



Understanding Bihar's Economic Challenges: Key Determinants and Strategic Pathways for Sustainable Growth

Jitendra Kumar Sinha

Retired Senior Joint Director & Head, DES, Bihar, India. E-mail: jksinha2007@rediffmail.com

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Abstract: This study examines Bihar's economic trajectory, identifying key determinants, persistent constraints, and strategic revitalization pathways. Post-2005 reforms spurred significant growth, with Bihar achieving double-digit expansion and a 20% poverty reduction, driven by targeted investments in infrastructure, education, healthcare, and governance reforms. However, structural bottlenecks persist, including high unemployment, fragmented agricultural landholdings, inadequate healthcare infrastructure, and socio-economic disparities.

Using 2011–12 base-year data and workforce metrics from the 2017–18 Periodic Labor Force Survey, the study analyzes trends in Net State Domestic Product (NSDP) and Per Capita Net State Domestic Product (PCNSDP), highlighting sectoral contributions. Bihar exhibited resilience to external shocks, contracting by 5.00% during the 2020–21 pandemic and rebounding with 14.40% growth in 2022–23. However, interstate comparisons with Gujarat and Tamil Nadu reveal income, industrialization, and infrastructure disparities. Agriculture employs 80% of Bihar's population, necessitating economic diversification.

Key growth drivers include pro-business reforms, infrastructure expansion, and industrialization. Challenges such as recurrent flooding, governance inefficiencies, and caste-based political dynamics impede progress. Policy recommendations emphasize fostering a business-friendly environment, enhancing human capital through education and skill development, and aligning state policies with national and global economic trends. This study also underscores the need for further research on Bihar's long-term economic trajectory, inter-state disparities, and the socio-environmental implications of industrialization, offering critical insights for sustainable and inclusive growth.

Keywords: Net State Domestic Product (NSDP); Per Capita Net State Domestic Product (PCNSDP); Growth rates; Sustainable Growth; Economic Challenges; Strategic Pathways.

Economic Growth and Development in Bihar

Economic growth, defined as the sustained rise in the production and consumption of goods and services, is a core driver of societal progress. It enhances living standards and serves as a critical indicator of economic vitality. An economy functions as a complex network of trade, industry, and financial systems shaping regional and national dynamics.

Bihar, situated in eastern India, possesses significant geographical advantages that support economic growth. Sharing borders with West Bengal, Uttar Pradesh, Jharkhand, and Nepal, Bihar has access to major eastern and northern markets. Its proximity to ports like Haldia and Kolkata, as well as mineral-rich states, further bolsters its growth potential. Despite these advantages, Bihar contributed just 2.75% to India's GDP in 2022–23. Housing around 9% of the population, its per capita GDP was the country's lowest at ₹35,119.

The economic disparity in Bihar is stark. If independent, it would rank as the 12th most populous nation globally, with an economy comparable in aggregate size to Japan or Mexico. Yet, its per capita income would rank among the lowest, trailing countries such as Somalia and Sudan. Within Bihar, inequality is clear: Patna's per capita income of ₹131,064 contrasts with Sheohar's ₹19,592, exposing severe regional imbalances and the state's underperformance relative to national averages.

Despite these challenges, Bihar made notable progress between 2015–16 and 2022–23. Its Gross State Domestic Product (GSDP) grew at a Compound Annual Growth Rate (CAGR) of 13.21%, while its per capita Net State Domestic Product (NSDP) grew at 13.41%. These metrics indicate a significant economic improvement, albeit from a low starting point.

Agriculture remains Bihar's economic backbone, employing 80% of the population—well above the national average. The state ranks fourth in vegetable production and eighth in fruit production nationally. Beyond agriculture, Bihar has made significant advancements in food processing, dairy, sugar, healthcare, tourism, education, and renewable energy, leveraging its cost-efficient labour force to attract investments.

Growth and development are closely linked in developing economies like Bihar, addressing unemployment and poverty. Structural transformation theories emphasize sustainable development through resource reallocation, improved labour productivity, and shifts from primary (agriculture) to secondary (industry)

and tertiary (services) sectors. These transitions are crucial for regions advancing from subsistence to diversified growth paths.

Post-2005 reforms catalyzed significant improvements in Bihar's infrastructure, governance, and policies, driving double-digit growth rates and a 20% reduction in poverty rates. However, the state faces persistent unemployment, migration, fragmented agricultural holdings, low literacy, and inadequate healthcare. Despite these challenges, Bihar demonstrated resilience in the face of external shocks, such as COVID-19, showcasing its potential for sustained recovery and growth [1-23].

This study examines Bihar's economic transformation by analyzing trends in the NSDP, sectoral contributions, and structural changes over the past decade. Using 2011–12 base year data and workforce statistics from the 2017–18 Periodic Labour Force Survey, this evaluation assesses the sustainability and effectiveness of growth drivers, identifying challenges and opportunities for long-term revitalization.

Bihar's Economy: An Overview

Bihar spans 94.2 thousand square kilometres and is geographically divided by the Ganges River into two distinct regions: North Bihar (53.3 thousand square kilometres) and South Bihar (40.9 thousand square kilometres). The state's economy is predominantly agrarian, with approximately 80% of the population engaged in agricultural activities, significantly above the national average. This highlights the centrality of agriculture to Bihar's socioeconomic structure. In 2004–05, agriculture accounted for 42% of Bihar's Gross State Domestic Product (GSDP), underscoring its economic significance. Despite this heavy reliance, Bihar's agricultural sector continues to face persistent challenges, including low crop productivity and an excessive dependence on farming as a primary source of livelihood. These constraints perpetuate widespread poverty and economic vulnerability. The limited expansion of industrial and service sectors has further stifled income diversification, reinforcing the state's predominantly rural and agrarian character. The severity of Bihar's socioeconomic challenges is evident in the NITI Aayog's Multidimensional Poverty Index (MPI), which ranks Bihar as the poorest state in India, with 51.91% of its population living in multidimensional poverty. This statistic highlights the urgent need for structural reforms and targeted interventions to address the state's economic challenges.

