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Spatial and temporal analysis of regional disparities and tourist flow in Chhattisgarh, India (2021–2025)

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Abstract—Tourism is one of the fastest growing sectors of the global economy as well as Indian economy. It generates jobs and income but it also has an important role to play in regional development, cultural preservation and social inclusion. Chhattisgarh is rich in natural, cultural, religious and archeological resources having immense tourism potential. But the arrival of tourists is still unevenly distributed in its districts. The present study analyzes the district-wise data of tourist arrivals published by the Chhattisgarh Tourism Board for the period 2021–2025.

The study is purely based on secondary data. Statistical tools like percentage analysis, trend analysis, comparative analysis, district-wise ranking of top five tourist receiving districts and comparative charts have been used. Results show that tourist arrivals fell sharply in 2021 due to COVID-19 pandemic and a gradual recovery from 2022 onward. The study period showed that Rajnandgaon, Gariaband, Raipur, Janjgir-Champa and Baloda Bazar were the leading tourist-receiving districts. The study concludes that the development of integrated tourism circuits, better tourism infrastructure, effective destination marketing and active participation of local communities will help accelerate tourism growth in other districts of Chhattisgarh and promote balanced regional tourism development.

Keywords: Tourism, Tourist Flow, Chhattisgarh, Regional Development, Tourism Circuit

I. INTRODUCTION

Tourism is considered one of the major service industries of the world and is universally accepted as a prominent contributor to economic development, employment opportunities and foreign-exchange generation and balanced regional development. In the last few years, the tourism the sector has undergone considerable growth in India and has established itself as a key contributor to the Gross Domestic Product (GDP) and employment of the country. It also promotes the development of infrastructure, preservation of cultural heritage and improvement of socio-economic well-being of local communities due to its high multiplier effect.

Chhattisgarh possesses considerable potential for tourism because of its abundance of natural resources, dense forests, beautiful waterfalls, religious places, archeological monuments and the colorful tribal culture. The state is home to several prominent tourist destinations like Chitrakote Falls, Tirathgarh Falls, Bhoramdeo Temple, Sirpur, Dongargarh, Dantewada, Mainpat, Kudargarh, Ramgarh and Rakasganda Falls. The attractions provide a range of options for nature, religious, cultural, heritage and eco-tourism.

Chhattisgarh has a lot of tourism resources but its tourism development is spatially uneven. Tourist arrivals are concentrated in very few districts and many districts with significant tourism potential continue to receive relatively few visitors. Such differences call for a systematic assessment of district-wise tourist flow patterns. Consequently, it is necessary to analyze the

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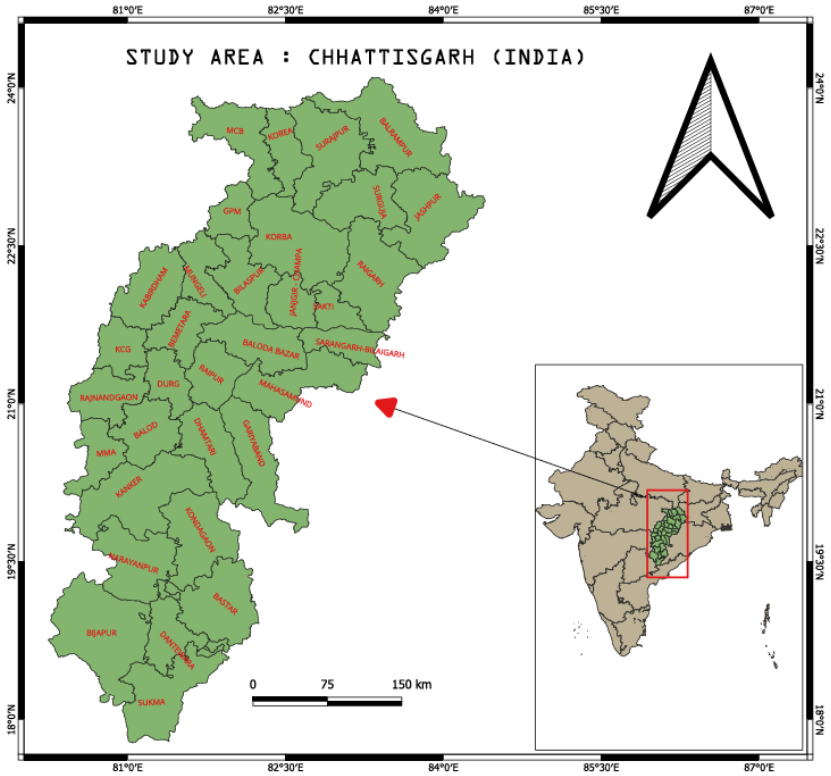
spatio-temporal distribution of tourist arrivals to identify the regional imbalances, understand the dynamics of tourism and develop effective policies to promote sustainable and balanced tourism development in the state.

