

## A STUDY ON SECTORAL DEVELOPMENT, GROWTH AND CHALLENGES IN CHHATTISGARH

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### ABSTRACT

*This study looks into the sectoral development, growth trajectories, and difficulties confronting the Indian state of Chhattisgarh. Chhattisgarh, which was established in 2000, has experienced tremendous economic growth, especially from agriculture, mining, and the industrial sector. This study takes a mixed-methods approach, combining quantitative data analysis with qualitative interviews to evaluate these sectors' contributions to the state's GDP and employment. Key findings show that, while agriculture remains the economy's backbone, the mining sector has attracted significant investment, driven growth while generating environmental and social issues. Industrial expansion, particularly in the industrial and service sectors, provides chances for diversification; nevertheless, infrastructure gaps and regulatory challenges stymie progress. The research also outlines key challenges, such as socioeconomic inequality, environmental degradation, and the need for skill development. Policy recommendations emphasise the relevance of sustainable practices, inclusive growth strategies, and improved infrastructure in promoting holistic development. This research contributes to the understanding of regional economic dynamics and offers insights for policymakers aiming to foster sustainable development in Chhattisgarh.*

**Keywords:** *Mixed Method, Socio-Economic, Diversification.*

### Introduction

Chhattisgarh, a state in central India, is an exceptional scenario for analysing sectoral development, growth, and problems. Established in 2000, the state has quickly transitioned from a predominantly rural economy to one that values industrialisation and service sector expansion. Agriculture, mining, and manufacturing are key industries in the country's economy, contributing significantly to GDP and employment. However, the state has a number of obstacles, including infrastructure inadequacies, socioeconomic imbalances, and environmental concerns associated with resource extraction. This study seeks to examine the dynamics of sectoral growth in Chhattisgarh, specifically how different sectors interact and influence overall economic development. The research will provide insights into policy implications and sustainable growth strategies by investigating both the triumphs and challenges encountered in these industries. Understanding Chhattisgarh's developmental trajectory is critical for developing effective measures that will boost the state's economic potential while addressing current impediments to its advancement. Finally, this study aims to contribute to a holistic knowledge of regional development in India by providing lessons that may be applied to similar contexts.

### Objective of Study

A study titled "Sectoral Development, Growth, and Challenges in Chhattisgarh" would normally include the following important points:

- Determine the contributions of several sectors (agriculture, industry, and services) to Chhattisgarh's overall economic growth.
- Determine the primary drivers of growth in each industry and how they interact with one another.
- Identify the issues that different industries confront, such as infrastructure deficits, skill shortages, and environmental concerns.
- Provide estimates for sectors growth and development, taking into account present trends and future disruptions.

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### Methodology

- **Research Design:** This is a descriptive and exploratory study to better understand the dynamics of different sectors in Chhattisgarh. It uses a mixed-methods approach, combining quantitative and qualitative data to create a comprehensive view.
- **Study Areas:** It focusses on four important sectors: agriculture, industry, services, and infrastructure. Selection of regions in Chhattisgarh for in-depth investigation, assuring representation of both urban and rural environments.
- **Data Collection:** Secondary data is gathered from government reports, statistical databases (such as Census and Economic Surveys), and sectoral performance indicators. The study Use case studies from successful initiatives in the state to illustrate best practices.
- **Sampling Method:** The Study Use stratified sampling to achieve diversified representation across sectors and geographies. Aim for a sample size that is statistically significant yet manageable for qualitative analysis.
- **Data Analysis:** The study used quantitative analysis of data trends to calculate sector-specific growth rates. In the study, a SWOT analysis was performed for each sector.

### Sectoral Analysis

#### Agriculture

The state has a total population of over 2.55 crore, with agriculture accounting for approximately 70% of the total. The state has approximately 37.46 lakh farm families, with roughly 80% of farmers falling into the Small & Marginal category. The key Kharif crops are paddy, soybean, urd, and arhar, whereas the Rabi season is dominated by chickpea and lathyrus. Some districts in the state have a high sugarcane production potential, and the state now has four successful cooperative sugar plants. Other crops grown in the state include maize, millets, moong, wheat, and groundnuts. The Central Plains of Chhattisgarh are known as the Rice Bowl of Central India.

Chhattisgarh has launched a determined effort to increase double planted areas, diversify cropping patterns, and boost revenue from agro-based small-scale enterprises. To realise the full potential of the state's agriculture sector, the government is focussing on improving water resource management. To lessen farmers' reliance on rainfall, the government is seeking to expand the state's irrigation potential. The state's net irrigated area is currently roughly 14.76 lakh ha, accounting for approximately 32% of its net sown area.