Unleashing Bihar's Economic Growth Potential

Investment is a pivotal driver of economic growth, enhancing productive capacities, generating employment, fostering technological advancements, and increasing

government revenues. Historically, India has implemented several policy measures to bolster its saving-investment profile. The Five-Year Plans and the 1969 bank nationalization significantly enhanced financial inclusion and mobilized domestic savings. The liberalization of foreign direct investment (FDI) in the 1990s further catalyzed economic growth by attracting global capital and stimulating private sector participation. During the 12th Five-Year Plan (2012–2017), India's investment rate exceeded 35% of its GDP, driving an economic growth rate of 8.2%. Projections indicated further increases in investment rates to 38.4% and 41.4% in subsequent planning periods. Remarkably, Bihar, despite lagging in socioeconomic indicators, outperformed national growth averages during the 12th Plan. Sustaining this momentum in future development strategies is crucial for narrowing regional disparities and fostering equitable growth. A sectoral analysis of agriculture, industry, and services is necessary to optimize investment returns and ensure inclusive development.

India's structural transformation has been shaped by a series of policy regimes yielding uneven growth across sectors—post-independence policies, such as the Green Revolution, modernized agriculture, and increasing food production. However, the economic liberalization of the 1990s shifted focus toward the industrial and service sectors, leading to rapid growth in these areas. Today, the service sector dominates both the national and Bihar economies, while agriculture and industry contribute relatively less. Bihar lacks a balanced investment strategy to harness its full economic potential.

Empirical studies, including those by Mazumdar and Mallick, emphasize the role of industrial investment in driving growth, but they lack comprehensive sectoral analyses. Bihar faces similar challenges, necessitating a customized investment approach that balances agriculture, industry, and services while addressing structural constraints. Targeted investments in physical infrastructure, human capital, and institutional capacity are essential for maximizing returns and achieving sustainable development.

Ancient and Medieval Periods

Bihar's historical significance, rooted in the Mauryan and Gupta empires, profoundly shaped India's political, economic, and intellectual landscape, establishing it as a cornerstone of early Indian civilization. The Mauryan Empire (321–185 BCE), centred in Pataliputra (modern-day Patna), implemented a

sophisticated governance model characterized by centralized administration, efficient tax systems, and extensive trade networks that connected India to Central Asia and beyond. Under Emperor Ashoka, infrastructure developments such as roads, irrigation systems, and urban planning catalyzed economic growth, thereby boosting agriculture and commerce across the empire. The Gupta Empire (circa 319–550 CE), often hailed as India's "Golden Age," elevated Bihar's prominence through remarkable advancements in science, mathematics, and the arts. Scholars like Aryabhata revolutionized astronomy and mathematics, Charaka advanced the medical sciences, and Kalidasa crafted timeless literary works. These contributions solidified Bihar's role as a global intellectual hub, influencing knowledge systems far beyond India's borders. Institutions like Nalanda and Vikramshila attracted scholars from China, Korea, and Persia, offering interdisciplinary education in philosophy, linguistics, astronomy, mathematics, and medicine, fostering academic excellence. Intellectual giants like Kautilya, whose Arthashastra laid the foundation for statecraft and economic policy, further underscored Bihar's enduring legacy in governance and philosophical thought, shaping India's socioeconomic evolution.

Decline Post-Independence

Before its bifurcation in 2000, Bihar's economy thrived on the synergy of its fertile Gangetic plains and mineral-rich southern districts, now part of Jharkhand, supporting robust agricultural and industrial sectors. This dual economic strength enabled Bihar to leverage both primary (agriculture) and secondary (industry) activities, with coal mines, iron ore deposits, and manufacturing hubs driving industrial growth. However, the 2000 bifurcation stripped Bihar of these industrial assets, leaving it heavily reliant on agriculture and vulnerable to climatic and market fluctuations, significantly altering its developmental trajectory. From 2000 to 2005, Bihar experienced economic stagnation, characterized by low public and private investment, underdeveloped infrastructure, and limited industrial diversification, resulting in one of India's lowest per capita incomes. Following 2005, transformative governance reforms led to a remarkable recovery, with Bihar's GSDP experiencing an 8.6% CAGR (2005–2010), surpassing the national average of 7.04%. Infrastructure advancements included 1,723 new bridges, expanded highways, and 100% village electrification, though household electrification remained at 48%. Social sector investments have reduced infant mortality from 75 to 27 per 1,000 live births and significantly reduced school dropout rates. However, Bihar's literacy rates still trail

the national average, highlighting the need for sustained reforms to ensure inclusive growth.

Literature Review

Recurring floods, sectoral imbalances, and legislative interventions significantly shape the economic landscape of Bihar. Research by Kansal, Kumar, and Kumar (2017) (3) highlights that 73.06% of Bihar's land area is flood-prone, severely disrupting agriculture and stagnating growth. Structural flood management measures, such as embankments, have proven insufficient, necessitating an integrated approach that incorporates non-structural interventions, including floodplain management, land-use regulations, and enhanced forecasting. Community-based disaster preparedness and adaptive strategies are crucial for mitigating socioeconomic vulnerabilities.

Legislative interventions have played a pivotal role in addressing Bihar's economic challenges. PRS Legislative Research (2020–2021) (24) examined state policies concerning floods, poverty, and infrastructure deficits, underscoring governance reforms and strategic investments as essential to economic resilience. Aligning legislative actions with Bihar's socioeconomic and geographic realities remains crucial for achieving inclusive growth.

Agriculture, the backbone of Bihar's economy, is highly vulnerable to floods, perpetuating poverty and migration. Kansal *et al.* (2017) (3) and subsequent studies by Sinha (2017, 2019, 2023 a-c, 2022 a-b) [13,14, 16-19, 21, 23] and Sinha & Sinha (2020,2022, 2023) [15, 20, 22] emphasize critical strategies for agricultural growth. These include increased capital investment, timely reinforcement of infrastructure, mechanization, skill development, and effective credit. Although the role of forestry is economically minimal, it provides essential ecological services. Strategic investments and policy-driven interventions are imperative for overcoming agricultural challenges and ensuring sustainable economic progress.

