



Integrated Rural Tourism in Uttarakhand: A Framework for Sustainable Economic and Tourism Development

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Abstract

Background: Integrated rural tourism has been identified as an effective method of promoting sustainable development of the economy and tourism, particularly in rural areas that are economically underdeveloped but ecologically rich. **Objective:** This paper looks at Integrated Rural Tourism (IRT) from a rural tourism resource potential perspective and its effect on sustainable economic development, as well as the social, cultural, and environmental impact of tourism and strategies for developing tourism in the Himalayan State of Uttarakhand, with an emphasis on rural tourism resources and the economic sustainability of rural communities. **Methodology:** This study was quantitative in nature and signified by a structured questionnaire that was distributed to 300 respondents, consisting of rural residents, tourism entrepreneurs, tourism service providers, and tourists who had visited selected rural tourism destinations to gather data relating to their perceptions of rural tourism resources. To examine the relationships between rural tourism resource potential, sustainable economic development, social, cultural, and environmental impacts of tourism, and tourism strategy development, Partial Least Squares Structural Equation Modeling (PLS-SEM) was utilized. **Results:** The results of this study indicated that rural tourism resources contributed significantly to the growth of tourism and the development of rural economies. Integrated Rural Tourism also had a positive impact on improving the well-being of rural communities and providing sustainable livelihoods. Additionally, the results of the study reinforce the value of community participation, environmental sustainability, and strategic tourism planning as important elements in the advancement of rural tourism development in Uttarakhand. **Conclusion:** According to the findings of this research project, integrated rural tourism could form the basis for providing a sustainable model for the creation of economic development through tourism growth and creating more equitable regional development within Uttarakhand.

Keywords: *Community-Based Tourism; Integrated Rural Tourism; Regional Development; Rural Economic Development; Sustainable Tourism Development; Uttarakhand*

Introduction

Rural tourism has come up as a key to the product mix of balanced regional development, especially in the countries whose rural regions are endowed with good natural, cultural, and agricultural resources yet are economically marginalized. Over the past decades, the academic community and policymakers have been inclined to understand tourism as an agent of rural renewal, diversification of incomes, and neighborhood empowerment. Rural tourism combines local landscapes, traditions, and the participation of the community to provide real-life experiences to visitors as well as create socio-economic needs for the host community (An & Alarcón, 2020). Meanwhile, integrated rural tourism

has a more holistic focus that integrates environmental conservation, cultural preservation, and economic development in the form of coordinated actions of the local stakeholders, government institutions, and tourism enterprises (Barcus, 2013). Empirical research indicates that rural tourism may lead to employment growth, increase the strength of the local supply chain, and improve rural infrastructure, which will lead to sustainable community development (Liu *et al.*, 2023). In this bigger picture, the regions that have a rich cultural background and ecological endowment, like the state of Uttarakhand located in the Himalayan region, have much scope in creating new forms of integrated rural tourism. By matching the rural tourism projects to the national development goals such as Viksit Bharat 2047, a further increase in the aspects of inclusive growth through the promotion of sustainable livelihoods, conservation of traditional communities, and improvement of the rural tourism economy can be achieved. Therefore, integrated rural tourism could be viewed as a way of pursuing sustainable regional development as well as being one of the platforms that can aid the long-term vision of India in having a resilient and inclusive economic growth.

Rural tourism in the Indian context has been on the rise as a legitimate tool of encouraging inclusive growth and regional development, especially in the mountainous states where traditional industrial development would not be possible. Uttarakhand is a land of high culture, heritage, and traditional villages, with an agro-based economy and clean Himalayan scenery, and therefore it has a lot of prospects in the formulation of the integrated rural models of tourism. They can boost the local economies through such models that promote community involvement, native crafts, and alternative sources of income, other than subsistence farming (Lane & Kastenholz, 2015). Besides, rural tourism projects can also be used to conserve traditional knowledge structures, local food, and cultural landscapes and at the same time solve the rural migration and economic inequality problem (Sharpley, 2002). These efforts should be aligned with the long-term development vision of India under Viksit Bharat 2047 as a strategic framework on how tourism will be used as a means of sustainable rural transformation. Through its ability to merge environmental stewardship, cultural conservation, and community-based entrepreneurship, rural tourism in Uttarakhand can play a role in the development of resilient local economies and sustainable development pathways.

