FMDB *Transactions on Sustainable Social Sciences Letters*

Destination Management and Sustainable Tourism Practices in India: A Comparative Study of Munnar and Jaipur

Athithi Sridhar[1,*], K. Sivaperumal[2]

[1,2]Department of Commerce, SRM Institute of Science and Technology, Kattankulathur, Chennai, Tamil Nadu, India.
as2527@srmist.edu.in[1], sivaperk@srmist.edu.in[2]

Abstract: The rapid growth of tourism in India necessitates effective destination management strategies that promote Sustainability, stakeholder coordination, and visitor satisfaction. This study presents a comparative analysis of Munnar (Kerala) and Jaipur (Rajasthan) to examine how key destination management practices influence sustainable tourism outcomes. The research focuses on four specific objectives: (1) evaluating the influence of infrastructure development, waste management, and community participation on sustainable tourism outcomes, analysed using descriptive statistics and correlation, (2) To analyse the role of stakeholder coordination in enhancing sustainable tourism outcomes., (3) assessing the mediating effect of visitor satisfaction on the relationship between management practices and sustainable tourism performance using hierarchical regression, and (4) conducting a comparative analysis of Munnar and Jaipur to identify best practices using ANOVA. Data was collected through field surveys of tourists, interviews with Destination Management Organizations (DMOs), and secondary sources. Independent variables include infrastructure development, waste management practices, community participation, and stakeholder coordination; visitor satisfaction serves as a mediating variable, while sustainable tourism outcomes are the dependent variable. Preliminary analysis indicates that Munnar's ecocentric, community-driven model exhibits higher sustainability performance and visitor satisfaction. In contrast, Jaipur's heritage-focused management emphasises infrastructure but faces challenges in stakeholder engagement and waste management.

Keywords: Sustainable Tourism; Destination Management; Visitor Satisfaction; Infrastructure Development; Community Participation; International Destinations; Stakeholder Engagement.

Received on: 06/12/2024, **Revised on:** 05/03/2025, **Accepted on:** 03/05/2025, **Published on:** 10/12/2025

Journal Homepage: https://www.fmdbpub.com/user/journals/details/FTSSSL

DOI: https://doi.org/10.69888/FTSSSL.2025.000519

Cite as: A. Sridhar and K. Sivaperumal, "Destination Management and Sustainable Tourism Practices in India: A Comparative Study of Munnar and Jaipur," *FMDB Transactions on Sustainable Social Sciences Letters*, vol. 3, no. 4, pp. 146–157, 2025.

1. Introduction

Tourism has emerged as one of India's most significant economic sectors, contributing substantially to employment generation, GDP growth, foreign exchange earnings, and regional development. With its diverse landscapes, rich cultural heritage, and ecological hotspots, India attracts millions of domestic and international tourists annually. Destinations such as hill stations, heritage cities, and eco-tourism hubs play a critical role in sustaining the tourism industry and enhancing regional economies. However, the rapid expansion of tourism in India has often resulted in negative consequences, including environmental

*Corresponding author.

degradation, overcrowding, cultural commodification, and infrastructure strain. These challenges underscore the importance of destination management, which involves strategic planning, policy formulation, sustainable resource utilisation, community involvement, and stakeholder coordination to achieve long-term Sustainability. Effective destination management integrates multiple dimensions: infrastructure development, ensuring accessibility and quality services; waste management, protecting the natural and cultural environment; community participation, ensuring equitable benefits and local ownership; and stakeholder coordination, fostering cooperation among government agencies, private enterprises, and local communities. Additionally, visitor satisfaction plays a pivotal role, serving as both an outcome and a mediator that reflects the effectiveness of management strategies [9]. This study focuses on two contrasting Indian destinations: Munnar (Kerala), a hill station emphasising eco-tourism and community-led initiatives, and Jaipur (Rajasthan), a heritage city renowned for cultural tourism and high tourist inflows [10]. By conducting a comparative analysis, the research aims to examine how sustainable destination management practices are applied, identify gaps in planning and execution, and provide actionable insights to improve sustainability, stakeholder engagement, and visitor experiences across Indian tourism destinations.

2. Literature Review

2.1. Infrastructure Development and Sustainable Tourism

Infrastructure development is the backbone of any tourism destination, shaping both the quality of tourist experiences and the sector's environmental footprint. According to Crouch and Ritchie [4], infrastructure—comprising transport, communication, accommodation, sanitation, and energy systems—constitutes the physical framework that supports tourism activities. In sustainable tourism contexts, infrastructure plays a dual role: it enhances accessibility and comfort for visitors while ensuring minimal ecological disruption. Empirical studies reveal that tourists' perceptions of infrastructure quality significantly influence their satisfaction, revisit intentions, and destination loyalty. Poor road conditions, waste accumulation, and lack of sanitation facilities deter potential tourists and create negative destination images. Conversely, eco-sensitive infrastructure—such as renewable energy, eco-lodges, and sustainable transport—has been found to positively influence destination competitiveness. However, infrastructure development in many Indian tourism regions remains fragmented and reactive rather than strategic, often failing to account for carrying capacity and environmental thresholds. In destinations like Munnar and Jaipur, infrastructure gaps manifest differently: while Munnar faces limited accessibility due to its topography and inadequate waste handling systems, Jaipur's challenges are linked to urban congestion, pollution, and over-commercialisation. Hence, infrastructure's contribution to Sustainability must be assessed not merely by its presence but by its appropriateness, quality, and environmental compatibility.