Since 2005, improved governance has contributed to the growth of infrastructure and the service sector; however, agricultural underperformance continues to constrain Bihar's overall economic potential. A sectoral review indicates structural constraints, including infrastructural deficits and industrial stagnation. The Annual Survey of Industries (2021–22) reveals Bihar's limited industrial presence, with only 1.37% of India's operational factories and a mere 0.62% contribution to national Gross Value Added (GVA). Industrial employment has declined at a compound

annual growth rate (CAGR) of 1.65% since 2014–15, underscoring the need for job creation and economic diversification (25-28).

Agriculture remains a significant contributor to Bihar's GDP, accounting for 20.56% in 2021–22. However, vulnerability to natural disasters persists, with 74% of northern Bihar experiencing annual flooding while southern regions grapple with frequent droughts. Initiatives such as the Kosi-Mehsi intrastate link project aim to expand irrigation coverage and mitigate climate risks, necessitating sustained investment in water resource management for agricultural resilience.

To counter the industrial decline, Bihar has launched initiatives such as the Gaya industrial node under the Amritsar-Kolkata Industrial Corridor, targeting manufacturing, agro-processing, and export-driven industries. These measures are expected to enhance employment and economic diversification. Additionally, Bihar's rich cultural heritage, including Nalanda and the Mahabodhi Temple, presents significant economic potential. Drawing inspiration from projects like the Kashi Vishwanath Corridor, the strategic development of these sites could position Bihar as a global tourism hub, fostering employment and local economic growth.

A multidimensional growth strategy is imperative for Bihar's economic transformation, necessitating an integrated approach that encompasses agriculture, industry, and tourism. Enhancing infrastructure, industrial corridors, and cultural assets can create forward and backward linkages across sectors, providing a robust framework for sustainable development. Insights from Bihar's economic trajectory can inform regional development strategies in other underdeveloped areas.

Recent studies (29-36) emphasize the need for a multi-pronged strategy to promote Bihar's sustainable development. A comprehensive flood management system, integrating both structural (embankments) and non-structural (forecasting, land-use planning) measures, is crucial. Agricultural resilience can be strengthened through the adoption of flood-resistant crops, diversification, and the development of allied sectors, such as dairy and fisheries. Infrastructure expansion, including rural connectivity, electrification, and urban services, is vital for reducing regional disparities. Legislative and governance reforms should focus on strengthening policy implementation and fostering public-private partnerships to drive sustainable growth.

This study underscores the necessity for targeted interventions to accelerate Bihar's economic development and promote inclusive growth. A strategic policy framework that integrates flood management, agricultural modernization, industrial

revitalization, and tourism development can unlock the state's economic potential. By improving infrastructure, governance, and private sector participation, Bihar can overcome structural constraints and achieve sustainable development.

Objectives of the Study

1. The objective is to identify key growth drivers by assessing sectoral contributions from agriculture, industry, and services, alongside evaluating infrastructure, human capital, and high-growth opportunities in food processing, renewable energy, tourism, and healthcare to foster Bihar's economic advancement.
2. The goal is to diagnose developmental constraints by analyzing the impact of natural disasters, socio-economic challenges like poverty, unemployment, and migration, as well as governance inefficiencies and deficits in industrial and infrastructure development.
3. The aim is to propose strategic interventions through policies promoting disaster resilience, sector-specific growth, socio-economic upliftment, governance reforms, and enhanced private sector engagement to ensure sustainable and inclusive economic progress for Bihar.

Scope of the Study

This study examines Bihar's economic growth from 2011 to 2023, a period marked by significant policy and economic transformations. It identifies key growth determinants, addresses knowledge gaps, and provides strategic insights for sustainable development. The analysis ensures data consistency through a structured approach, focusing on Bihar's high population density, agrarian dependency, and flood vulnerability while identifying key growth sectors and cross-sectoral linkages. The analytical framework includes trend analysis to assess long-term economic patterns, sectoral evaluations to identify growth drivers and constraints, socio-economic assessments to evaluate development impacts, and disaster impact analysis to measure economic resilience and recovery.

Research Methodology

This study systematically evaluates strategies for Bihar's economic growth using a rigorous analytical framework, ensuring accuracy, relevance, and reliability. Adopting a descriptive and analytical research design, it relies exclusively on

secondary data from sources such as the Ministry of Statistics, NITI Aayog, NSSO, Bihar Economic Survey, peer-reviewed literature, and reports on policy impacts and economic trends. Covering the period 2011–2023, with a focus on key policy reforms post-2005, the study employs trend analysis to examine Bihar's GSDP growth, sectoral contributions, and employment trends; comparative analysis to benchmark performance against other states; sectoral evaluation to assess agriculture, industry, and services; and impact analysis to evaluate the effects of natural disasters and policy measures. The conceptual framework integrates structural transformation theory, growth models, and policy evaluation frameworks. However, reliance on secondary data limits micro-level insights and localized economic assessments.

Economic Structure of Bihar: An Analytical Perspective

Bihar's economic trajectory has been marked by a structural shift from an agrarian base toward a service-dominated economy, which now constitutes the largest proportion of the state's Gross State Domestic Product (GSDP). The bifurcation of Jharkhand in 2000, however, led to a substantial contraction in economic output, particularly in high-value sectors such as mining, quarrying, and industrial manufacturing, resulting in an estimated 30% reduction in Bihar's overall economic output. This structural dislocation posed significant challenges to Bihar's industrial base, exacerbating its reliance on primary and tertiary sectors.

Nevertheless, the state has demonstrated resilience through sustained expansion in agricultural productivity and rapid growth in services, with modest yet incremental advancements in the secondary sector. The ongoing diversification of Bihar's economic landscape, coupled with policy-driven initiatives in infrastructure and industrialization, has laid the foundation for long-term structural transformation. [See Table 1 & Table 2 for empirical insights.]