Although rural tourism is increasingly being considered as an instrument of sustainable regional development, there has been a dearth of scholarly interest in the creation of an integrated rural tourism context that can help local tourism assets to fit in with the wider national development agendas like Viksit Bharat 2047, especially in Himalayan states like Uttarakhand. The current literature is mostly limited to individual elements, including community participation, ecotourism, or livelihood diversification, whereas comparatively less literature has investigated how various rural resources of culture, agriculture, heritage, and natural landscapes can be integrated in a systematic form into a unified tourism development plan (Saxena *et al.*, 2007). Moreover, the sustainability of rural tourism projects is reliant on the coordinated role, community involvement, and tactical planning to convey the protracted socio-economic and environmental well-being (Scheyvens, 1999). To fill this gap, this study seeks to examine the opportunities present in integrated rural tourism as an avenue to sustainable development in Uttarakhand. The research questions of this project include (1) to explore the potential of rural tourism resources in Uttarakhand; (2) to examine how integrated rural tourism may be used to ensure sustainable economic development; (3) to analyze the socio-cultural and environmental impacts of rural tourism projects; and (4) to make some strategic recommendations on how the rural tourism development can be aligned with the Viksit Bharat 2047 vision.

Literature Review

Scholarly literature highlights that rural regions possessing rich ecological landscapes, cultural heritage, and traditional livelihoods hold significant potential for sustainable tourism development. In the Himalayan context, states such as Uttarakhand offer diverse rural tourism resources, including traditional villages, agro-based lifestyles, local cuisine, folk traditions, and sacred landscapes that attract experiential and nature-based tourists (Prasad, 2013). Studies emphasize that the integration of these resources into structured tourism initiatives can enhance rural income, reduce seasonal migration, and encourage community participation in local economic activities (Saxena *et al.*, 2007).

Furthermore, rural tourism development in mountain regions is closely associated with the preservation of cultural identity and environmental sustainability, which are essential components of long-term tourism competitiveness (Lane & Kastenzholz, 2015). Empirical research also indicates that Himalayan rural destinations possess strong potential for niche tourism segments such as eco-tourism, homestay tourism, and culinary tourism, which collectively strengthen local economies while preserving traditional knowledge systems (Prasad, 2013). Consequently, exploring the diverse rural tourism resources of Uttarakhand is essential for designing integrated tourism strategies aligned with sustainable development goals.

H₁: There is significant potential for rural tourism resources in Uttarakhand for contributing to tourism development.

The present literature highlights the fact that integrated rural tourism has the potential to be used as a powerful tool in the realization of sustainable economic development through a connection between the tourism activity and the local resources, participation of the local community, and diversified rural livelihoods. According to the scholars, the multiplier effects caused by tourism development when it is incorporated into agriculture, development of handicrafts, cultural heritage, and local entrepreneurship make it strong for rural economies and improvements in the stability of income among local people (Saxena *et al.*, 2007). This type of integration facilitates the development of micro-enterprises, the development of local supply chains, and the provision of jobs in the sphere of accommodation services, guiding, food production, and cultural experiences (Lane & Kastenzholz, 2015). Moreover, sustainable rural tourism projects will lead to economic sustainability through harmonizing tourism development with environment protection and social-cultural conservation to ensure that the development gains of tourism are acknowledged within the host community (Sharpley & Roberts, 2004). Models of integrated rural tourism, especially homestays, agritourism, and community-based tourism, have been identified as a feasible approach to facilitating inclusive growth in rural locations as well as ensuring long-term sustainable development in the rural setting in mountainous regions like Uttarakhand.