I.I. STUDY AREA

The present study covers the entire state of Chhattisgarh which is rich in natural and cultural resources. The state of Central India is known for its dense forests, hills, waterfalls, rivers, rich tribal culture and scores of religious and archeological sites. Chhattisgarh was formed on 1 November 2000, out of the territory of the former state of Madhya Pradesh. It has a total geographical area of 135,192 square kilometers with latitudinal extent from 17°46′ N to 24°05′ N and longitudinal extent from 80°15′ E to 84°24′ E. (Map 01)

Presently, the state comprises of 33 districts, which are further classified into five administrative divisions namely Raipur, Bilaspur, Durg, Surguja and Bastar. Chhattisgarh is bordered by Madhya Pradesh, Uttar Pradesh, Jharkhand, Odisha, Maharashtra, Telangana and Andhra Pradesh. The state is bestowed with rich bio-diversity, extensive forest cover, perennial rivers, picturesque waterfalls, wildlife, historical monuments, sacred pilgrimage centers and colorful tribal traditions, which add a lot to its tourism potential.

The main tourist attractions are Chitrakote Waterfall, Tirathgarh Waterfall, Bhoramdeo Temple, Sirpur, Mainpat, Kudargarh and Danteshwari Temple with several eco-tourism, cultural and heritage destinations. The variation in the tourist arrivals in the districts and the diversity of its tourism resources make Chhattisgarh a suitable place for studying the spatial and temporal pattern of tourist flow. Therefore, the state is an appropriate and promising field for studying regional disparities in tourism and strategies for sustainable tourism development.



Map 01: Prepared by the author using QGIS 3.36.3 (Maidenhead)

I.II. STUDY OBJECTIVES

1. To study the district wise pattern and distribution of tourist arrivals in Chhattisgarh.

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2. To identify and analyze the pattern of ranking and change of top five tourist-receiving districts of Chhattisgarh during the period 2021–2025.
3. To study the spatial and temporal variations in tourist arrivals and suggest appropriate policy suggestions for balanced and sustainable tourism development in Chhattisgarh.

I.III. REVIEW OF THE LITERATURE

Gupta (2018) studied the tribal, natural and cultural tourism potential of Chhattisgarh in his research paper entitled "Chhattisgarh State: A Potential of Tribal Tourism". The study highlighted that the major factors that determine the development of sustainable tourism are tourism infrastructure, development of tourism circuits, destination marketing and the active participation of local communities. It also stressed that the effective management of tourism resources and development of basic infrastructure and promotional strategies can boost tourism growth in the state greatly. The findings contribute to a better understanding of the opportunities and challenges of tourism development in Chhattisgarh and act as an important reference for the present study, which examines the potential of tourism development and spatial distribution of tourist flow in different districts of the state.

Chaudhury et al. (2023) in their study "Tourism as a Tool for Economic Development: A Case Study of the Nepalese Tourism Industry" applied secondary data and statistical techniques to find the relationship between tourist arrivals, GDP, tourism infrastructure and economic growth. Research shows tourism is important for economic growth, jobs and regional development. Theoretical and methodological approach of it, is a useful framework for analysis on district wise tourist flow and tourism development in Chhattisgarh.

In "A Geographical Study and Significance of Tourist Destinations in Chhattisgarh", Singh (2023) has examined the major natural, religious, historical and cultural tourist destinations of the state in a geographical perspective. The study focused on tourism infrastructure, transportation, destination promotion and the development of sustainable tourism. It gives good insights about Chhattisgarh's tourism resources and provides a useful geographical framework for analyzing tourist flow and regional tourism development.