2.2. Waste Management Practices in Tourism Destinations

Waste management is a core component of sustainable destination management. Byrd [3] argued that tourism-generated waste, if not properly managed, can lead to environmental degradation and deteriorated visitor experiences. The exponential growth of tourism in developing countries has exacerbated solid waste issues, particularly in areas lacking adequate municipal infrastructure. In eco-tourism destinations, effective waste segregation, recycling, and disposal are fundamental to preserving natural landscapes and biodiversity. Studies in Southeast Asia and Europe have shown that destinations implementing waste minimisation programs achieve higher tourist satisfaction and community acceptance. However, in India, improper waste management continues to undermine the Sustainability of tourism destinations, especially hill stations and heritage cities, where local capacity is limited. In Munnar, indiscriminate waste dumping and inadequate segregation have led to visible degradation of the scenic landscape. Jaipur, on the other hand, struggles to manage waste generated by large-scale events and high tourist footfall at heritage sites. These issues highlight the pressing need to integrate waste management as a measurable indicator into sustainable destination management frameworks.

2.3. Community Participation and Tourism Sustainability

Community participation is recognised as a cornerstone of sustainable tourism development. Local communities play multifaceted roles—as hosts, protectors of cultural identity, and beneficiaries of tourism's economic gains. Studies by Byrd [3] emphasise that when communities are actively involved in tourism planning and benefit-sharing, destinations achieve better social equity, stronger conservation ethics, and greater long-term viability. However, participation often remains tokenistic rather than transformative. In many destinations, decision-making power is centralised within governmental or private tourism authorities, limiting community agency. The lack of local empowerment can lead to resentment, mismanagement of resources, and reduced sustainability outcomes. In Munnar, community-led eco-tourism initiatives—such as tribal trekking guides and homestays—have shown promising results in promoting inclusive development. Jaipur, conversely, relies more heavily on commercial and heritage-based tourism operators, with limited community ownership in the formal tourism economy. Comparing these two models offers insights into how community participation can be institutionalised to balance economic development and social inclusion.

2.4. Stakeholder Coordination in Destination Management

Tourism development inherently involves multiple stakeholders with varying interests—government agencies, private entrepreneurs, NGOs, and residents. The absence of coordination among these actors often leads to overlapping policies, inefficient resource allocation, and conflicting objectives [1]. Rasoolimanesh et al. [8] argue that stakeholder coordination enhances governance efficiency by aligning the strategic goals of public and private entities with sustainability imperatives. Well-coordinated destinations tend to implement more coherent policies related to land use, infrastructure development, and visitor management. For example, destinations that have adopted public–private partnerships (PPPs) have demonstrated improved environmental outcomes and enhanced competitiveness. In India, stakeholder fragmentation remains a major bottleneck. In Munnar, coordination challenges arise between forest departments, tourism councils, and local panchayats. Jaipur's issues stem from bureaucratic overlaps between heritage preservation authorities and tourism promoters. Strengthening institutional linkages and establishing transparent communication channels are thus essential for achieving integrated destination management.

2.5. Visitor Satisfaction as a Mediating Variable

Visitor satisfaction serves as a vital indicator of destination performance and Sustainability. According to Sharpley [6], the Expectation–Confirmation Theory, satisfaction arises when tourists' experiences meet or exceed pre-visit expectations. Chi and Qu [2] found that satisfaction mediates the relationship between destination attributes and behavioural intentions, influencing revisits and word-of-mouth promotion [13]. Recent studies have confirmed that management practices such as cleanliness, community engagement, and stakeholder coordination indirectly enhance sustainability outcomes by fostering satisfaction and loyalty. In eco-tourism contexts, satisfaction also influences tourists' willingness to adopt pro-environmental behaviours, contributing to long-term destination sustainability. Hence, examining visitor satisfaction as a mediating variable offers valuable insights into how management practices translate into tangible sustainability outcomes through the lens of the tourist experience.

2.6. Comparative Destination Management

Comparative studies between destinations are essential for identifying best practices, regional variations, and policy implications. Murphy [5] emphasised that sustainable tourism cannot adopt a "one-size-fits-all" model; instead, management must be adapted to each destination's environmental and socio-cultural context. In India, few comparative studies have examined how eco-based destinations (such as Munnar) differ from heritage-based destinations (such as Jaipur) in their management approaches and sustainability performance. Munnar prioritises environmental protection and natural resource conservation, while Jaipur focuses on cultural heritage, urban aesthetics, and visitor infrastructure. A comparative analysis of these two distinct models can uncover patterns of success and areas requiring intervention, guiding policymakers toward context-specific strategies for sustainable destination management.

2.7. Conceptual Framework

Figure 1 shows how destination management techniques, such as infrastructure, waste management, community involvement, and stakeholder coordination, work together to affect visitors' happiness.