Chhattisgarh is separated into three agro-climatic zones with enormous potential for agricultural development. The table below shows agro-climatic zone-specific characteristics such as area, soil, irrigation, cropping pattern, and so on.

**Table 1: Agro-Climatic Zone-Specific Characteristics**

Agro Climatic Zone	Districts Included	Total Geo. Area	Net sown area	Soil Type	Irri. %	Cropping Pattern	
						Rainfed	Irrigated
<b>C.G. Plains (15 Distt.)</b>	Raipur, Gariyaband, Balodabazar, Mahasamund, Dhamtari, Durg, Balod, Bemetara, Rajnandgaon, Kabirdham, Bilaspur, Mungeli, Korba, Janjgeer, Raigarh & a part of Kanker Districts (Narharpur & Kanker Block)	68.49 lakh ha. (50%)	32.95 Lakh ha.	Entisol 36 %, (Bhatha) Alfisol 21 %, (Matasi) Inceptisol 22 %, (Dorsa) Vertisol 18 %, (Kanhar) Alluvial 3 % (Kachhar)	43 %	Rice - Fallow, Rice - Lathyrus, Rice - Lathyrus, Rice - Gram / Wheat Soybean - Gram / Wheat Soybean + Arhar Kodo / Urd / Moong / Til + Arhar Maize - Mustard	Rice - Gram / Wheat / Sunflower, Rice - Rice / Maize, Maize - Urd, Vegetable - Vegetable, Soybean + Arhar, Sugarcane
<b>Plateau (7 Distt.)</b>	Jagdalpur, Narayanpur, Beejapur, Kondagaon, Dantewada, Sukma and the remaining part of Kanker Districts	39.06 lakh ha. (29%)	6.40 Lakh ha.	Entisol 26 %, Alfisol 25 %, Inceptisol 34 %, Vertisol 10 %, Alluvial 5 %	5 %	Rice - Fallow, Maize - Fallow, Millets / Niger - Fallow, Arhar + Moong / Urd - Fallow	Rice - Wheat / Gram Maize - Gram / Mustard Rice - Maize Vegetable - Vegetable Sugarcane
<b>Northern Hills (5 Distt.)</b>	Sarguja, Surajpur, Balrampur, Korla, Jashpur & Dharamjaigarh Tehsil of Raigarh Districts	28.47 lakh ha. (21%)	8.35 Lakh ha.	Entisol 13 %, Alfisol 29 %, Inceptisol 28 %, Vertisol 28 %, Alluvial 2 %	11 %	Rice - Fallow, Maize - Fallow, Fallow - Horse Gram/Niger (Horsegram and niger are mid season crop sown during Aug.to mid Sept.) Arhar - Fallow Rice - Wheat Maize - Mustard Sugarcane	Rice - Wheat, Maize - Wheat / Mustard, Vegetable - Vegetable Sugarcane

Source: -Directorate of Economic and Statistics, C.G.

The efforts made by the state government for the development of agriculture as well as the financial upliftment of farmers have resulted positively in terms of the "Krishi Karman Award" (Chhattisgarh received this prestigious award for the years 2010-11, 2012-13, and 2013-14 for paddy production, the year 2014-15 for pulse productivity, and again for the fifth time for the year 2016-17) which are truly dedicated to the farmers of the state, as their hard work pays off.

Agriculture in Chhattisgarh has grown at a 5.0% rate, which is less than the general growth rate of 6.5%. Agriculture employs 74.5% of the Chhattisgarh labour force, which is significantly greater than in any other state. Its percentage of GSDP decreased from 18.3% in 2012-13 to 17.1% in 2017-18.22 During this period, Indian agriculture expanded at a rate of only 3.1%.<sup>23</sup> Thus, agricultural growth in Chhattisgarh has outpaced the rest of the country.

The main crop is paddy, and Chhattisgarh's central plains are renowned as the rice bowl of central India. Rice is planted on around 69% of the cropped area. Chhattisgarh is rich in genetic variety. It boasts up to 22,972 different varieties of paddy seeds, which have been developed over centuries by local farmers. These types are well-suited to the local soil and climate.<sup>26</sup> Other main crops include coarse grains, wheat, maize, peanuts, legumes, and oilseeds. The terrain is also ideal for cultivating mangoes, bananas, guavas, and other fruits and vegetables.