In the research paper titled "Chhattisgarh Tourism 4.0: Harnessing Cultural Heritage and Digital Innovation for a Sustainable Future," T. C. Gupta & Tiwari (2024) explored the role of cultural heritage conservation and digital innovation in developing sustainable tourism in Chhattisgarh. The study highlighted the significance of digital technologies, improved tourism infrastructure, effective destination management and heritage preservation in enhancing tourism competitiveness. The authors concluded that digital innovation has a significant positive impact on the tourist experience, destination marketing, and tourism governance. The main findings of their study provide a useful theoretical framework for the present study, particularly for understanding tourism planning, sustainable management of destination and promotional strategies of tourism in less developed districts of Chhattisgarh.

Dewangan et al. (2025) in their paper "Case Study on Chhattisgarh Tourism" analyzed the status of tourism development, major challenges and prospects for sustainable tourism in Chhattisgarh. The study employed a mixed-method research approach, which combined tourism-related statistical data with perceptions of tourists, local communities and other stakeholders. The analysis indicated that despite the state has abundant natural and cultural tourism resources, poor infrastructure, low destination promotion, poor community participation and weak policy coordination remain the major challenges to tourism development. The authors stressed the significance of community engagement, sustainable tourism initiatives, environmental conservation and digital marketing strategies to promote sustainable development of the tourism industry. The present research is useful for providing a practical framework for understanding regional tourism challenges and formulating strategies for balanced and sustainable tourism development across the districts of Chhattisgarh.

Soni & Mishra (2026) studied tourism development potential of the Surajpur and Surguja districts using circuit-based tourism approach in their research paper "Circuit-Based Tourism Development Potential in Surajpur and Surguja Districts of Chhattisgarh: An Analytical Study". The study used field observations and administrative reports published by the Chhattisgarh Tourism Department for the period of 2020–2024 to determine the tourist flow patterns, major tourism resources, and development prospects. The results show that although both districts have rich natural, religious and archeological tourism

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resources, they represent a small share of the total number of tourists visiting the state. The authors recommended the development of circuits for religious tourism, nature-based tourism and archeology tourism and also suggested improving tourism infrastructure, road connectivity, digital promotion, community engagement and destination marketing for tourism growth. Thus, the study provided a useful theoretical and policy-oriented framework to understand the regional development of tourism and to study the patterns of tourist flow in northern Chhattisgarh.

II. DATA SOURCES

The present study is based purely on secondary data. The statistics related to tourism are mainly from the district wise tourist arrival data published by the Chhattisgarh Tourism Board for the period 2021 – 2025. The data gives complete information on the arrivals of tourists (foreign and domestic) to all districts of the state. The national-level tourism statistics released by the Ministry of Tourism, Government of India, such as India Tourism Statistics and the India Tourism Data Compendium, were also used to understand the larger trends in tourism and to enable comparative analysis. The study was also supported by a review of relevant research articles, books, official government reports, annual publications, policy papers and other published literature. These different sources provided the theoretical and empirical background necessary to the analysis of the space-time patterns of tourist flows in Chhattisgarh and to the evaluation of regional variations of tourism development.

III. RESEARCH METHODOLOGY

Within the scope of the present research, a range of analytical methods have been applied to study the district-wise pattern of tourist flow in Chhattisgarh. Percentage analysis was used to first identify the distribution and relative share of tourist arrivals for each district. To evaluate the tourism performance of different regions, a district-wise ranking of top five tourist receiving districts was prepared for each year. Temporal variations and growth patterns were determined through trend analysis to assess changes in tourist arrivals during 2021–2025. The study also employed descriptive statistical methods to synthesize and interpret the tourism data. Spatial analysis was used to examine the geographical distribution of tourist arrivals and regional disparities across the state. The combined use of these analytical techniques provides an overall perspective of the spatial and temporal trends of tourist flow and helps in formulating appropriate policy suggestions for balanced and sustainable tourism development in Chhattisgarh.

