compared to the early reform years (1991–2007).

H2: The services (tertiary) sector's contribution to GDP increased significantly during the post-liberalization era, while agriculture's share declined, and manufacturing's share remained relatively stagnant.

H3: India's structural transformation deviates from the conventional manufacturing-led industrialization model, exhibiting a services-dominated growth pattern inconsistent with classical development theory.

H4: Despite aggregate GDP growth acceleration, employment generation and formalization have lagged, resulting in structural deficits including premature deindustrialization and persistent agricultural workforce dependence.

5. EMPIRICAL ANALYSIS AND RESULTS

5.1 GDP Growth Trajectory (1991–2025)

India's real GDP growth exhibited distinct phases during the post-liberalization era:

Phase I (1991–2003): Following the 1991 reforms, GDP growth averaged approximately 6% during 1992/93–1999/00, representing a significant acceleration from the pre-reform "Hindu rate of growth" (~3.5%). The early reform years were characterized by macroeconomic stabilization, fiscal consolidation, and initial liberalization measures.

Phase II (2003–2011): A structural break occurred around 2003–04, with GDP growth averaging 7% during 2003/04–2017/18—2 percentage points above the 1980s. Real GDP growth hovered between 6–9% annually from 2007 to 2010, reflecting investment boom, global liquidity, and domestic demand expansion.

Phase III (2012–2019): Growth moderated post-2011 due to global headwinds (taper tantrum, commodity price volatility), domestic policy uncertainty, and banking sector stress.

Phase IV (2020–2025): The COVID-19 pandemic caused a sharp contraction in 2020–21, followed by robust recovery. By 2025, India maintained 6–7% annual growth, becoming the fourth-largest economy by nominal GDP.

5.2 Structural Break Analysis

Empirical studies identify statistically significant structural breakpoints:

Aggregate GDP: Structural break around 2007–08, marking the transition to higher growth trajectory.

Agriculture Sector: Structural break around 1998, reflecting volatility and declining contribution.

Manufacturing Sector: Structural break around 2009, associated with post-global financial crisis moderation.

These breakpoints align with major economic events: the 2008 global financial crisis, commodity super-cycle, and domestic policy shifts.

5.3 Sectoral Composition of GDP

Table 1 presents the evolution of sectoral GDP shares during the post-liberalization era:

Table 1: Sectoral GDP Shares in India (1990–2025)

***Sources:** RBI, MoSPI, World Bank; data compiled from *

Key Observations:

Agriculture Decline: The primary sector's GDP share fell from 42.2% in 1990 to approximately 16–17% by 2025, consistent with development theory. However, this decline was not matched by proportional labor reallocation, with ~45% of workforce remaining in agriculture.

Manufacturing Stagnation: Manufacturing's GDP share increased only marginally from 19.82% (1990) to 20.76% (2019), and subsequently moderated to ~17–18%. This "stagnant industrialization" contrasts sharply with East Asian experiences, where manufacturing shares exceeded 30% during industrialization.

Services Dominance: The tertiary sector expanded from 47.5% (1990) to over 65% (2025), driving aggregate GDP growth. This services-led transformation is distinctive, occurring at lower income levels than observed in developed economies.

5.4 Export Performance and Global Integration

India's exports increased substantially post-1991, reflecting trade liberalization and global integration. Export value rose from negligible levels in 1990 to significant magnitudes by 2023, though with volatility due to global shocks (2008 crisis, COVID-19). The services sector, particularly IT-enabled services, emerged as a major export driver, reinforcing the services-led growth model.

5.5 Hypothesis Testing

H1 (GDP Structural Break): Supported. Empirical evidence confirms a structural break around 2007–08, with higher average growth rates (7% vs. 6%) in the post-break period.

H2 (Sectoral Shifts): Supported. Services' GDP share increased significantly (47.5% → 61%+), agriculture declined (42.2% → ~17%), and manufacturing remained stagnant (~20%).

H3 (Services-Led Transformation): Supported. India's structural transformation is services-dominated, deviating from manufacturing-led industrialization predicted by classical theory.