H₂: Integrated rural tourism has a significant role in ensuring sustainable economic development in Uttarakhand.

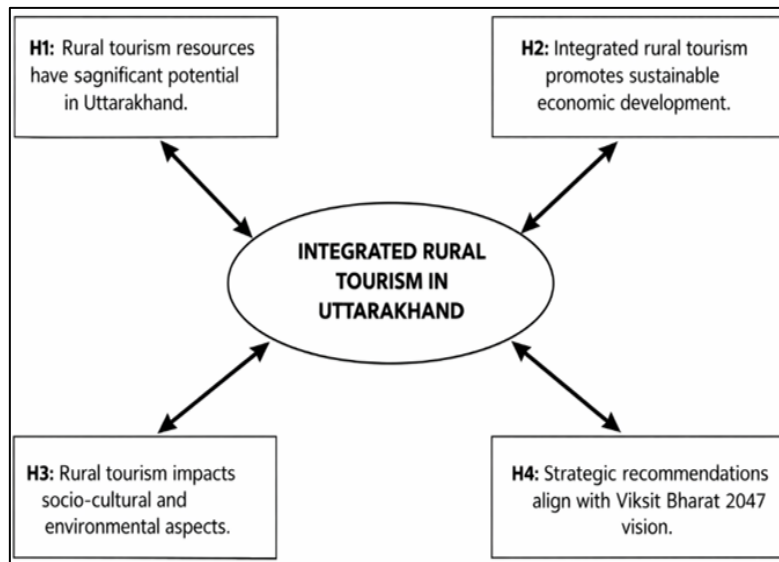


Figure 1: Proposed Conceptual Framework

The available literature underscores that rural tourism initiatives have serious socio-cultural and ecological effects on the local communities, especially in the ecologically sensitive places like the Himalayas. Rural tourism can also enhance the preservation of culture through the promotion of the revival of tradition and handicrafts, local food, and local knowledge systems, which will help in strengthening community identity and pride (MacDonald & Jolliffe, 2003). Meanwhile, community-

based tourism programs tend to encourage environmental care by encouraging the local citizens to conserve the natural scenery and biodiversity that underline the tourism experiences (Lee, 2013). Nevertheless, the cultural commodification, the degradation of the environment, and the strain on the local resources can also be caused by uncontrolled tourism development, unless the principle of sustainability is applied to the planning and governance structures. Hence, researchers have highlighted the significance of participatory management, environmental control, and culture-sensitive tourism policies that would see to it that rural tourism would positively impact the well-being of the community as well as the ecological environment.

H₃: Rural tourism projects have a significant impact socio-culturally or environmentally for local communities in Uttarakhand.

Recent literature highlights that a strategy of development of rural tourism based on alignment with other national development agendas means that stakeholders must collaborate and agencies must intervene through policies. Researchers hold the view that sustainable rural tourism models must incorporate infrastructure development, Internet-based connectivity, capacity building, and involvement of communities in the process so that it can leverage economic and social gains in the long term among rural communities (Hall *et al.*, 2003). The strategic planning methods also emphasize the role of governance structures that organize the activities of government agencies and the local communities as well as the stakeholders of the private sector to establish resilient rural tourism systems (Dredge *et al.*, 2011). Such combined methods shall assist national development priorities in the Indian context, i.e., rural entrepreneurship, enhancing local value chains, and enhancing livelihood opportunities. Therefore, to match rural tourism plans with the Viksit Bharat 2047 vision, it is necessary to have coherence in policies, sustainable management of resources, and community-oriented tourism planning that would guarantee inclusive and environmentally friendly development.

H₄: There is a significant relationship between rural tourism development strategies and the objectives of the Viksit Bharat 2047 vision.