IV. TOP FIVE TOURIST RECEIVING DISTRICTS OF CHHATTISGARH (2021-2025): SPATIAL AND TEMPORAL DISTRIBUTION

The analysis of the geographic and temporal distribution of tourist reveals the presence of significant changes in the ranking and distribution of the five districts receiving the largest number of tourists between 2021 and 2025. Rajnandgaon emerged as the leading tourist destination from 2022 but other districts such as Raipur, Baloda Bazar, Janjgir-Champa, Gariaband and Dantewada also witnessed a substantial number of tourists, showing changing trends in the tourism pattern and more diversity in the region of Chhattisgarh. (Table-01 to 05 and Graph-01 to 05)

Table -02: Top 5 districts in total tourist inflow in Chhattisgarh (in 2022)

S.No.	District	Total	Percentage
1	Janjgir-Champa	5890986	24.92
2	Rajnandgaon	4093442	17.32
3	Baloda Bazar	2629370	11.12
4	Gariaband	1840042	7.78
5	Dhamtari	1347876	5.70
Total tourist inflow in Chhattisgarh = 23.64 million			

Table-01: Top 5 districts in total tourist inflow in Chhattisgarh (in 2021)

S.No.	District	Total arrivals	Percentage
1	Raipur	5152821	44.68
2	Baloda Bazar	2019935	17.51
3	Rajnandgaon	1428676	12.39
4	Bilaspur	686966	5.96
5	Gariaband	683984	5.93
Total tourist inflow in Chhattisgarh = 11.53 million			

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Table -03: Top 5 districts in total tourist inflow in Chhattisgarh (in 2023)

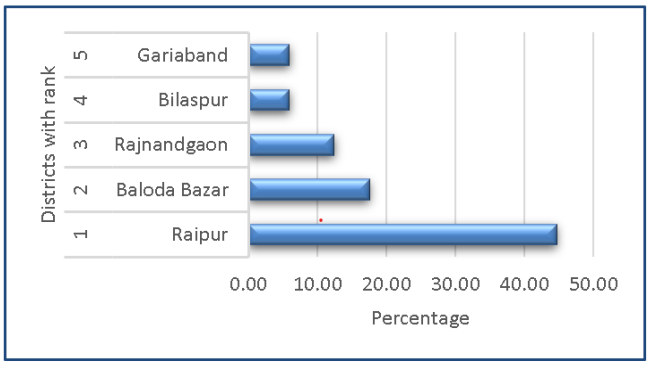
S.No.	District	Total	Percentage
1	Rajnandgaon	5749689	22.09
2	Janjgir-Champa	3055527	11.74
3	Gariaband	2181862	8.38
4	Dhamtari	1781853	6.85
5	Sakti	1492011	5.73
Total tourist inflow in Chhattisgarh = 26.02 million			

Table-04: Top 5 districts in total tourist inflow in Chhattisgarh (in 2024)

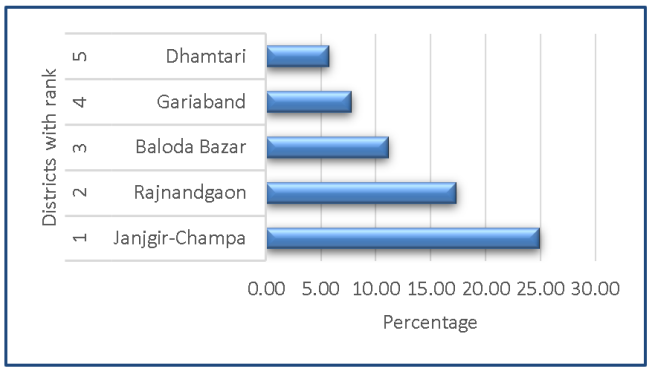
S.No.	District	Total	Percentage
1	Rajnandgaon	7287605	23.14
2	Gariaband	2984340	9.48
3	Raipur	2790567	8.86
4	Dantewada	2749046	8.73
5	Baloda Bazar	2571307	8.17
Total tourist inflow in Chhattisgarh = 31.49 million			

Table-05: Top 5 districts in total tourist inflow in Chhattisgarh (in 2025)

S.No.	District	Total	Percentage
1	Rajnandgaon	7764934	24.36
2	Baloda Bazar	2996301	9.40
3	Dantewada	2752426	8.63
4	Raipur	2519826	7.90
5	Khairagarh-Chhuikhadan-Gandai	2025337	6.35
Total tourist inflow in Chhattisgarh = 31.88 million			