Improving irrigation facilities has the ability to significantly increase both gross cropped area and net planted area. Irrigation coverage is currently at 30%, but it can be raised by a quarter to 40% of the farmed land. With good rainfall (in the range of 1300 mm per year on average), irrigation will primarily assist protect Kharif crops from protracted dry spells and promote Rabi sowing. The area under Rabi crops should be increased from less than one-third to more than 40%. This expansion of around 5 lakh ha will create 5 lakh long-term agricultural jobs for both cultivators and agricultural workers. Larger dam-based canal irrigation projects must be held accountable for implementing regulations like these. Groundwater use should be managed by ensuring that agricultural connections are metered. Conjunctive use of groundwater and canal water should be encouraged in command regions. This will help to stabilise agricultural revenues and increase the number of person-days employed in cultivation-related operations.

### **Industry**

The industrial sector contributes the most to Chhattisgarh's GDP, accounting for 40% in 2021-22. Mining minerals generated 5,517.01 crore in revenue for the state. Furthermore, it is one of the top states in India in terms of mineral output value (excluding atomic, fuel, and minor minerals), accounting for 17.69% in 2020-21. Chhattisgarh is India's sole state that produces tin concentrates. Natural resources, state policies, and infrastructure encourage investment in the iron & steel, cement, and electricity sectors. Korba District in Chhattisgarh is known as India's electricity capital. Furthermore, the state has significant quantities of bauxite, limestone, and quartzite, making it the ideal location for low-cost production of end products such as cement and aluminium. The new industrial policy for 2019-24 aims to attract investments in robotics, artificial intelligence (AI), aerospace engineering, and aircraft repair. It discusses expanding the breadth of employment on a broad scale through diverse processing lines of business in horticulture, minor forest products, herbals, and food. Other non-core businesses include the manufacture and maintenance of electric vehicles, batteries, and related industries.

The handloom business employs around 18,876 households, both directly and indirectly. Kosa Textiles from Janjgir-Champa, Raigarh, and Bilaspur districts have established themselves not only in the country, but also on a global scale. Tasar raising and fabric manufacture are performed as cottage industries on a traditional scale. Sericulture provides a source of income for the socially and economically disadvantaged, particularly rural women. Kosa handloom holds great significance in the state. The issues associated with manufacturing/industry in Chhattisgarh are related to the gap between skill demands by industry and the capabilities now available.

There is insufficient access to quality vocational training, limiting employment. Manufacturing employment in Chhattisgarh has not increased in recent years. To improve intra-sectoral competency, focus on skilling, reskilling, and upskilling in specific roles in industry. There is a need in the handloom business to manufacture things that meet modern customer demands. Welding, CNC machining, fabrication, quality control, mine operations, mineral processing, safety procedures, power plant maintenance, food processing techniques, painting, assembly line work, production processes, waste management, and other areas can be used to train youth in the manufacturing/industrial sector.

Mining and quarrying, industry, utility services, and construction have all contributed significantly to Chhattisgarh's economic growth. It increased by 6.7% from 2012-13 to 2017-18. This growth rate is almost equivalent to the national industrial sector growth rate of 6.6%.<sup>29</sup> It is also consistent with Chhattisgarh's overall growth rate of 6.5%.

At the same time, the share of industries in Chhattisgarh's overall GDP has risen marginally, from 47.1% to 47.6%.<sup>31</sup> All industries in Chhattisgarh create extremely little employment: only 9.3% of workers are employed in all industrial sectors, including mining and quarrying, manufacturing, utilities, and construction.

### Services

In 2021-22, the service sector provided 33% of the state's GDP. The sector grew by 8.54% in 2021-22, compared to the national average of 8.20%. Transportation, communication, tourism, real estate, banking, and insurance continue to be key contributors to the service industry. Some of the issues facing the service sector in Chhattisgarh include a lack of skill development and inadequate infrastructure. The employment are mostly informal, pay low wages, and lack social security benefits and job stability. Skills can be upgraded by skilling, reskilling, and upskilling, resulting in increased intra-sector proficiency.

Hospitality, culinary, event management, travel and tour operations, nurses, healthcare assistants, therapists, geriatric care, sales assistant, customer service, banking, and food services are examples of talents that can be pushed in the services industry. In 2017-18, the services industry accounted for 35.2% of the Chhattisgarh GDP.<sup>45</sup> It increased by 6.8% from 2012-13 to 2017-18. This is slightly faster than Chhattisgarh's overall growth rate of 6.5%.<sup>46</sup> However, it is significantly slower than the national services sector's growth rate of 8.5%.<sup>47</sup> During the same period, the share of services in the Chhattisgarh economy climbed marginally, from 34.6% to 35.2%.