Table 1: Share and semi-logarithm annualized growth rate of the Major sectors in the total GDP at 2004-05 prices for Bihar and India.

Sector	Bihar			India		
	Agri. & Allied	Industry	Services	Agri. & Allied	Industry	Services

Share of the Sectors (%) in the GDP	1980-81	51.74	10.58	37.68	36.54	25.22	38.24
	1990-91	44.98	12.43	42.49	30.21	26.59	43.20
	2000-01	37.72	11.66	50.62	23.22	24.97	51.81
	2010-11	21.99	19.05	58.96	14.98	24.62	60.60
	2022-23	18.19	21.17	60.64	12.19	23.91	63.90
Semi-logarithm annualized growth rate (%)	1980-81 to 1995-96	2.06	24.59	6.11	3.24	7.95	4.74
	1996-97 to 2006-07	(-) 3.11	(-) 9.80	3.29	2.46	4.33	5.85
	2007-08 to 2022-23	(-)0.82	(-)2.06	6.47	2.48	7.89	5.84

Source: Author's calculation.

Table 2: Average share of value-added and contribution in the growth rate of the Agri. & Allied, Industry, and Service sectors in GDP of Bihar & India at 2004-05 prices

Period		The average share of value added			Contribution to the growth rate			
		Agri. & Allied	Industry	Services	Agri. & Allied	Industry	Services	Aggregate
Bihar	1980-81 to 1995-96	0.42	0.16	0.42	1.32	0.02	2.16	4.32
	1996-97 to 2005-06	0.33	0.20	0.47	0.05	(-)0.01	0.36	0.54
	2006-07 to 2022-23	0.25	0.19	0.56	0.22	0.01	3.32	4.56
India	1980-81 to 1995-96	0.28	0.30	0.42	0.52	0.26	2.37	4.80
	1996-97 to 2005-06	0.23	0.29	0.48	0.53	0.39	2.67	4.67
	2006-07 to 2022-23	0.17	0.25	0.58	0.75	0.24	4.13	6.67

Source: Author's calculation

Structural transformation is a multifaceted process shaped by the interplay of human capital, infrastructure expansion, institutional efficiency, and industrial investments. Depending on the strategic alignment of these factors, structural change can either catalyze or impede economic growth. Empirical evidence underscores this dichotomy: nations such as India and Thailand have successfully navigated growth-enhancing structural transitions, whereas Argentina, Brazil, Nigeria, and Zambia have undergone structural shifts that constrained long-term economic performance (Ahsan, 2012; McMillan, Rodrik & Sepulveda, 2017) [25].

In Bihar, structural transformation remained sluggish before 2005. However, the advent of stable governance post-2005 initiated a period of accelerated economic expansion and sectoral realignment [37-49]. Central to Bihar's economic resurgence has been the development of critical infrastructure. Between 2005-06 and 2015-16, the state witnessed the construction of 1,723 bridges and a significant augmentation of road networks. National highway coverage expanded from 3,410 km in 2001 to 4,595 km in 2015, while state highways increased from 2,383 km in 2011 to 4,253 km in 2015. Electrification efforts also advanced substantially, with 95.50% of villages receiving power by 2014-15.

Public expenditure patterns reflect Bihar's strategic focus on economic and social development. From 1999-00 to 2013-14, annual capital expenditure grew at 16.7%, while social sector investments expanded at 14.94% and 21.76%, respectively, prioritizing human capital formation and welfare programs post-2005. These policy-driven investments have yielded tangible improvements in health indicators, including declines in infant mortality, birth rates, and fertility rates. Moreover, poverty alleviation initiatives such as Jeevika have contributed to socioeconomic upliftment, though persistent challenges—such as low literacy levels and pronounced regional disparities—continue to impede equitable development.

Bihar's evolving economic structure highlights the pivotal role of infrastructure expansion, social sector advancements, and human capital investments in driving sustainable growth. However, ensuring long-term inclusivity necessitates targeted policy interventions to bridge regional inequalities and enhance educational outcomes. [See Table 3 for empirical substantiation.]

The primary sector forms the backbone of early-stage economies, contributing substantially to national income; however, its share decreases as economies diversify and industrialize. It encompasses agriculture, forestry, fishing, livestock, and mining, as measured by Net State Domestic Product (NSDP). While mining and quarrying are often grouped under the secondary sector, they are traditionally included in primary sector estimates. Advanced economies see agriculture contributing 1%-8% to value-added, with North America contributing under 1%. India's primary sector accounts for approximately 14%-15%. In contrast, in Bihar, agriculture-driven contributions declined from 40.57% in 1993-94 to 19.70% in 2022-23, representing a drop of 20.87 percentage points. Fishing's NSDP share has remained stable, while forestry/logging declined by an average of 3% annually. Mining, with an average annual growth of 34%, still contributes just 0.35%, limited by volatility like 535.57%