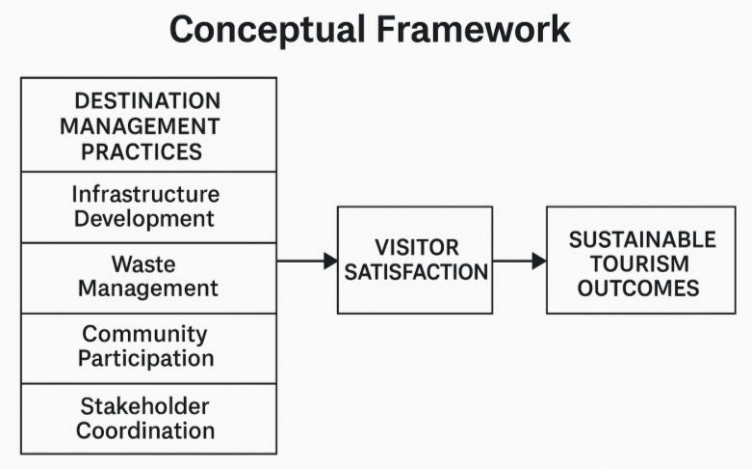

Figure 1: Conceptual framework of destination management practices influencing sustainable tourism outcomes

3. Research Gap

3.1. Evidence Gap

While sustainable tourism and destination management have been widely studied in global contexts, empirical evidence from Indian destinations—especially comparisons between eco- and heritage-based sites—remains limited. Most studies emphasise individual dimensions such as infrastructure or community involvement, but few examine their combined influence on sustainable tourism outcomes. There is a lack of systematic, data-driven evidence analysing how infrastructure development, waste management, and community participation simultaneously affect Sustainability in diverse Indian settings such as Munnar and Jaipur. Moreover, studies in India often prioritise economic impacts or tourist arrivals over sustainability indicators such as waste reduction, community empowerment, and environmental conservation. This absence of localised empirical data constrains the formulation of evidence-based policies for sustainable destination governance.

3.2. Knowledge Gap

The existing literature predominantly focuses on conceptual discussions or isolated case studies of eco-tourism development. However, there is insufficient knowledge regarding the interrelationships between multiple destination management variables—particularly how infrastructure quality, stakeholder coordination, and visitor satisfaction collectively contribute to sustainable performance. Most previous research in India has treated visitor satisfaction as an outcome variable rather than a mediating construct linking management practices and sustainability outcomes. Understanding this mediating mechanism is critical to explaining why some well-managed destinations still struggle to achieve long-term Sustainability despite substantial infrastructure investments or community programs. Furthermore, comparative insights between ecocentric destinations (such as Munnar) and heritage-oriented destinations (such as Jaipur) are rare, resulting in a limited understanding of how management strategies differ across ecological and cultural contexts.

3.3. Practical Gap

In practice, India's tourism management framework remains fragmented and reactive, focusing more on promotion than on sustainable implementation. Policy initiatives such as the "Incredible India" and "Dekho Apna Desh" campaigns emphasise marketing appeal, but ground-level execution of waste management, infrastructure maintenance, and community engagement is inconsistent. There is a significant gap between policy rhetoric and the practical application of destination management principles. While Kerala and Rajasthan are both recognised tourism leaders, their sustainability challenges—ranging from ecological degradation in Munnar to cultural overcrowding in Jaipur—underscore the need for comparative evaluation of how management systems perform under distinct environmental and social pressures. This practical gap also highlights the absence of standardised indicators or benchmarking tools to measure sustainable tourism outcomes across diverse destinations in India.

3.4. Methodological Gap

Many studies on sustainable tourism in India rely on qualitative or descriptive approaches, lacking rigorous quantitative validation. Empirical studies employing advanced statistical methods—such as correlation, regression, hierarchical regression, and ANOVA—to test causal relationships among destination management variables are scarce. Furthermore, there is limited use of validated measurement scales for constructs like visitor satisfaction, stakeholder coordination, and sustainable tourism performance in the Indian context. The absence of such methodological rigour reduces the comparability and replicability of findings across regions. This study addresses the methodological gap by adopting a structured quantitative framework that includes validated scales, reliability testing, and inferential statistical analyses to ensure robust and generalizable results.

3.5. Theoretical Gap

Theoretical models linking destination management practices, visitor satisfaction, and sustainable tourism outcomes remain underdeveloped in Indian tourism research. Most studies apply traditional frameworks such as the Expectation–Confirmation Theory or the S-O-R (Stimulus–Organism–Response) Model in isolation, without integrating them into a holistic destination management perspective. There is a lack of comprehensive theoretical frameworks that explain how environmental management (e.g., waste control), infrastructural adequacy, and stakeholder coordination collectively drive sustainability outcomes through visitor satisfaction. This study contributes to filling this gap by proposing an integrated conceptual model connecting management practices, mediating variables, and sustainability performance indicators.

3.6. Population Gap

Tourism research in India has historically emphasised international tourists and urban luxury travellers, often overlooking domestic tourists, who constitute the majority of visitors to eco-tourism and heritage sites. Similarly, studies seldom include the perspectives of residents, community workers, and tourism officials who are integral stakeholders in sustainable destination management. This study bridges this population gap by incorporating a diverse set of respondents, including domestic tourists, local community members, and tourism administrators from Munnar and Jaipur. Such inclusivity ensures a more balanced understanding of perceptions of destination management effectiveness and Sustainability from multiple stakeholder viewpoints.

4. Statement of the Problem

Tourism in India is expanding rapidly, but this growth often comes at the cost of environmental and socio-cultural degradation. Many destinations suffer from fragmented management, poor infrastructure, ineffective waste systems, and minimal community participation. Although India's National Tourism Policy emphasises Sustainability, implementation remains uneven across states. In eco-tourism hubs like Munnar, rapid visitor inflow has placed immense pressure on fragile ecosystems, leading to habitat loss, waste accumulation, and water scarcity. Meanwhile, in Jaipur, a heritage city with UNESCO recognition, rising urbanisation and mass tourism threaten the authenticity of cultural assets and create strain on municipal infrastructure. Despite their distinct contexts, both destinations face the common challenge of maintaining Sustainability amidst tourism growth. A key issue lies in the lack of integrated destination management. Infrastructure projects are often reactive rather than strategic; waste management remains under-resourced; and coordination among government bodies, tourism operators, and local communities is weak. These deficiencies result in uneven service delivery, low visitor satisfaction, and diminishing environmental quality.