Tourism, information technology, health care, and education services are all part of this sector.

The employment created by all services in Chhattisgarh is extremely low: only 16.6% of workers are working in all service categories.<sup>49</sup> Trade and education are the sector's largest employers.

Chhattisgarh is centrally located. It is easily accessible by train via the east-west and north-south main rail routes. National Highway 6, which connects Mumbai to Kolkata, runs through the state.

Chhattisgarh is not now a popular tourist destination, but it has enormous potential to become one. It has a variety of fascinating destinations, including wildlife sanctuaries, religious sites, and forts. The Dandakaranya jungles, where Lord Rama is thought to have spent much of his exile, are in Chhattisgarh. There is already significant domestic pilgrim traffic, which can be upsold to higher-spending groups as domestic visitors seek out newer places. There are now almost 80,000 vacancies in the state government, including police, teachers, and health personnel.

### Sector wise GDP of Chhattisgarh

The primary sector contributes significantly to Chhattisgarh's GDP, accounting for 25.97% in 2020-21. Agriculture, forestry, and fishing activities have a significant role in this, with crops, livestock, forestry, and fisheries all contributing favourably. Manufacturing, electricity, gas, water supply, and construction all contribute significantly to the secondary sector, which accounts for 38.09%. Finally, the tertiary sector is responsible for 35.94% of the state's GDP, with trade, transportation, financial services, real estate, public administration, and other services playing critical roles. Chhattisgarh's diverse economy demonstrates a balanced contribution from numerous industries, which drives total economic growth.

**Table 2: Gross Value Added (GVA) Data for Different Sectors for the Year 2020-21, with both Current Prices and Prices Adjusted to 2011-12**

S.No	Sector	GVA (Rupees in Lakh) at current prices		GVA (Rupees in Lakh) at 2011-12 prices	
		2020-21	% share	2020-21	% share
1	Primary Sector	9,138,236	28.02	5,858,730	25.97
1.1	Agriculture, forestry & fishing	7,399,351	22.69	3,978,337	17.64
1.2	Crops	4,205,427	12.90	2,397,597	10.63
2	Secondary Sector	11,182,222	34.29	8,593,298	38.09
2.1	Manufacturing	4,329,771	13.28	3,902,145	17.30
3	Tertiary Sector	12,289,294	37.69	8,106,591	35.94

3.1	Transport, storage, communication & services related to broadcasting	1,300,437	3.99	1,008,491	4.47
3.2	Railways	214,361	0.66	155,873	0.69
3.3	Road transport	679,809	2.08	544,214	2.41
	Other services	2,713,682	8.32	1,640,040	7.27

Source: Directorate of Economic and Statistics, C.G.

The figures presented above show a diversified economic structure, with considerable contributions from all three sectors. However, the rapid growth of the tertiary sector and the relatively static share of the primary sector highlight the need for policies that promote agricultural sustainability and manufacturing expansion in order to encourage balanced economic development.

In the primary sector, current prices are ₹9,138,236 lakh (28.02% share) and constant prices are ₹5,858,730 lakh (25.97%). Agriculture, forestry, and fisheries generate ₹7,399,351 lakh at current prices, making a major contribution to the economy. Crops account for ₹4,205,427 lakh, reflecting a high focus on agricultural production.

Current prices in the Secondary Sector are ₹11,182,222 lakh (34.29% share), while constant prices are ₹8,593,298 lakh (38.09%). This sector has the largest current GVA and has strong industrial activity. Manufacturing contributes ₹4,329,771 lakh, reflecting its importance. However, it has a lower contribution compared to the entire secondary sector.

Tertiary Sector Current Prices: ₹12,289,294 lakh (37.69% share), Constant Prices: ₹8,106,591 lakh (35.94%). This sector is the largest in terms of current GVA, demonstrating the expanding importance of services in the economy. Transport, storage, communication, and broadcasting services are important, although their contribution (₹1,300,437 lakh) is lower than the whole tertiary sector. Other services make a considerable contribution of ₹2,713,682 lakh, highlighting the variety of services supplied.