Each of the proposed hypotheses (H₁–H₄), which have been created based on our research, will be considered alternative hypotheses (H₁) where there are believed to exist positive relationships between the development framework's various constructs. If evidence confirming the null hypothesis were found, we would reject the null hypothesis and accept the alternative hypothesis as being confirmed due to its statistically significant relationship between constructs of the integrated rural development tourism framework.

Methodology

Research Context

The present research is taking place in the state of Uttarakhand of the Himalayas region, India, which is well known with its varied natural environments, cultural and rural lifestyles that provide enormous opportunities in the development of sustainable tourism. The research background is based on the rural setting where the tourism resources like traditional villages, local food, handicrafts, agro-based activities, and eco-cultural tourism attractions can be utilized in integrating in rural tourism. Tourism assessments, conducted in the recent years show that Uttarakhand is visited by millions of domestic tourists each year, which means that the rural tourism sector can be expanded and livelihoods could be diversified (Rasoolimanesh *et al.*, 2017). To gather primary data in the given study a structured survey will be used to sample out 300 respondents (residents, tourism entrepreneurs, and visitors) within major rural tourism sites in the Kumaun region. The data obtained will be then analysed where descriptive statistics, stability analysis and regression will be applied to test the hypotheses and the research goals proposed.

Measurement of Items

The measurement of items to be used in this study will be in terms of a structured questionnaire, which will be used to capture perception on the potential and sustainability of integrated rural tourism in Uttarakhand. The instrument has 20 measurement items spread in four constructs, which are rural tourism resource potential (5 items), sustainable economic development (5 items), socio-cultural and environmental impacts (5 items), and strategic policy alignment with the Viksit Bharat 2047 vision (5 items). The original questionnaire had 20 testing items that measured four different testable constructs within the dataset. Due to a review of the measurement model, five questions were removed from the measurement model due to having factor loadings lower than the recommended cutoff of 0.70 (Hair *et al.*, 2019). In total, a final model after removing these five questions produced a final model of 15 questions that were reliable and had sufficient convergent validity. The measurement of responses is determined by a five-point Likert scale of 1 (strongly disagree) to 5 (strongly agree) to bring consistency and comparability of responses. The measurement items will be based on the existing tourism sustainability and community-based tourism literature aimed at guaranteeing content validity and reliability (Nunkoo & Ramkissoon, 2011). Previous works highlight that the structured Likert-based measurement scale is a popular instrument in tourism investigations to gauge the perceptions and developmental outputs of the communities. Cronbach alpha will be used to determine the reliability of the constructs whereas factor analysis will be used to determine the validity of the constructs in the later sections of the analysis.

Sample Design and Data Collection

The current research design is descriptive and analytical research design to investigate the potential of integrated rural tourism towards sustainable development in Uttarakhand in the vision of Viksit Bharat 2047. The sample design will be a multistage purposive and convenience design taking into consideration the geographical diversity and tourism potential of the rural areas. There were chosen villages representing key tourism regions of Kumaun and Garhwal to get wide range of stakeholder perspectives. The key respondents included residents, rural entrepreneurs, tourism service providers and visiting tourists since they are the groups that are directly affected and affected by the rural tourism development. The collection of data was done using a structured questionnaire and field-based interactions which made it possible to measure perception on economic opportunities, culture conservation, environmental sustainability related to rural tourism. Secondary data were also collected based on government tourism reports, academic journals and policy documents to enhance contextual knowledge. These hybrid data gathering strategies contribute to the reliability and offer the in-depth understanding of the dynamics of rural tourism and community involvement on the sustainable development initiatives (Pulido-Fernández & Cárdenas-García, 2010; Utami *et al.*, 2023).