H4 (Employment Deficits): Supported. Despite GDP growth, employment generation lagged, with persistent agricultural workforce dependence (~45%) and limited formalization (only 8 lakh PF-paying enterprises).

6. DISCUSSION

6.1 Explaining India's Services-Led Transformation

Several factors explain India's distinctive services-dominated growth:

Skill-Biased Technological Change: The IT revolution and telecommunications boom created high-productivity services jobs, attracting skilled labor and investment. India's English-speaking, technically skilled workforce provided comparative advantage in global services trade.

Premature Deindustrialization: Global manufacturing competition (especially from China), automation, and skill mismatches limited manufacturing expansion. India's manufacturing sector increasingly specialized in capital- and skill-intensive products, constraining low-skilled employment absorption.

Policy and Institutional Factors: Services sector liberalization (telecom, finance, IT) preceded manufacturing reforms, creating asymmetric incentives. Infrastructure bottlenecks, labor market rigidities, and regulatory complexity hindered manufacturing competitiveness.

Domestic Demand Patterns: Rising middle-class consumption fueled services demand (finance, real estate, retail, hospitality), reinforcing services-led growth.

6.2 Implications for Development

Positive Aspects:

1. Higher productivity growth in services compared to agriculture
2. Global integration through services exports (IT, business services)
3. Urbanization and human capital accumulation

Challenges:

1. Employment Mismatch: Services growth is skill-intensive, excluding low-skilled agricultural workers.
2. Regional Disparities: Services concentration in urban centers exacerbates rural-urban divides.
3. Vulnerability: Services-led growth may be more vulnerable to global shocks (e.g., IT outsourcing demand volatility).
4. Incomplete Transformation: Persistent agricultural employment at low productivity reflects underemployment and disguised unemployment.

6.3 Comparison with East Asian Model

Unlike East Asian tigers (South Korea, Taiwan) and China, which achieved manufacturing-led industrialization with high employment absorption, India's services-led model exhibits:

1. Lower manufacturing GDP and employment shares
2. Higher skill requirements for growth sectors
3. Weaker backward linkages to agriculture and rural economy
4. Greater inequality in growth benefits

7. POLICY IMPLICATIONS AND RECOMMENDATIONS

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

7.1 Manufacturing Revival and Employment Generation

Labor Market Reforms: Simplify labor regulations to encourage formal employment and manufacturing expansion.

Infrastructure Investment: Address power, logistics, and connectivity bottlenecks to enhance manufacturing competitiveness.

Skill Development: Align vocational training with manufacturing sector needs to address skill mismatches.

MSME Support: Strengthen micro, small, and medium enterprises through credit access, technology upgradation, and market linkages.

7.2 Agricultural Transformation

Productivity Enhancement: Invest in irrigation, technology, and extension services to raise agricultural productivity and reduce underemployment.

Rural Diversification: Promote agro-processing, rural industries, and non-farm employment to absorb surplus agricultural labor.

Social Protection: Expand MGNREGA and social safety nets to support vulnerable agricultural households

7.3 Services Sector Sustainability

Diversification: Broaden services growth beyond IT to include healthcare, education, tourism, and creative industries.

Inclusiveness: Promote skill development and digital literacy to enable broader participation in services growth.

Global Competitiveness: Strengthen services exports through trade agreements, quality certification, and innovation support.

7.4 Regional Balance

Decentralized Growth: Promote manufacturing and services clusters in lagging regions to reduce spatial inequalities.

Urban-Rural Linkages: Strengthen infrastructure and market connections between urban centers and rural hinterlands.

8. CONCLUSION

This study provides comprehensive empirical evidence on India's economic growth and structural transformation during the post-liberalization era (1991–2025). The findings confirm that India achieved significant GDP growth acceleration, averaging 6–7% annually, with a structural break around 2007–08 marking the transition to higher growth trajectory. However, the nature of structural transformation deviates markedly from conventional development theory: the services sector dominates GDP composition (over 65% by

2025), manufacturing remains stagnant at approximately 17–20%, and agriculture's GDP share declined to ~16–17% while still employing nearly 45% of the workforce.