### Findings

- Agriculture, mining, and manufacturing have contributed to the stable GDP growth in Chhattisgarh.
- Agriculture accounts for around 25% of the state's GDP, followed by industry and services.
- Prioritise rice and maize, with efforts to boost pulses and oilseeds.
- Limited irrigation facilities reduce productivity; investing in irrigation infrastructure is vital.
- The state's rich natural resources (coal and iron ore) support mining and related sectors.
- Steel and cement sectors face constraints such as infrastructure limitations, limiting expansion.
- IT and tourism are emerging industries with potential for growth, but require major investment and promotion.
- Healthcare & Education Demand is increasing, but quality and accessibility issues persist.
- Lack of supportive efforts, such as the "Make in Chhattisgarh" policy, to encourage investment.
- Inadequate road and energy infrastructure has hindered growth in certain industries.
- To generate employment, skill development programs must align with industry requirements.
- Access to Finance. Small and medium-sized firms (SMEs) experience difficulties in obtaining capital.
- Lack of adoption of contemporary technologies in agriculture and manufacturing to improve production.

### Challenges and Limitations

This study explores the three key sectors—agriculture, industry, and services—while stressing their respective limitations and challenges.

#### Agricultural Sector

- **Current Status:** Agriculture continues to be the primary source of income for the bulk of the population.

#### Challenges

- **Inefficient Irrigation:** A large section of agricultural area lacks adequate irrigation systems, resulting in reliance on monsoon rainfall.

- **Low Productivity:** Traditional farming practices produce lower crop yields than national averages.
- **Market Access:** Farmers frequently have limited market access, resulting in price instability and exploitation by middlemen.

#### Limitations

- **Lack of Diversification:** The sector's reliance on a few crops renders it susceptible to price changes and climate change.
- **Insufficient Technology Adoption:** Limited access to new farming techniques and inputs reduces productivity.

#### Industrial Sector

- **Current Status:** Chhattisgarh's industrial sector is mostly driven by mining and heavy industries, including steel and cement.

#### Challenges

- **Infrastructure Deficits:** Inadequate transport and logistics infrastructure stifle industrial development.
- **Environmental Concerns:** Mining activities pose serious environmental dangers, including community dislocation and ecological destruction.
- **Skill Gaps:** Employment prospects are limited when the workforce's skills do not meet the requirements of industry.

#### Limitations

- **Overdependence on Mining:** The industrial base is heavily reliant on resource extraction, which is unsustainable in the long term.
- **Investment Constraints:** Small and medium-sized enterprises (SMEs) have limited access to financing, which stifles innovation and growth.
- **Service Sector:** The services sector is developing but still undeveloped compared to other states.

#### Challenges

- **Limited Infrastructure:** Inadequate urban infrastructure and basic services impede the expansion of the service industry.
- **Lack of Education and Training:** Educational institutions frequently do not correlate with industrial needs, resulting in talent shortages.

#### Limitations

- **Low Employment Generation:** The services industry has not produced enough jobs to keep up with the rising population.
- **Unequal Development:** Urban areas gain more from service sector growth, while rural areas are marginalised.

#### Other Challenges

- **Poverty and Inequality:** These issues remain and impact all industries. Efforts to resolve these concerns must be linked to sectoral development strategies.
- **Tribal Displacement:** Industrial and infrastructure developments cause displacement of indigenous populations, leading to increased social tensions and economic marginalisation.

#### Recommendations

Here are some recommendations for a study on sectoral development, growth, and challenges in Chhattisgarh:

- Investigate how contemporary farming practices, irrigation facilities, and government plans affect productivity.
- Analyse industrial and mining growth, identifying significant companies and their economic impact.
- Evaluate the possibilities for job development in the service industry, focussing on IT and tourism.

- Evaluate government programs that encourage sectoral growth, such as incentives for industries and support for farmers.
- Evaluate infrastructure, such as transportation, energy, and communication, and its impact on sectoral growth. Identify necessary investments to improve connection and efficiency.
- Identify skill gaps in the workforce across industries.
- Develop vocational training and education programs to better prepare local residents for work opportunities.
- Identify measures to promote environmentally friendly practices and their possible impact on long-term growth.
- Investigate the impact of marginalised communities on sectoral development and propose solutions to promote equitable growth for all demographics.
- Analyse Chhattisgarh's investment climate, including ease of doing business and investor confidence, and identify steps to attract domestic and overseas investment.

### Conclusion

Chhattisgarh faces numerous hurdles on its path to balanced sectoral development. To address these concerns, a multifaceted approach is required, involving investment in infrastructure, education, and technology, as well as regulations that promote sustainable practices and equitable growth. Stakeholder engagement, especially with local communities, is critical to ensuring that development activities are inclusive and responsive to all residents' demands.

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