Moreover, existing tourism assessments in India often evaluate performance solely on visitor numbers or revenue generation, overlooking sustainability metrics such as waste reduction, resource conservation, and community welfare. Visitor satisfaction, which serves as an important measure of how effectively destination management meets expectations, is rarely analysed as a mediating mechanism connecting management practices and sustainable performance. The research problem thus emerges from the urgent need to evaluate how destination management elements—infrastructure development, waste management, community participation, and stakeholder coordination—jointly influence sustainable tourism outcomes. Additionally, understanding how visitor satisfaction mediates these relationships is vital to developing a holistic and resilient model of sustainable tourism governance. Comparing Munnar (Kerala) and Jaipur (Rajasthan) offers a unique opportunity to explore eco-based and heritage-based management paradigms within the Indian context. Both destinations symbolise India's tourism diversity but represent different sustainability challenges. By identifying best practices, performance gaps, and the role of collaborative governance, this study seeks to provide actionable insights to strengthen sustainable destination management and improve the overall visitor experience across Indian tourism destinations.

4.1. Objectives of the Study

- To evaluate the influence of infrastructure development, waste management practices, and community participation on sustainable tourism outcomes.
- To analyse the role of stakeholder coordination in enhancing sustainable tourism outcomes.
- To assess the mediating effect of visitor satisfaction on the relationship between destination management practices and sustainable tourism performance.
- To conduct a comparative analysis between Munnar (Kerala) and Jaipur (Rajasthan) to identify best practices and performance variations in sustainable destination management.

5. Research Methodology

5.1. Research Instrument

The study employed a structured questionnaire as the primary research instrument to collect quantitative data from tourists and stakeholders visiting the destinations of Munnar (Kerala) and Jaipur (Rajasthan). The questionnaire was carefully designed based on an extensive review of the literature on destination management, sustainable tourism, and visitor satisfaction. It consisted of two main sections. Section A collected demographic information, including age, gender, education, occupation, monthly income, type of tourist, destination visited, and number of visits. Section B contained statements measuring the major constructs of the study—infrastructure development, waste management practices, community participation, stakeholder coordination, visitor satisfaction, and sustainable tourism outcomes. Each construction was operationalised using multiple items adapted from previously validated scales developed by scholars such as Crouch and Ritchie [4], Bramwell and Lane [1], Chi and Qu [2], and Yoon and Uysal [13]. Respondents were asked to indicate their level of agreement with each statement on a

five-point Likert scale ranging from 1 (Strongly Disagree) to 5 (Strongly Agree). Before the final data collection, a pilot test involving 30 respondents was conducted to assess the clarity, relevance, and reliability of the items. Based on the feedback, minor wording adjustments were made to enhance the instrument's readability and contextual accuracy. The reliability of the final instrument was tested using Cronbach's Alpha, and all constructs recorded values above 0.80, confirming high internal consistency. The questionnaire thus served as a valid and reliable tool to measure tourists' perceptions of destination management practices, stakeholder coordination, and sustainable tourism outcomes across both study sites.

5.2. Data Collection

The present study adopted both primary and secondary data collection methods to obtain comprehensive insights into destination management and sustainable tourism practices in India. Primary data were collected through the structured questionnaire described above, administered to domestic and international tourists, residents, and tourism stakeholders in the selected destinations of Munnar (Kerala) and Jaipur (Rajasthan). A stratified random sampling method was used to ensure representation from various categories of respondents, including tourists, community members, local business owners, and officials associated with destination management organisations (DMOs). Data collection was conducted over three months, from March to May 2025, through both online and face-to-face surveys. In Munnar, data were collected from popular tourist attractions, including Ernakulam National Park, the Tea Museum, and Mattupetty Dam. In contrast, in Jaipur, responses were collected from heritage sites including Amber Fort, City Palace, and Hawa Mahal. A total of 400 valid responses (200 from each destination) were obtained for quantitative analysis. In addition, 15 in-depth interviews (eight in Munnar and seven in Jaipur) were conducted with key tourism officials, local leaders, and hospitality managers to supplement the quantitative findings with qualitative perspectives. Secondary data were sourced from government tourism reports, policy documents, and published research papers related to sustainable tourism and destination management. Reports from the Ministry of Tourism, Government of India, state tourism departments, and international organisations such as UNWTO [11], WTTC [12] were also reviewed to provide contextual support. All respondents were informed of the study's academic purpose, and participation was strictly voluntary. Ethical research practices were maintained throughout the study, ensuring respondent anonymity, confidentiality, and informed consent.

5.3. Analysis and Interpretation

Before proceeding with the main analysis, a reliability test was conducted to assess the internal consistency of the questionnaire items. The instrument's reliability was evaluated using Cronbach's Alpha (α), a widely recognised standard for assessing the consistency of scale items in social science research. According to Gössling et al. [7], a Cronbach's Alpha value of 0.70 or above is generally considered acceptable for basic research, while values above 0.80 indicate good reliability and those above 0.90 signify excellent internal consistency. In the present study, the Computed Cronbach's Alpha value was 0.939, signifying that the questionnaire items exhibit excellent reliability. This high coefficient indicates that responses are consistent across the items measuring constructs such as infrastructure development, waste management practices, community participation, stakeholder coordination, visitor satisfaction, and sustainable tourism outcomes. The results confirm that the collected data are both reliable and suitable for further statistical analyses (Table 1).