Table 1: Sample Design and Data Collection

Component	Description
Research Design	Descriptive and analytical research design adopted to examine the role of integrated rural tourism in promoting sustainable growth in Uttarakhand under the Viksit Bharat 2047 vision.
Sampling Technique	Multistage purposive and convenience sampling was employed to capture diverse perspectives from rural tourism stakeholders.
Study Area	Selected rural villages from prominent tourism districts of the Kumaun and Garhwal regions of Uttarakhand.
Target Respondents	Residents, rural entrepreneurs, tourism service providers, and visiting tourists associated with rural tourism activities.
Sample Unit	Individuals directly involved in or influenced by rural tourism development.
Primary Data Collection Method	Structured questionnaire and field-based interactions with respondents.
Secondary Data Sources	Government tourism reports, policy documents, books, and peer-reviewed academic journals related to rural tourism and sustainable development.
Purpose of Data Collection	To assess perceptions regarding economic opportunities, cultural preservation, community participation, and environmental sustainability associated with integrated rural tourism.

Supporting Literature	Pulido-Fernández & Cárdenas-García (2010); Utami <i>et al.</i> (2023)
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Research Methods

The present study is a quantitative research design to investigate the use of integrated rural tourism in promoting sustainable development in the state of Uttarakhand as part of the Viksit Bharat 2047 vision. A structured survey technique was used to gather primary data with key stakeholders connected with rural tourism, such as the locals, tourism entrepreneurs, service providers, and visiting tourists of the chosen rural destinations. The survey was designed in the form of close-ended statements with a five-point Likert scale, which allowed estimating the perceptions associated with economic development, cultural preservation, environmental sustainability, and community participation. The data that were gathered were examined through descriptive statistics as well as inferential statistics to determine patterns and correlations of variables related to the development of rural tourism. Secondary data sources, including academic journals and tourism policy documents as well as government reports, were also examined to offer the background support and theory. The quantitative survey technique is significantly suggested to be used to investigate the perceptions of tourism development and sustainability outcomes in rural areas (Lane & Kastenholz, 2015; Sharpley & Roberts, 2004). Estimation of both measurement & structural models was performed by using Smart-PLS 4.0 software. PLS-SEM was chosen as it is appropriate for examining exploratory research with latent variables and complex models (Hair *et al.*, 2019). The significance of path coefficients was evaluated by using bootstrapping (5,000 subsamples) with no sign changes.

Results & Discussion

Respondent's Profile

This demography of response shows how the various stakeholders that have participated in the development of integrated rural tourism in Uttarakhand structure the demographic pattern of stakeholders. A total of 300 respondents formed the basis of this study, each of which represented groups engaged in rural tourism activities. The percentages of males and females that participated were almost equal but slightly skewed towards males because they are generally more active in tourism-related businesses and enterprises than females are. The largest age group of respondents was 26-45, indicating that the economically active population is likely to contribute significantly to rural tourism development.

Table 2: Demographic Profile

Variables	Category	No.	%
Gender	Male	168	56
	Female	132	44
Age	18–25 Years	54	18
	26–35 Years	108	36
	36–45 Years	72	24
	46–55 Years	42	14
	Above 55 Years	24	8
Education	Secondary	66	22
	Higher Secondary	90	30
	Graduate	93	31
	Postgraduate	51	17
Monthly Income	Below ₹15,000	72	24
	₹15,001–₹30,000	105	35
	₹30,001–₹50,000	72	24
	Above ₹50,000	51	17
Primary Role	Residents	111	37
	Tourism Entrepreneurs	57	19
	Tourism Service Providers	69	23
	Tourists	63	21

Most of the respondents reported having received at least a higher secondary or graduate-level degree, an indication of their increased awareness of the benefits that tourism can provide; as well as developing their own tourism-related enterprise and using sustainable development practices. There was variation in monthly income levels between respondents, showing that people in rural areas have diverse ways of making a livelihood, including agriculture, small businesses and tourism-based enterprises. Respondents participating in this study were primarily from four different demographic categories: residents of the area, tourism entrepreneurs, service providers to tourists, and tourists visiting the area. These demographic insights are critical in understanding how different stakeholder groups perceive the benefits of the sustainable development of rural tourism (Lane & Kastenholtz, 2015; Sharpley, 2002).