Table 3: Average public investment and growth rate – Bihar & India

		Rate of Investment			Growth rate			
		Agri. & Allied	Industry	Services	Agri. & Allied	Industry	Services	Aggregate
INDIA	1980-81 to 1982-83	1.84	4.37	7.43	5.86	4.25	5.35	5.37
	1983-84 to 1985-86	1.58	4.82	7.11	6.42	4.63	5.86	5.45
	1986-87 to 1988-89	1.37	3.47	6.74	3.43	5.37	7.01	5.67
	1989-90 to 1991-92	1.31	3.92	6.32	3.21	6.23	7.57	5.76
	1992-93 to 1994-95	0.98	4.14	7.34	2.96	6.21	5.26	3.95
	1995-96 to 1997-98	0.65	5.11	7.11	2.57	6.08	6.01	5.98
	1998-99 to 2000-01	0.84	5.32	6.95	3.02	3.47	7.53	5.73
	2001-02 to 2003-04	0.98	4.88	6.79	2.06	3.78	8.51	7.38
	2004-05 to 2006-07	1.32	3.52	7.32	1.84	9.32	8.63	7.63
	2007-08 to 2009-10	1.23	8.64	7.65	3.04	8.27	9.64	7.53
	2010-11 to 2012-13	1.29	8.35	8.94	3.45	7.28	9.74	7.76
	2013-14 to 2015-16	1.31	3.92	6.32	3.21	6.23	7.57	5.76
	2016-17 to 2018-19	0.98	4.14	7.34	2.96	6.21	5.26	3.95
2019-20 to 2021-22	0.65	5.11	7.11	2.57	6.08	6.01	5.98	
BIHAR	1980-81 to 1982-83	1.01	0.82	5.73	7.45	4.52	5.79	6.48
	1983-84 to 1985-86	1.23	0.96	6.54	8.56	4.65	5.96	6.84
	1986-87 to 1988-89	1.12	0.87	6.76	(-) 1.75	5.16	4.81	2.17
	1989-90 to 1991-92	1.35	1.04	6.83	(-) 1.45	5.61	4.32	2.78
	1992-93 to 1994-95	1.33	1.54	6.94	2.76	2.17	3.45	2.95
	1995-96 to 1997-98	1.12	1.63	6.98	2.51	(-) 2.22	4.23	3.13
	1998-99 to 2000-01	1.64	1.87	7.03	(-) 2.12	2.69	5.27	3.91
	2001-02 to 2003-04	1.77	1.99	7.13	6.44	2.82	4.23	3.43
	2004-05 to 2006-07	2.43	3.12	8.76	7.44	3.21	6.86	7.75
	2007-08 to 2009-10	2.77	4.44	9.32	3.43	1.48	12.11	8.75
	2010-11 to 2012-13	3.12	4.58	9.76	4.33	8.96	12.44	9.08
	2013-14 to 2015-16	3.29	8.345	8.94	4.45	8.28	11.74	8.76
	2016-17 to 2018-19	3.31	7.92	8.32	4.21	8.23	11.57	7.76
2019-20 to 2021-22	2.98	6.14	5.34	3.96	6.21	6.26	5.95	

Source: Author's calculation.

growth in 2013-14, followed by a -60.61% plunge the next year. Agriculture and fishing have stable growth averages of 4.47% and 6.06%, respectively, making them the primary stable contributors to NSDP. Despite its vital role in Bihar's economy, the primary sector faces declining NSDP shares and inherent volatility, requiring strategic interventions to ensure long-term stability and growth.

Bihar's secondary sector, comprising manufacturing, construction, and utilities, plays a crucial role in structural transformation and economic expansion. However, the bifurcation of the state in 2000 deprived Bihar of significant industrial assets, constraining its industrial base. The sector grew post-2005, with its GSDP contribution increasing by five percentage points from 1993-94 to 2022-23, peaking at 20.85% in 2014-15 before declining. Among its subsectors, construction has been the most dynamic, growing from 2.39% in 1993-94 to 9.72% in 2022-23, with annual growth reaching 23.69% between 2004-05 and 2011-12 before slowing. Meanwhile, the manufacturing sector's share declined by 1.47% over the study period, and utilities, including electricity, gas, and water, stagnated, losing 0.74% of their GSDP contribution. These trends signal structural challenges, and the slowdown in construction growth raises concerns about the sustainability of the industry. Revitalization strategies are necessary to enhance the resilience and diversification of Bihar's secondary sector. The tertiary sector, encompassing trade, communication, banking, and public administration, has become the dominant contributor to Bihar's NSDP, increasing from 45.50% in 1993-94 to 61.24% in 2011-12. It grew at an average annual rate of 9.00% from 2004-05 to 2011-12 and 8.30% from 2011-12 to 2022-23. However, its annual share growth in NSDP has been modest, with peak gains occurring from 2004-05 to 2011-12. Sub-sectoral analysis reveals that trade, hotels, and restaurants (THR) were the most significant contributors, growing at an annual rate of 9.59% from 2004-05 to 2011-12; however, growth slowed thereafter. Communication emerged as the fastest-growing segment, driven by the expansion of telecommunications and the internet, with an annual growth rate of 25.80% from 2008-09 to 2015-16. The banking and insurance sector also expanded, increasing its share by 3.16% between 1993-94 and 2022-23. While communication has grown the fastest, THR and banking have slowed, and stagnation in railways and public administration highlights inefficiencies that hinder modernization efforts.

Structural transformation in Bihar's economy is evident at both the micro and macro levels, reflecting localized efficiency improvements alongside economy-wide shifts in industrialization, urbanization, and agricultural transition. Bihar's NSDP

grew at a compound annual growth rate (CAGR) of 5.61% from 1993-94 to 2018-19, with specific subsectors experiencing double-digit CAGR between 2004-05 and 2011-12, aligning with Gross State Domestic Product (GSDP) trends. Sectoral shifts from 1993-94 to 2022-23 indicate that the secondary and tertiary sectors have driven growth, particularly since 2004. Primary-sector employment has declined, while secondary-sector jobs, especially in construction, have expanded. The tertiary sector remains the dominant employer in urban areas, though some of its subsectors show slower growth. Labour migration has increased female participation in both agricultural and non-agricultural activities; however, structural employment shifts remain slow for women, underscoring persistent disparities. These changes highlight Bihar's evolving economic landscape and the interplay between sectoral expansion, employment trends, and inclusivity.

Bihar's economic trajectory has been shaped by a strategic combination of policies and growth drivers aimed at leveraging its strengths while addressing systemic challenges. Pro-business initiatives, including regulatory reforms and incentives for industrial development, have improved the ease of doing business, attracting investments in emerging sectors and fostering economic diversification. Infrastructure development, particularly in transport, energy, and digital connectivity, has played a pivotal role in enhancing market access and industrial expansion. Targeted investments in manufacturing, agro-processing, and technology sectors have bolstered Bihar's industrial ecosystem, strengthening production capacities and integration into domestic and global value chains. The state's large population serves as a vast consumer market, driving demand across various sectors. At the same time, its abundant labour force, if effectively trained and upskilled, can significantly enhance productivity and economic sustainability. Agriculture remains the backbone of Bihar's economy, contributing substantially to GDP and employment. Government policies focusing on irrigation expansion, sustainable farming practices, and technological advancements have improved productivity, with crop diversification and the development of value-added agricultural products helping mitigate market and environmental risks.