Table 1: Summary of case processing results

Case Processing Summary			
		N	**%**
Cases	Valid	57	56.4
	Excluded	44	43.6
	Total	101	100.0
a. Listwise deletion based on all variables in the procedure.			

Source: *SPSS*

Table 2 presents the descriptive statistics for the demographic variables considered in the study. Data were collected from 101 respondents, comprising both domestic and international tourists who visited the selected destinations — Munnar (Kerala) and Jaipur (Rajasthan).

Table 2: Cronbach's alpha reliability statistics

Reliability Statistics	
Cronbach's Alpha	**No. of Items**
.939	30

Source: *SPSS/8*

The mean age of respondents is 2.13, indicating that a majority belong to the 21–30 age group, suggesting that younger travellers are more engaged in sustainable tourism activities. The gender mean of 1.46 shows a balanced participation, with a slight predominance of male respondents. The mean score for educational qualifications (2.68) indicates that most participants have undergraduate to postgraduate education, suggesting a relatively educated sample that is likely to be more aware of sustainability issues in tourism. Regarding occupation (mean = 1.98), respondents are fairly distributed between students, private-sector employees, and entrepreneurs, indicating a mix of working professionals and leisure travellers (Table 3).

Table 3: Descriptive statistics of demographic and socioeconomic characteristics of respondents

Descriptive Statistics					
	N	**Minimum**	**Maximum**	**Mean**	**Std. Deviation**
Age	101	1	4	2.13	1.197
Gender	101	1	2	1.46	.500
Educational Qualifications	101	1	4	2.68	.948
occupation	101	1	3	1.98	.959
Month Income	101	1	3	2.13	.702
Type of Tourist	101	1	2	1.54	.500
Destination Visited	101	1	3	1.59	.851
Number of Visits to 1 or 2	101	1	3	1.96	.706
Valid N (listwise)	101				

Source: *SPSS*

Regarding monthly income (mean = 2.13), most respondents fall within the middle-income range, typically earning between ₹20,000 and ₹60,000 per month. The type of tourist (mean = 1.54) suggests a predominance of domestic tourists in the sample, although a fair proportion of international visitors also participated. The destination visited (mean = 1.59) indicates that more respondents visited Munnar than Jaipur. Additionally, the number of visits (mean = 1.96) indicates that most respondents were repeat visitors, showing sustained interest in these destinations (Table 4):

- **Objective 1:** To evaluate the influence of infrastructure development, waste management practices, and community participation on sustainable tourism outcomes.
- **H_1:** There is a significant relationship between destination management factors (infrastructure development, waste management practices, and community participation) and sustainable tourism outcomes.

Table 4: Correlations

Correlations				
		IF total	**WMP_total**	**STO_total**
IF total	Pearson Correlation	1	.371**	.123
	Sig. (2-tailed)		.000	.222
	N	101	101	101
WMP_total	Pearson Correlation	.371**	1	.470**
	Sig. (2-tailed)	.000		.000
	N	101	101	101
STO_total	Pearson Correlation	.123	.470**	1
	Sig. (2-tailed)	.222	.000	
	N	101	101	101
***. Correlation is significant at the 0.01 level (2-tailed).*				

Source: *SPSS*

The correlation analysis shows a moderate positive and significant relationship between waste management practices and sustainable tourism outcomes ($r = 0.470$, $p < 0.01$), indicating that effective waste management contributes to Sustainability at tourist destinations. A moderate positive correlation also exists between infrastructure development and waste management ($r = 0.371$, $p < 0.01$), suggesting that improved infrastructure supports better waste practices. However, the relationship between infrastructure development and sustainable tourism outcomes ($r = 0.123$, $p = 0.222$) is weak and not significant, implying that infrastructure alone does not strongly influence sustainability performance:

- **Objective 2:** To analyse the role of stakeholder coordination in enhancing sustainable tourism outcomes.
- **H_1:** Stakeholder coordination has a significant positive impact on sustainable tourism outcomes.

Table 5 demonstrates that the regression model predicting STO_total has a weak relationship (R = .301) and explains 9.1% of the variance, with an adjusted R^2 of .074. The standard error (3.89784) shows that the anticipated values are not very stable.

Table 5: Model summary for regression predicting STO_total

Model Summary				
Model	**R**	**R Square**	**Adjusted R Square**	**Std. Error of the Estimate**
1	.301[a]	.091	.074	3.89784
a. Predictors: *(Constant), SC1_total*				

Source: *SPSS*

Table 6 shows that the regression model predicting STO_total is statistically significant (F = 5.480, p = .023). This means that the predictor SCI_total accounts for a significant portion of the variance in sustainable tourism outcomes. It shows the breakdown of the sum of squares, degrees of freedom, and mean squares, which indicate how well the model fits overall.

Table 6: ANOVA results for regression model predicting STO_total

ANOVA[a]						
Model		**Sum of Squares**	**df**	**Mean Square**	**F**	**Sig.**
1	Regression	83.255	1	83.255	5.480	.023[b]
	Residual	835.622	55	15.193		
	Total	918.877	56			
a. Dependent Variable: *STO_total*						
b. Predictors: *(Constant), SC1_total*						

Source: *SPSS*

Table 7 shows the regression results, which demonstrate that SCI_total has a substantial negative effect on STO_total (β = –0.301, p = .023). The table also includes unstandardised coefficients, standard errors, t-values, and collinearity statistics, indicating no multicollinearity problems.