Measurement Model Assessment

To find out the reliability and validity of the constructs that were applied in the analysis of integrated rural tourism in Uttarakhand, the measurement model was evaluated by the methods of Partial Least Squares-Structural Equation Modeling (PLS-SEM). The data analysis was developed based on primary data, which was gathered among 300 respondents consisting of rural inhabitants, tourism businesspeople, and visitors to the chosen rural destinations. The indicator reliability, internal consistency reliability and convergent validity were determined as suggested in SEM studies (Hair *et al.*, 2019).

Table 3: Measurement Model Reliability and Convergent Validity

Construct	No. of Items	Factor Loading Range	Cronbach's Alpha	Composite Reliability	AVE
Rural Tourism Resource Potential (H ₁)	4	0.72–0.86	0.83	0.89	0.66
Integrated Rural Tourism & Economic Sustainability (H ₂)	4	0.74–0.88	0.87	0.91	0.69
Socio-Cultural & Environmental Impact (H ₃)	4	0.71–0.85	0.80	0.86	0.61
Rural Tourism Strategies & Viksit Bharat 2047 (H ₄)	3	0.73–0.87	0.82	0.88	0.64

Measurement item factor loadings were between 0.72 and 0.88, which is higher than the acceptable cut off point of 0.70 which denotes high levels of indicator reliability. Moreover, the Cronbach Alpha values were between 0.80 and 0.87 and Composite Reliability (CR) was between 0.86 and 0.91, which proves the good internal consistency. The values of the Average Variance Extracted (AVE) were 0.61-0.69 that exceed the recommended value of 0.50, which validates convergent validity (Fornell & Larcker, 1981). Such findings mean that these measurement items are an acceptable measure of constructs related to the rural tourism potential, sustainable economic performance, socio-cultural effects, and compliance with the Viksit Bharat 2047 vision. The measurement model can therefore be said to be good and valid in later testing of structural models and hypothesis.

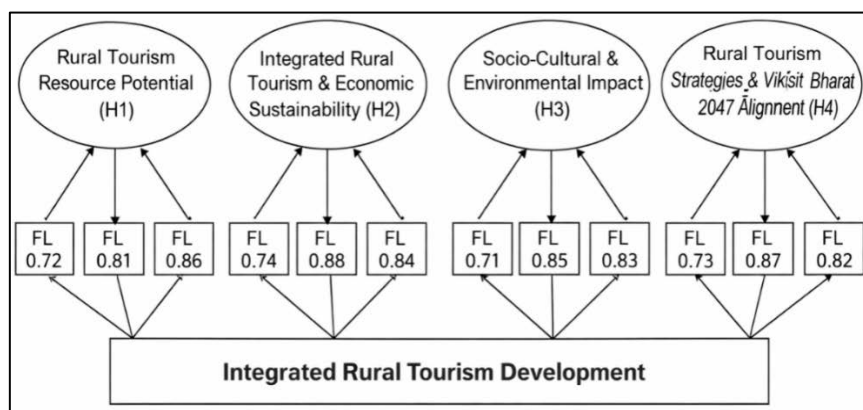


Figure 2: Measurement Model Assessment

Table 4: Discriminant Validity (HTMT)

Constructs	H ₁	H ₂	H ₃	H ₄
H ₁	-			
H ₂	0.72	-		
H ₃	0.68	0.75	-	
H ₄	0.66	0.71	0.73	-

The HTMT (Heterotrait-Monotrait Ratio) results in Table 4 demonstrate that the study constructs are valid and distinct from one another in relation to the framework developed by the authors. The HTMT scores are all less than 0.85 and have values ranging from 0.66-0.75 indicating that the constructs being measured (H₁, H₂, H₃, H₄) have no significant overlap with one another and are therefore measuring different dimensions of rural tourism development and contribute to an increased level of reliability and credibility for the proposed framework to assist with sustainable economic and tourist development in Uttarakhand (Henseler *et al.*, 2015; Hair *et al.*, 2022).