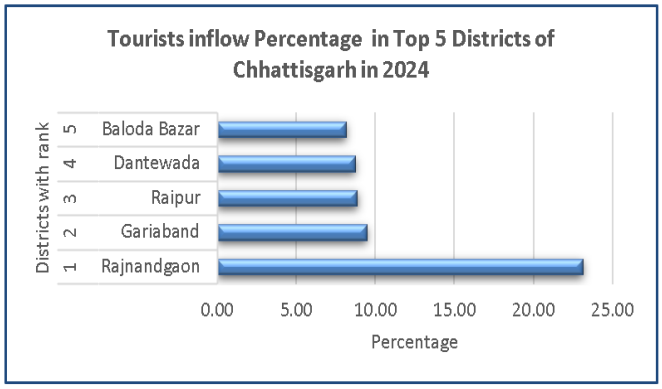


Graph – 01: Tourists inflow Percentage in Top 5 Districts of Chhattisgarh in 2021

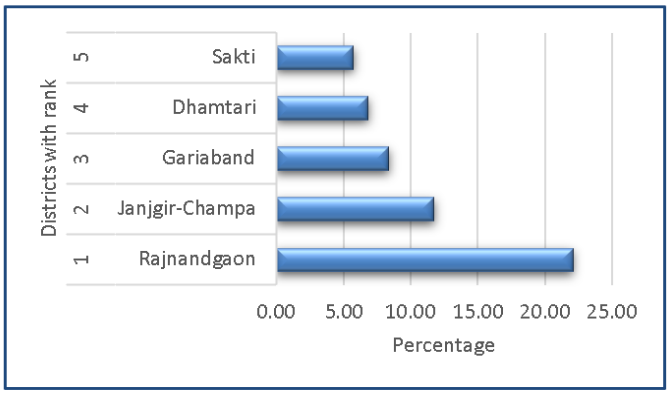


Graph – 02: Tourists inflow Percentage in Top 5 Districts of Chhattisgarh in 2022

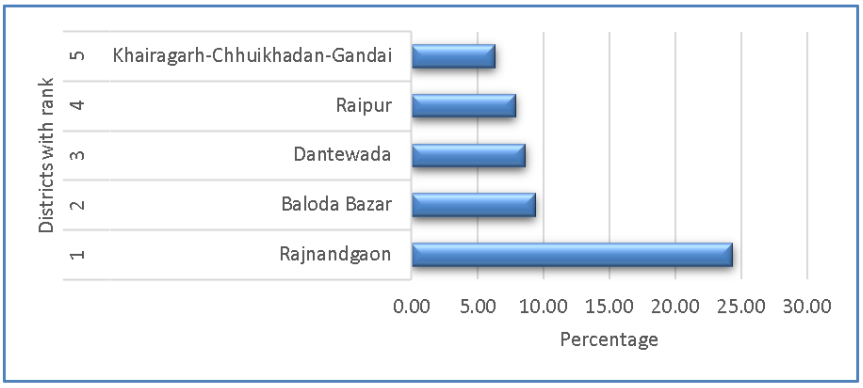
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Graph – 04: Tourists inflow Percentage in Top 5 Districts of Chhattisgarh in 2024



Graph – 03: Tourists inflow Percentage in Top 5 Districts of Chhattisgarh in 2023



Graph – 05: Tourists inflow Percentage in Top 5 Districts of Chhattisgarh in 2025

Source: Author's compilation and analysis based on Administrative Reports (2021 to 2025) published by the Chhattisgarh Tourism Board, Government of Chhattisgarh.

V. RESULTS AND DISCUSSION

In 2021, the total tourist inflow in Chhattisgarh was 11.53 million. Raipur had the highest concentration of tourist arrivals, accounting for 44.68% of the total inflow and was a dominant tourism hub of the state. Baloda Bazar (17.51%) and Rajnandgaon (12.39%) followed second and third respectively. Bilaspur (5.96%) and Gariaband (5.93%) were fourth and fifth (Administrative Report, 2021). The five districts jointly accounted for about 86.47% of the state's tourist arrivals, pointing to high spatial concentration of tourism. The other districts had a small share of visitors, which shows a big difference in enhancing tourism development between the regions.

Total tourist inflow in Chhattisgarh increased sharply to 23.64 million in 2022 indicating a strong recovery after the COVID-19 pandemic. Janjgir-Champa replaced Raipur as the number one tourist destination and became the number one tourist district with 24.92% of the total arrivals. Rajnandgaon was second (17.32%) followed by Baloda Bazar (11.12%). Gariaband (7.78%) and Dhamtari (5.70%) were next in line (Administrative Report, 2022). The relative share of tourist arrivals declined in comparison with 2021 which indicates a gradual diversification of tourist destinations in the state and regional distribution of tourism activities.