Table 7: Regression coefficients for predicting STO_total

Coefficients[a]								
Model		**Unstandardized Coefficients**		**Standardized Coefficients**	**t**	**Sig.**	**Collinearity Statistics**	
		B	**Std. Error**	**Beta**			**Tolerance**	**VIF**
1	(Constant)	38.120	10.399		3.666	.001		
	SC1_total	-1.304	.557	-.301	-2.341	.023	1.000	1.000
a. Dependent Variable: *STO_total*								

Source: *SPSS*

The regression analysis indicates that stakeholder coordination (SC1_total) has a significant but negative relationship with sustainable tourism outcomes (STO_total) (β = -0.301, p = 0.023). The model explains 9.1% of the variance in sustainable tourism outcomes (R^2 = 0.091), and the F-test (F = 5.480, p < 0.05) confirms the model's overall significance. This suggests that stakeholder coordination variations moderately influence sustainability outcomes; however, the negative beta value implies that poor or ineffective coordination among stakeholders may hinder the achievement of sustainable tourism goals:

- **Objective 3:** To assess the mediating effect of visitor satisfaction on the relationship between management practices and sustainable tourism performance.
- **H_1:** Visitor satisfaction mediates the relationship between management practices and sustainable tourism performance.

Table 8: Hierarchical regression model summary for predicting STO_total

Model Summary[c]									
Model	**R**	**R Square**	**Adjusted R Square**	**Std. Error of the Estimate**	**Change Statistics**				
					R Square Change	**F Change**	**df1**	**df2**	**Sig. F Change**
1	.683[a]	.467	.450	2.29107	.467	28.307	3	97	.000
2	.798[b]	.637	.622	1.89910	.171	45.173	1	96	.000
a. Predictors: *(Constant), CP1_total, WMP_total, IF_total*									
b. Predictors: *(Constant), CP1_total, WMP_total, IF_total, VS_total*									
c. Dependent Variable: *STO_total*									

Source: *SPSS*

Table 8 shows the results of a hierarchical regression. Model 1 explains 46.7% of the variation, while Model 2 increases that to 63.7%, a significant gain. The R Square Change and Sig. F Change values indicate that adding the new predictors improved the model substantially. Table 9 shows the ANOVA findings for the hierarchical regression. It shows that both Model 1 and Model 2 are statistically significant ($p < .001$). The increase in the regression sum of squares from Model 1 to Model 2 indicates greater explanatory power.

Table 9: ANOVA results for hierarchical regression predicting STO_total

ANOVA[a]						
Model		**Sum of Squares**	**df**	**Mean Square**	**F**	**Sig.**
1	Regression	445.756	3	148.585	28.307	.000[b]
	Residual	509.155	97	5.249		
	Total	954.911	100			
2	Regression	608.678	4	152.169	42.192	.000[c]
	Residual	346.233	96	3.607		
	Total	954.911	100			

Table 10 presents the regression coefficients, indicating that the predictors have important effects in both models and that all variables make substantial contributions. Collinearity diagnostics indicate that the tolerance and VIF values are adequate, indicating no multicollinearity problems.

Table 10: Regression coefficients, correlations, and collinearity statistics for STO_total

Coefficients											
Model		**Unstandardized Coefficients**		**Standardized Coefficients**	**t**	**Sig.**	**Correlations**			**Collinearity Statistics**	
		B	**Std. Error**	**Beta**			**Zero-order**	**Partial**	**Part**	**Tolerance**	**VIF**
1	(Constant)	6.248	2.006		3.115	.002					
	IF_total	-.928	.184	-.544	-5.036	.000	.123	-.455	-.373	.471	2.124
	WMP_total	.783	.108	.587	7.240	.000	.470	.592	.537	.835	1.197
	CP1_total	.628	.094	.672	6.647	.000	.383	.559	.493	.537	1.861
2	(Constant)	8.120	1.686		4.816	.000					
	IF_total	-.705	.156	-.414	-4.515	.000	.123	-.419	-.277	.450	2.224
	WMP_total	.421	.105	.315	4.021	.000	.470	.380	.247	.614	1.630
	CP1_total	.032	.118	.035	.274	.785	.383	.028	.017	.236	4.244
	VS_total	.635	.095	.758	6.721	.000	.695	.566	.413	.297	3.367
a. Dependent Variable: *STO_total*											

Source: *SPSS*

The regression analysis revealed that Infrastructure Facilities, Waste Management Practices, and Community Participation together explained 46.7% of the variance in Sustainable Tourism Outcomes (Model 1). When Visitor Satisfaction was added (Model 2), the explained variance increased to 63.7%, indicating a significant improvement. Among all predictors, Visitor Satisfaction ($\beta = 0.758$, $p < 0.001$) had the strongest positive influence, followed by Waste Management Practices and Infrastructure Facilities. Community Participation became insignificant when Visitor Satisfaction was included. Overall, the results show that improving visitor satisfaction and waste management practices greatly enhances sustainable tourism outcomes:

- **Objective 4:** To conduct a comparative analysis between Munnar (Kerala) and Jaipur (Rajasthan) to identify best practices and performance variations in sustainable destination management.
- **H_1:** There is a significant difference between Munnar and Jaipur in destination management practices and sustainable tourism outcomes.

Table 11 presents descriptive statistics comparing how tourists feel about different places. It shows the sample sizes, mean scores, and variability for each construct. The table shows that the average perceptions of Munnar and Jaipur differ significantly across indicators such as IF_total, WMP_total, CP1_total, SC1_total, and VS_total.