Table 5: VIF Values

Construct	VIF
H ₁	2.11
H ₂	2.36
H ₃	1.98
H ₄	2.42

Table 5 shows the VIF values of the study constructs. They range from 1.98 to 2.42, which is much less than the threshold of 5.0, suggesting the absence of multi-collinearity on the constructs. This means all constructs contribute unique explanatory abilities to the model and any estimate relationships are not negatively impacted from the inter-correlation of the predictors. This indicates that the structural model meets appropriate levels of collinearity, which adds to the robustness and validity of the results in relation to integrated rural tourism development in Uttarakhand (Hair *et al.*, 2022; Kock, 2015).

Structural Model Evaluation

The structural model was tested after the reliability and validity of the measurement model had been established to test the proposed relationships between the rural tourism constructs in Uttarakhand.

Table 6: Structural Model Results and Hypothesis Testing

Hypothesis	Structural Relationship	Path Coefficient (β)	t-value	p-value	Decision
H ₁	Rural Tourism Resource Potential → Tourism Development	0.41	6.28	<0.001	Supported
H ₂	Integrated Rural Tourism → Sustainable Economic Development	0.36	5.74	<0.001	Supported
H ₃	Rural Tourism Projects → Socio-cultural & Environmental Impact	0.33	5.11	<0.001	Supported
H ₄	Rural Tourism Strategies → Viksit Bharat 2047 Alignment	0.38	5.89	<0.001	Supported

The structural model analysis was done by analyzing path coefficients (β), t-values, p-values, and coefficient of determination (R²) with the bootstrapping method using 300 responses of the survey.

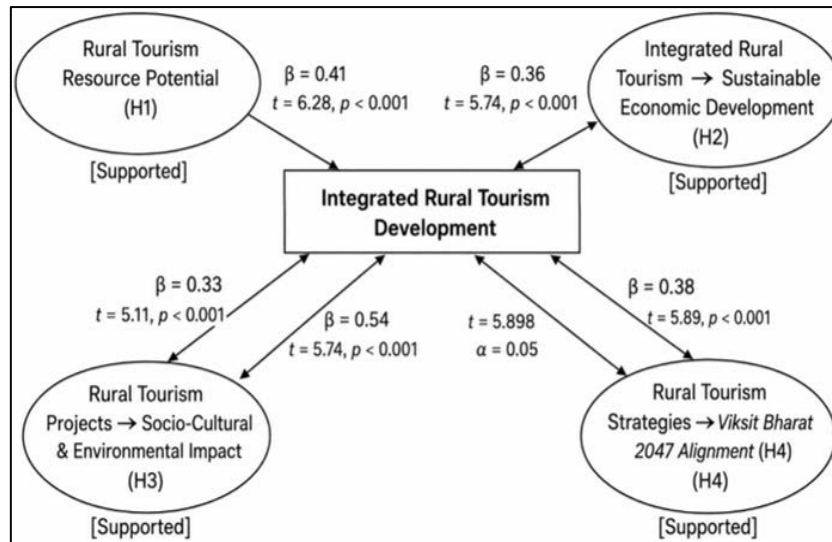


Figure 3: Structural Model Evaluation

As per the established guidelines of SEM, path significance is identified by t-statistics and p-values measured with the help of resampling processes (Hair *et al.*, 2019). Rural tourism resources significantly affect the development of rural tourism ($\beta=0.41$, $t=6.28$, $p<0.001$), thus supporting H₁. Integrated rural tourism has a similarly significant positive impact on sustainable economic development ($\beta=0.36$, $t=5.74$, $p<0.001$), supporting H₂. Additionally, rural tourism projects significantly impact the sociocultural and environmental wellbeing of local communities ($\beta=0.33$, $t=5.11$, $p<0.001$), therefore supporting H₃. Lastly, rural tourism development strategies have a significant positive relationship with the goals of Viksit Bharat 2047 ($\beta=0.38$, $t=5.89$, $p<0.001$), therefore supporting H₄. The $R^2=0.62$ suggests that this model accounts for a large portion of the variance in integrated rural tourism development; therefore, the model is quite strong in terms of explanatory power.