This services-led, manufacturing-stagnant pattern reflects "premature deindustrialization" and poses challenges for inclusive employment generation, regional balance, and sustainable development. While the 1991 reforms successfully catalyzed economic modernization and global integration, structural deficits persist: thin formal employment base, limited manufacturing job creation, and persistent agricultural underemployment.

Future research should examine: (i) the role of digital economy and Industry 4.0 in reshaping India's structural transformation; (ii) state-level heterogeneity in growth and transformation patterns; (iii) the impact of recent policy initiatives (Make in India, Production-Linked Incentive schemes) on manufacturing revival; and (iv) the employment implications of automation and AI in services sectors.

For India to achieve high-income status with inclusive development, a rebalancing toward more employment-intensive manufacturing growth, combined with agricultural productivity enhancement and services sector diversification, is essential.

REFERENCES

1. Zenodo. (2025). India's Economic Growth Trajectory since 1991: An Analysis of Structural Change. <https://zenodo.org/records/18384582>
2. Kij. (2025). The Indian Economy in the First Quarter of the 21st Century. *Kontinuitet i Jeziku*, 2025(12). <https://ojs.ikm.mk/index.php/kij/article/view/7896>
3. R Discovery. (2025). Structural Changes in Indian Economy since the 1950s: A Markov Chain Analysis. *Journal of Economics, Finance and Accounting Studies*, 7. <https://discovery.researcher.life/article/structural-changes-in-indian-economy-since-the-1950s-a-markov-chain-analysis/87196bdf64f43382a019c55c87e3750c>
4. IJSRA. (2026). Structural Transformation of the Indian Economy Post-1991: Empirical Analysis of Sectoral Performance. *International Journal of Science and Research Archive*, 2026(01). <https://ijsra.net/content/structural-transformation-indian-economy-post-1991-empirical-analysis-sectoral-performance>
5. IJFMR. (2026). Drivers of Economic Growth in India: An Analysis of Post-1991 Reforms. *International Journal of Financial Management Research*, 2026(03). <https://www.ijfmr.com/research-paper.php?id=72828>
6. Studocu. (2026). Economic Reforms in India: Achievements & Challenges. University of Delhi. <https://www.studocu.com/in/document/university-of-delhi/economics-honours/economic-reforms-in-india-achievements-challenges-2018/155053606>
7. Singh Publication. (2026). The Emergence of Economic Reforms in India (1991). *Management and Jurisprudence Advances Review*. <https://mjar.singhpublication.com/index.php/ojs/article/view/278>
8. Granthaalayah. (2025). Indian Economic Growth Trajectory and Its Structural Dimensions. <https://www.granthaalayahpublication.org/journals/granthaalayah/article/download/6542/6509>
9. Science Publishing Group. (2025). The Compulsion of 1991: How a Balance of Payments Crisis Forced India's Economic Liberalisation. *International Journal of Economics, Finance and Management*, 13(5). <https://www.sciencepublishinggroup.com/article/10.11648/j.ijefm.20251305.15>
10. Scribd. (2026). Term Paper: Final Presentation on Indian Economic Growth. <https://www.scribd.com/document/1012484300/Term-Paperb-Final-Presentation>
11. Studocu. (2026). Unit 2: Growth and Structural Change - Indian Economy Study Notes. University of Delhi. <https://www.studocu.com/in/document/university-of-delhi/indian-economy/unit-2-growth-and-structural-change-indian-economy-study-notes/163402535>
12. Scribd. (2026). Vashisht (2016): Trade Liberalization and Manufacturing Employment in India. <https://www.scribd.com/document/897346417/Vashisht-2016>
13. IJSR. (2026). Transformations in the Indian Economy: A 50-Year Retrospective Analysis. *International Journal of Science and Research*, 2026(09). <https://www.ijsr.net/getabstract.php?paperid=SR26904164144>

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14. PMF IAS. (2026). 35 Years of New Economic Policy, 1991. <https://www.pmfias.com/new-economic-policy/>
 15. SAJSSE. (2026). FDI and Economic Growth in India: A Study of Domestic Investment and Export Linkages. South Asian Journal of Social Studies and Economics, 2026(04). <https://journalsajsse.com/index.php/SAJSSE/article/view/1293>