Table 11: Descriptive statistics of tourist perceptions by destination

Group Statistics					
	Destination Visited	**N**	**Mean**	**Std. Deviation**	**Std. Error Mean**
IF_total	Munnar	65	14.6769	.93721	.11625
	Jaipur	12	14.1667	.38925	.11237
WMP_total	Munnar	65	13.0462	1.83227	.22727
	Jaipur	12	11.5000	1.16775	.33710
CP1_total	Munnar	65	16.8923	2.12958	.26414
	Jaipur	12	20.0000	2.33550	.67420
SC1_total	Munnar	39	18.5385	.88396	.14155
	Jaipur	10	18.0000	.00000	.00000
VS_total	Munnar	65	14.8462	3.31300	.41093
	Jaipur	12	17.5000	1.16775	.33710

Source: *SPSS*

The group statistics reveal notable differences between Munnar and Jaipur across several dimensions of destination management. The mean infrastructure development score is slightly higher in Munnar (M = 14.68) than in Jaipur (M = 14.17), indicating better infrastructure in Munnar. Waste management practices are also rated higher in Munnar (M = 13.05) compared to Jaipur (M = 11.50), suggesting stronger environmental management in Munnar. However, community participation (M = 20.00) and visitor satisfaction (M = 17.50) are higher in Jaipur, indicating greater local involvement and greater tourist satisfaction there. Stakeholder coordination levels appear similar across both destinations. Overall, the results suggest that while Munnar performs better in infrastructure and waste management, Jaipur excels in community participation and visitor satisfaction.

6. Findings

The study demonstrated strong reliability and validity across all constructs, including infrastructure development, waste management, community participation, stakeholder coordination, visitor satisfaction, and sustainable tourism outcomes, as evidenced by a high Cronbach's Alpha of 0.939. The demographic profile showed that most respondents were young adults aged 21 to 30, predominantly male, and well educated at the undergraduate or postgraduate level. A majority were domestic tourists with middle-income levels and repeat visits, reflecting a growing interest among young, educated, and responsible travellers who are more aware of sustainability practices at tourist destinations. The correlation analysis indicated a significant positive relationship between waste management practices and sustainable tourism outcomes ($r = 0.470$, $p < 0.01$). At the same time, infrastructure development and waste management also showed a moderate positive correlation ($r = 0.371$, $p < 0.01$). However, the link between infrastructure development and sustainable outcomes was weak and statistically insignificant ($r = 0.123$, $p > 0.05$), suggesting that waste management plays the most influential role in achieving Sustainability. Regression results further revealed that stakeholder coordination had a significant, yet negatively related relationship with sustainable tourism outcomes ($R^2 = 0.091$, $F = 5.480$, $p = 0.023$; $\beta = -0.301$), suggesting that ineffective coordination among stakeholders could hinder sustainability efforts. The initial regression model, excluding visitor satisfaction, explained 46.7% of the variance

in sustainable tourism outcomes ($R^2 = 0.467$, $p < 0.001$). When visitor satisfaction was introduced as a mediating variable, the model's explanatory power increased to 63.7% ($\Delta R^2 = 0.171$, $p < 0.001$).

Visitor satisfaction emerged as a strong positive predictor ($\beta = 0.758$, $p < 0.001$), confirming its vital role in enhancing sustainability outcomes. Interestingly, community participation lost statistical significance when visitor satisfaction was added, indicating full mediation, whereas infrastructure development and waste management showed partial mediation. This finding reinforces that visitor satisfaction mediates the relationship between management practices and overall sustainability outcomes. A comparative analysis between the two destinations revealed that Munnar scored higher in infrastructure development (M = 14.68) and waste management (M = 13.05), highlighting its strengths in eco-friendly practices. Jaipur, on the other hand, performed better in community participation (M = 20.00) and visitor satisfaction (M = 17.50), reflecting higher levels of local engagement and superior tourist experiences. Stakeholder coordination levels were relatively similar across both destinations. Overall, the findings suggest that while Munnar excels in environmental and infrastructural management, Jaipur stands out in cultural participation and visitor-based Sustainability. The study concludes that waste management remains the key driver of sustainable tourism outcomes; stakeholder coordination significantly influences Sustainability, though it requires enhanced collaboration; and visitor satisfaction serves as a crucial mediating factor, strengthening the relationship between management practices and sustainable development in tourism destinations.

7. Conclusion

The present study examined the influence of destination management factors such as infrastructure development, waste management practices, community participation, stakeholder coordination, and visitor satisfaction on sustainable tourism outcomes in two selected Indian destinations—Munnar and Jaipur. The research instrument used in this study demonstrated high reliability (Cronbach's Alpha = 0.939), confirming the consistency and validity of the collected data. The findings revealed that among the various management practices, waste management emerged as the most influential factor in determining sustainable tourism outcomes. This highlights the crucial role of effective waste control, cleanliness, and environmental maintenance in shaping both destination sustainability and tourist experiences. The results further indicated that infrastructure development alone does not significantly contribute to Sustainability unless it is integrated with community participation and eco-friendly management practices. Interestingly, stakeholder coordination showed a significant, negative relationship with sustainability outcomes, suggesting that poor communication or fragmented coordination among tourism stakeholders can hinder the effective implementation of sustainable tourism initiatives.