Chhattisgarh got 26.02 million tourists in 2023 and tourism continues to be an ever-growing industry. Rajnandgaon regained the top position with 22.09 per cent share of total tourist arrivals followed by Janjgir-Champa (11.74 per cent). Gariaband was at the third position with 8.38% followed by Dhamtari (6.85%) and Sakti (5.73%) at the fourth and fifth position

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(Administrative Report, 2023). Sakti, a new district, makes it to the top five, indicating emergence of new tourism destinations. The data suggest a more balanced spatial distribution of tourist inflow than in previous years, but tourism was still concentrated in a few major districts.

Total tourist arrivals reached 31.49 million in 2024, a significant increase over the previous year. Rajnandgaon was the top tourist district with 23.14% of the state's tourist inflow. Gariaband was second with 9.48% followed by Raipur with 8.86%, Dantewada with 8.73% and Baloda Bazar with 8.17% (Administrative Report, 2024). The inclusion of Dantewada in the list of top five points to the increasing importance of tribal, cultural and religious tourism in southern Chhattisgarh.

Chhattisgarh received the highest number of tourists at 31.88 million during the study period in 2025. Rajnandgaon retained its top spot with 24.36% of total tourist arrivals, reasserting its position as the state's leading tourism destination. Baloda Bazar was second (9.40%), and then Dantewada (8.63%), Raipur (7.90%) and Khairagarh–Chhuikhadan–Gandai (6.35%) (Administrative Report, 2025). The inclusion of Khairagarh-Chhuikhadan-Gandai among the top five shows the growing importance of cultural and heritage tourism.

SPATIAL DISTRIBUTION AND REGIONAL DISPARITIES OF TOURISM IN DISTRICTS OF CHHATTISGARH (2021-2025)

The analysis of district-wise tourist arrivals during 2021-2025 shows large spatial disparities in tourism in Chhattisgarh. Tourist inflow was concentrated in few districts, notably Rajnandgaon, Raipur, Baloda Bazar, Janjgir-Champa, Gariaband and Dantewada, while many districts recorded lower tourist arrivals relatively though having considerable tourism potential. Better infrastructure, connectivity by transport and presence of major religious and urban tourism centers made Central Chhattisgarh the most preferred destination of tourists. Conversely, the relatively under developed Northern Chhattisgarh, with its abundance of natural beauty, waterfalls and tribal heritage, didn't attract many tourists. Southern Chhattisgarh has seen slow growth, especially in Bastar and Dantewada due to growing awareness of eco-tourism and tribal tourism. Such spatial variations indicate an uneven pattern of he development of the tourism sector in the state. It further emphasizes the need for better infrastructure, destination marketing, tourism circuits and balanced regional strategic planning to promote sustainable tourism in all districts.

RECOMMENDATIONS FOR INCLUSIVE AND SUSTAINABLE TOURISM DEVELOPMENT IN CHHATTISGARH

In Chhattisgarh, there is a need to give priority to the development of tourism infrastructure, road connectivity, accommodation facilities and visitor amenities in the less-developed districts to promote balanced and sustainable tourism development. Integrated tourism circuits linking natural, religious, cultural and heritage destinations should be created to enhance tourist mobility. Digital marketing, destination branding and smart tourism technologies are to be used to promote emerging destinations and to increase their visibility. Inclusive growth requires active involvement of local communities, capacity building and promotion of environment-friendly tourism practices. Also, encouraging effective policy coordination, public-private partnerships and sustainable resource management should be encouraged to reduce regional disparities and ensure long-term tourism development across the state.

VI. CONCLUSION

The present study reveals that the spatial and temporal variation of tourist flow in Chhattisgarh during 2021-2025 was very high. Tourist arrivals were concentrated in a few districts such as Rajnandgaon, Raipur, Baloda Bazar, Janjgir-Champa, Gariaband and Dantewada, while a number of districts with large tourism resources remained underutilized. The findings highlight considerable spatial variations in the development of tourism, mainly because of differences in the infrastructure, availability and promotion of the destination. Balanced regional development and improving the overall competitiveness of Chhattisgarh as a tourist destination requires strengthening of tourism circuits, transport and visitor facilities, community participation and sustainable tourism practices.

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