Furthermore, poverty alleviation programs, rural employment schemes, and farmer support initiatives have improved living standards, fostering inclusive growth. Effective governance, backed by political stability, has facilitated economic development; however, challenges such as bureaucratic inefficiencies and corruption necessitate targeted reforms to address these issues. Bihar's export-oriented industries

are also influenced by global financial conditions and national policies, such as “Make in India” and “Digital India,” which have strengthened their integration with the broader national development agenda. Moving forward, strengthening pro-business policies, expanding workforce skill development, investing in agricultural innovation, and improving governance mechanisms will be crucial in sustaining Bihar’s growth momentum and securing its position as a key contributor to India’s economic development.

Financial Status of Bihar’s Economy: Bihar’s financial status has demonstrated a notable improvement over recent years, reflecting positive trends in fiscal management and revenue generation. [See Table 4 below]

**Table 4. Per Capita Net State Domestic Product – Bihar & All States
(At Current Prices) Base Year: 2011-12 (Rs Crore)**

Year	Bihar		All States	
	PCNSDP	% Growth	PCNSDP	% Growth
2022-23	53478	13.07	169496	12.32
2021-22	47296	12.27	150906	18.59
2020-21	42128	(-)04.64	127244	(-)03.85
2019-20	44175	08.50	132341	05.08
2018-19	40715	10.48	125946	09.31
2017-18	36850	08.24	115224	09.86
2016-17	34045	11.97	104880	10.64
2015-16	30404	06.04	94797	09.41
2014-15	28671	06.39	86647	09.51
2013-14	26948	10.05	79118	11.45
2012-13	24487	12.58	70983	11.85
2011-12	21750	-	63462	-

Source: National Statistical Office/ Reserve Bank of India.

However, underlying challenges necessitate a continued focus on equitable and sustainable growth. Between 2019-20 and 2020-21, Bihar’s revenue receipts increased by 21.5%, reflecting an improved capacity to mobilize resources and manage fiscal responsibilities despite external shocks, such as the pandemic. A key component of Bihar’s budgetary framework is its share in central taxes, which has seen a substantial increase of 43.8%, thereby strengthening the state’s revenue base and underscoring its alignment with national tax devolution policies. However, revised estimates indicated a decline in receipts from central taxes, pointing to

potential vulnerabilities in financial flows influenced by factors such as national tax collection variability and economic slowdowns. While Bihar's share in central taxes is projected to rise slightly from 4.06% (2015-2020) to 4.13% in 2020-21, as per the 15th Finance Commission's recommendations, this marginal increase highlights the need for enhanced state-level revenue generation through improved tax collection mechanisms to reduce dependency on central transfers. Additionally, ensuring the efficient utilization of devolved funds through strategic allocation and expenditure is crucial for translating these financial resources into meaningful developmental outcomes.

Sectoral Dynamics in Bihar's Economy

Bihar's economy has undergone a significant structural shift, with the tertiary sector emerging as the primary driver of Gross State Domestic Product (GSDP). Services such as trade, transport, and financial activities have played a crucial role in economic expansion and employment generation. While this transformation highlights the evolving economic landscape of Bihar, it also underscores the need for balanced growth across the primary and secondary sectors to ensure long-term sustainability. Agriculture remains a vital source of employment and rural sustenance, yet it continues to face persistent structural inefficiencies, including low productivity, fragmented landholdings, inadequate irrigation, and climate-induced vulnerabilities. Sustainable modernization efforts, including investments in irrigation, mechanization, agro-processing, and market linkages, are essential to enhance productivity and improve farmers' incomes. Meanwhile, the manufacturing sector's contribution remains limited due to infrastructure constraints, low industrialization, and skill mismatches. Accelerating growth in this sector requires targeted investments in industrial clusters, logistics, and workforce development, along with policy measures to enhance the ease of doing business and attract private investment.

Economic Policies and Growth Drivers in Bihar

Bihar's economic progress hinges on strategic policies and growth drivers that capitalize on its strengths while addressing systemic challenges to foster sustainable development and resilience across all sectors. Pro-business initiatives, including regulatory reforms and incentives for industrial development, have streamlined operations, attracted investments in textiles, leather, and technology, and promoted

entrepreneurship, driving economic diversification. Infrastructure development, a cornerstone of Bihar's growth, involves significant investments in transportation, energy, and digital connectivity, thereby enhancing trade, market access, and industrial expansion through upgraded highways, railways, rural roads, and energy grids. The state's large population creates a robust consumer base, fuelling demand for goods and services. At the same time, its abundant labour force, supported by skill development programs, enhances productivity in both agriculture and industry. Agriculture, a backbone of Bihar's economy, benefits from policies that promote irrigation, sustainable practices, and crop diversification, thereby improving GDP contributions and enhancing resilience to market and environmental shifts.

Key Takeaways and Recommendations

Bihar's growth is driven by a dynamic interplay of policies, industrialization, population dynamics, and governance; however, sustaining this trajectory requires targeted interventions to address structural challenges effectively. Strengthening pro-business policies and infrastructure investments will attract further industrial growth, while expanding skill development programs will align the labour force with high-growth sectors, such as manufacturing and agro-processing. Agricultural innovation, facilitated by advanced technologies and robust market linkages, is crucial for maintaining sector resilience and economic contributions. Governance reforms are essential for reducing bureaucratic inefficiencies and corruption, ensuring transparent policy implementation, and enhancing institutional capacity building. To improve global integration, Bihar must diversify its export markets and adapt to international trade trends, thereby securing competitiveness in export-oriented industries. A stable political environment continues to bolster investor confidence, enabling long-term planning and policy consistency, which are vital for sustained economic development and Bihar's integration into national initiatives, such as "Make in India" and "Digital India."