The hierarchical regression analysis confirmed that visitor satisfaction plays a vital mediating role, enhancing the positive effects of destination management practices on sustainability performance. This demonstrates that sustainability is not only driven by managerial actions but also by how well visitors perceive and experience the destination. The comparative analysis between Munnar and Jaipur revealed distinct strengths and weaknesses in their approaches to sustainable tourism. Munnar performed better in terms of environmental infrastructure and waste management, reflecting strong ecocentric management practices. In contrast, Jaipur scored higher in community participation and visitor satisfaction, signifying a people-centred approach that emphasises cultural engagement and local involvement. Overall, the study concludes that sustainable tourism can be effectively achieved when environmental efficiency, community participation, stakeholder collaboration, and visitor satisfaction are balanced and integrated within destination management strategies.

7.1. Suggestion

Based on the study's findings, several recommendations are proposed for policymakers, destination managers, and tourism stakeholders to strengthen sustainable tourism development in India. First, there is an urgent need to enhance waste management systems in all tourist destinations. This can be achieved by establishing efficient waste segregation, recycling, and disposal mechanisms, along with awareness campaigns to promote responsible behaviour among both tourists and residents. Second, stakeholder coordination should be improved by establishing a collaborative governance framework that includes government bodies, private organisations, and local communities. Such partnerships can ensure shared responsibility and continuous monitoring of sustainability goals. Community participation must also be expanded by empowering residents through training programs, tourism entrepreneurship opportunities, and involvement in decision-making processes. This will not only generate local employment but also promote cultural preservation and social inclusion.

Third, infrastructure development should focus on sustainability-oriented investments, such as eco-friendly accommodations, renewable energy, and environmentally responsible transport facilities. Integrating sustainability principles into destination planning will help minimise ecological footprints while improving visitor convenience. Moreover, visitor satisfaction should be regularly measured through feedback systems to improve service quality and enhance the tourist experience. Designing authentic cultural, heritage, and nature-based experiences will further strengthen visitor loyalty and sustainability outcomes. Finally, destination-specific strategies should be developed to build on local strengths. For instance, Munnar should emphasise

expanding community-based tourism programs and cultural interpretation initiatives, whereas Jaipur should focus more on environmental management and waste reduction measures. Policymakers should integrate sustainability indicators into tourism policies and master plans to ensure that future development aligns with sustainable tourism principles. Future researchers may extend this study by including additional destinations, conducting longitudinal studies, and employing advanced analytical techniques, such as Structural Equation Modelling (SEM), to provide deeper insights into sustainable tourism performance.

Acknowledgement: The authors collectively extend their profound gratitude to SRM Institute of Science and Technology for its invaluable support, insightful guidance, and conducive research environment. Its academic resources and institutional encouragement significantly enriched the quality and advancement of this collaborative work.

Data Availability Statement: The data supporting the findings of this study are available from the corresponding author upon reasonable request.

Funding Statement: This research was conducted without any external financial support, and no grants were received from governmental, commercial, or not-for-profit funding bodies.

Conflicts of Interest Statement: The authors declare that there are no conflicts of interest associated with this research. All content represents original work, and all referenced materials have been properly cited.

Ethics and Consent Statement: This study was conducted in accordance with established ethical standards, and informed consent was obtained from all participants. Appropriate measures were taken to ensure confidentiality and protect participant privacy.

References

1. B. Bramwell and B. Lane, "Critical research on the governance of tourism and sustainability," *Journal of Sustainable Tourism*, vol. 19, no. 4–5, pp. 411–421, 2011.
2. C. G. -Q. Chi and H. Qu, "Examining the structural relationships of destination image, tourist satisfaction, and destination loyalty: An integrated approach," *Tourism Management*, vol. 29, no. 4, pp. 624–636, 2008.
3. E. T. Byrd, "Stakeholders in sustainable tourism development and their roles: Applying stakeholder theory to sustainable tourism development," *Tourism Review*, vol. 62, no. 2, pp. 6–13, 2007.
4. G. I. Crouch and J. R. B. Ritchie, "The Competitive Destination: A Sustainable Tourism Perspective," *CABI Publishing*, Wallingford, Oxfordshire, United Kingdom, 2003.
5. P. E. Murphy, "Tourism: A Community Approach," *Routledge*, London, United Kingdom, 2013.
6. R. Sharpley, "Tourism, sustainable development and the theoretical divide: 20 years on," *Journal of Sustainable Tourism*, vol. 28, no. 11, pp. 1932–1946, 2020.
7. S. Gössling, D. Scott, and C. M. Hall, "Tourism and Water: Interactions, Impacts and Challenges," *Channel View Publications*, Bristol, United Kingdom, 2015.
8. S. M. Rasoolimanesh, M. Jaafar, A. G. Ahmad, and R. Barghi, "Community participation in World Heritage Site conservation and tourism development," *Tourism Management*, vol. 58, no. 2, pp. 142–153, 2017.
9. T. B. Dangi and T. Jamal, "An integrated approach to sustainable community-based tourism," *Sustainability*, vol. 8, no. 5, p. 475, 2016.
10. UNEP and UNWTO, "Tourism in the Green Economy – Background Report," *UNWTO Publications*, Madrid, Spain, 2012.
11. UNWTO, "Tourism and Sustainable Development Goals – Journey to 2030," *United Nations World Tourism Organization*, Madrid, Spain, 2020.
12. World Travel and Tourism Council (WTTC), "Travel and Tourism Economic Impact 2023: Global Trends Report," *WTTC*, London, United Kingdom**,** 2023.
13. Y. Yoon and M. Uysal, "An examination of the effects of motivation and satisfaction on destination loyalty: A structural model," *Tourism Management*, vol. 26, no. 1, pp. 45–56, 2005.