Future Research Directions

Future research is crucial for developing a resilient, inclusive, and sustainable economic framework for Bihar, aligning with national and global development goals through rigorous analytical approaches. Longitudinal studies analyzing Bihar's economic evolution will identify sustainable growth drivers, structural bottlenecks, and sectoral dynamics that shape its long-term development

trajectories. Econometric and spatial analyses of interstate disparities will reveal the causal mechanisms behind Bihar's economic divergence, informing policies that foster regional convergence. Rigorous policy impact assessments, using methods like Difference-in-Differences and Propensity Score Matching, will evaluate the efficacy of industrial promotion, infrastructure investments, and fiscal incentives, optimizing future policy design. Research on socioeconomic and environmental trade-offs, employing integrated assessment models and sustainability indicators, will assess the impacts of rapid industrialization on resource use, pollution, and community livelihoods, ensuring balanced growth. These research directions will guide Bihar toward a diversified, equitable, and sustainable economic future, strengthening its role in India's broader development agenda.

References

- Bhattacharya, D. (2000): "Bihar after Bifurcation: A Challenging Future", *Economic and Political Weekly*, Vol. 35, No. 43-44, pp. 3800–3804.
- Das Gupta, C. (2010): "Unravelling Bihar's 'Growth Miracle'", *Economic & Political Weekly*, Vol. XLV, No. 52, December 25, 2010.
- Kansal, M. L., Kumar, P., & Kumar, A. (2017): Impact of Flood and its Management – A Case Study of Bihar. *Int. J. of adv. Res.* 5 (Mar). 1695-1706] (ISSN 2320-5407). <http://dx.doi.org/10.21474/IJAR01/3681>.
- Gupta, C. D. (2010): Unraveling Bihar's Growth Miracle. *Economic and Political Weekly*, pp. 50-62.
- Santra, S., Kumar, R., & Bagaria, N. (2014): Structural change of Bihar economy during 1999 to 2010: a district-level analysis. *The International Journal of Humanities and Social Studies*, pp.2(1).
- Kumar, D. (2020). Structural change, employment and economic growth in Bihar, India: A disaggregated sector-wise analysis. 7, 187–196. <https://doi.org/10.14445/23939125/IJEMS-V7I8P124>.
- Sabreen, M., & Behera, D. K. (2020). Changing structure of rural employment in Bihar: Issues and challenges. *The Indian Journal of Labour Economics*, 63, 833–845. <https://doi.org/10.1007/s41027-020-00279-6>
- Sabreen, M., & Behera, D. K. (2020). Changing structure of rural employment in Bihar: Issues and challenges. *The Indian Journal of Labour Economics*, 63, 833–845. <https://doi.org/10.1007/s41027-020-00279-6>
- Sabreen, M., & Behera, D. K. (2021). Determinants of non-farm employment in rural Bihar. *Indian Journal of Economics and Development*, 17(4), 831–839. <https://doi.org/10.35716/IJED/21157>

- Singh, A., & Singh, A. (2023). Trends and Determinants of Labour Force Participation in Bihar: Insights from PFLS data 2021-22. *International Research Journal of Modernization in Engineering Technology and Science*, 5(6). <https://www.doi.org/10.56726/IRJMETS41273>
- Singh, G. (2020). Access to non-farm employment in contemporary India: A study of Bihar and Punjab. *Social Change*, 50(4), 532–547. [http://dx.doi.org/10.1177/0049085720957512/\[ohio_text\]/\[vc_column\]/\[vc_row\]](http://dx.doi.org/10.1177/0049085720957512/[ohio_text]/[vc_column]/[vc_row])
- Kumar, D. (2020). Structural change, Employment and Economic growth in Bihar, India: A disaggregated sector-wise analysis. *International Journal of Economics and Management Studies* 7(8):187-196. DOI:10.14445/23939125/IJEMS-V718P124
- Sinha, J.K. (2023). Assessing the Impact of Sectoral Investment on Bihar's Economic Growth. *International Journal of Political Science* 1(1):33-42
- Sinha, J.K. (2023). "Revitalizing Bihar's Economy: A Sectoral Analysis of Agricultural and Allied Investments (1980-2021)". *The Journal of Income and Wealth* Vol. 45, Issue 1&2, January-December, 2023, pp. 100-117.
- Sinha, J.K. & A.K. Sinha (2023). Declining Contribution of Agriculture to the Indian Economy in the Post-Economic Reforms Period. *Asian Journal of Economics & Finance*, 2023, Vol.5(1). Pp. 61-85, DOI 10.47509 AJEF. 2023.v.05.i.01.04
- Sinha, J.K. (2023). Economies of the Factors Affecting Crop Production in India: Analysis Based on Cobb-Douglas Production Function *Sumerianz Journal of Economics and Finance*, 2023, Vol. 6, No. 1, pp. 10-18 DOI:<https://doi.org/10.47752/sjef.61.10.18>
- Sinha, J.K. (2024). "Reviving Resilience: Analyzing Agricultural and Allied Investments in Bihar Amidst the COVID-19 Pandemic (1980-2022)". *Open Access Journal of Economic Research*. Vol.1(1). Pp.1-13
- Sinha, J.K. (2017): Contribution of Investment in Economic Growth of Major Sectors: With Focus on Agriculture & Allied Sector in Bihar. *Statistical Journal of the IAOS*, Vol. 33, pp.557-564.
- Sinha, J.K. (2019): Influence of technologies on the GDP growth rate from agriculture: A case study of sustaining economic growth of the agriculture sector in Bihar. *Statistical Journal of the IAOS* Vol.35, pp. 277–287.
- Sinha, J.K. & A.K. Sinha (2020): Sustainable Agricultural Development Under Influence Of Technology: A Case Study of Bihar. *Indian Journal of Applied Business and Economic Research* Vol. 1, No. 1, pp. 1-18.
- Sinha, J.K. (2022 a). Public Expenditure for Agriculture Development & the Economic Growth of Bihar (1981-2019). *Asian Journal of Economics & Finance*, 2022, Vol.2(2). Pp. 411-424, DOI 10.47509 AJEF. 2022.v.04104.01
- Sinha, J.K. & A.K. Sinha (2022). Syndrome of Declining Economic Importance of Agriculture in Bihar (1960-2018). *Journal of Humanities, Arts and Social Science*, 2022, 6(1), 1-15

- Sinha, J.K. (2022 b). Factors Influencing Sustainable Agricultural Development In Bihar. *Indian Development Policy Review* Vol. 3, No. 1, 2022, pp. 47-65.
- Ministry of Statistics and Programme Implementation. (2022). Periodic Labour Force Survey (PLFS) 2022-23. Retrieved from https://www.mospi.gov.in/sites/default/files/publication_reports/AR_PLFS_2022_23N.pdf
- Ahsan, R. N., & Mitra, D. (2017): Can the Whole Be Greater Than the Sum of Its Parts? Lessons From India's Growing Economy and Its Evolving Structure", in McMillan, M., Rodrik, D., & Sepulveda, C. (ed.) *Structural Change, Fundamentals, and Growth: A Framework and Case Studies*. Cambridge, MA, (2017) 39-79.
- NSSO, Employment and Unemployment Situation in India, (July 2011- June 2012). New Delhi: Ministry of Statistics and Programme Implementation, Government of India. (2014)
- Department of Economic Affairs, Government of India (2024). *The Indian Economy: A Review*.
- F. Ahmad *et al.* (2022). Natural resources and environmental quality: exploring the regional variations among Chinese provinces with a novel approach. *Resour. Pol.*
- M. Ahmad *et. al.* (2020). The dynamic impact of natural resources, technological innovations and economic growth on ecological footprint: an advanced panel data estimation. *Resour. Pol.*
- A.U. Akar *et al.* (2023). Prediction of zenith tropospheric delay in GNSS observations using support vector regression. *Adv. Space Res. Vol*
- E.B. Ali *et al.* (2021). Green economy implementation in Ghana as a road map for a sustainable development drive: a review. *Sci. Afr.*
- E. Cascetta *et al.* (2020). Economic growth, transport accessibility and regional equity impacts of high-speed railways in Italy: ten years ex-post evaluation and future perspectives. *Transport. Res. Pol. Pract.*
- S. Chaturvedi. (2024). The Economics of Sustainable Development: Challenges and Solutions. *Educational Administration Theory and Practice journal* 30(5):9061-9067. DOI:10.53555/kuey.v30i5.4497
- J. Suresh Kumar and D. Shobana (2024). A Study on Strategies And Challenges of Sustainable Development Policy In India. *International Journal of Social Sciences & Economic Environment* 8(2):67 – 81. DOI:10.53882/IJSSEE.2023.0802005
- Natalia Yu. Moroz, Olga V. Antipova, Nadezhda Yu. Psareva, Elena V. Lyapunsova Nadezhda S. Matveeva (2021). Strategies for Sustainable Development of Socio-Economic Systems. *Estudios de Economia Aplicada*, Volumen:39-5 // ISSN: 1133-3197.
- Rajgarhia, P. (2024). The Impact of Political Instability on Economic Growth: A Comparative Study Between Gujarat and Bihar from 2010-2020. *International Journal of Social Science and Economic Research*. Volume:09, Issue:09

- Alam, Shadab. (2020). "Nearly failed education system of Bihar: a teacher's take." Medium, 8 August 2020, <https://medium.com/@9971427619/nearly-failed-education-system-of-bihar-a-teachers-take-1d8ab42b0794>.
- Bihar Government. (2022). "Economic Survey 2021-22." Bihar.gov.in, 2021, https://state.bihar.gov.in/finance/cache/12/01/Mar22/SHOW_DOCS/
- Gulati, Ashok, *et al.* (2021) "Performance of Agriculture in Gujarat." Revitalizing Indian Agriculture and Boosting Farmer Incomes, 2021. 978-981-15-9334-5.
- Keshri, Vikash R. (2020). "COVID-19: Why does Bihar's public healthcare system struggle so?" The George Institute for Global Health, <https://www.georgeinstitute.org.in/profiles/covid-19-why-does-bihars-public-healthcare-system-struggle-so>.
- F. Wang, W.K. Wong, Z. Wang, G. Albasher, N. Alsultan, and A. Fatemah (2023). Emerging pathways to sustainable economic development: An interdisciplinary exploration of resource efficiency, technological innovation, and ecosystem resilience in resource-rich regions. *Resources Policy*. Volume 85, Part A, August 2023, 10374
- Padder AH & Mathavan B (2022): Structural Transformation Path Across Indian States: Findings from Panel Data Analyses, Munich Personal RePEc Archive_paper_113305.pdf 44.
- Soni, S., & Subrahmanya, M. B. (2020). Growth and Structural Change in the Indian Economy: An Analysis of Pattern, Determinants, and Outcomes. *Economic and Political Weekly*, 65-70.
- Padder, A. H., & Mathavan, B. (2021). Structural Transformation Path Across Countries: Is It Systematic Pattern. *Design Engineering*, 2021(7), 12679-12687. Retrieve from <http://www.thedesigengineering.com/index.php/DE/article/view/4485>
- Mehrotra, S., Parida, J.K. (2021) Stalled Structural Change Brings an Employment Crisis in India. *Ind. J. Labour Econ.* 64, 281–308. <https://doi.org/10.1007/s41027-021-00317-x>
- Singh, S., Parida, J.K. & Awasthi, I.C. (2020). Employability and Earning Differentials Among Technically and Vocationally Trained Youth in India. *Ind. J. Labour Econ.* 63, 363–386 (2020). <https://doi.org/10.1007/s41027-020-00222-9>
- Mehrotra, S. (2020). Make in India': The Components of a Manufacturing Strategy for India. *Ind. J. Labour Econ.* 63, 161–176. <https://doi.org/10.1007/s41027-019-00201-9>
- Sundari, S. (2020). Structural Changes and Quality of Women's Labour in India. *Ind. J. Labour Econ.* 63, 689–717. <https://doi.org/10.1007/s41027-020-00245-2>.