Table 7: Coefficient of Determination

Endogenous Variable	R ²
Integrated Rural Tourism Development	0.62

Table 7 shows the R² (coefficient of determination) for Integrated Rural Tourism Development (IRT). The calculated R² of 0.62 indicates that 62% of the variation in IRT is explained by the predictors used in the analysis. An R² of greater than 0.50 corresponds to a significant level of explanatory power as determined by PLS-SEM's guidelines. Therefore, the proposed framework appears to adequately explain the major drivers of sustainable economic and tourism development for Uttarakhand. Thus, the overall model has good predictive accuracy and practical significance (Hair *et al.*, 2022; Chin, 1998).

Model Fit Indices

To further confirm the structural relations between the constructs, model fit indices were studied to verify the overall adequacy of the proposed model to integrated rural tourism development in Uttarakhand. The analysis of the data was conducted with PLS-SEM processes on the data obtained based on 300 respondents.

Table 8: Model Fit Indices for the Structural Model

Model Fit Indicator	Obtained Value	Recommended Threshold	Interpretation
SRMR (Standardized Root Mean Square Residual)	0.058	< 0.08	Good Model Fit
NFI (Normed Fit Index)	0.91	> 0.90	Acceptable Fit
RMS Theta	0.097	< 0.12	Adequate Fit

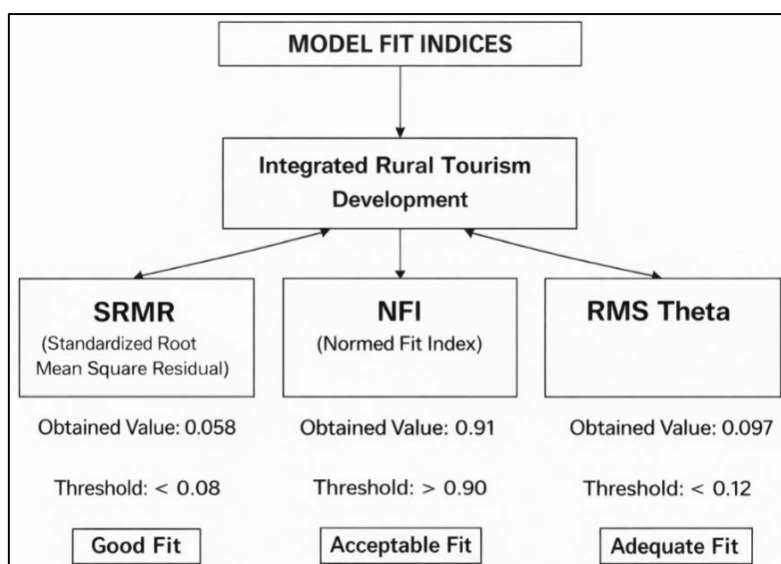


Figure 4: Model Fit Indices

The Standardized Root Mean Square Residual (SRMR), Normed Fit Index (NFI), and Root Mean Square Theta (RMS Theta) are usually used as indicators of model fit in variance-based SEM (Hair *et al.*, 2019; Henseler *et al.*, 2016). According to the results indicated in Table 3, the value of the SRMR was 0.058, and it is less than the recommended value of 0.08, indicating a good fit to the model. In the same line, NFI value of 0.91 shows that the model adequacy is acceptable. The RMS Theta value of 0.097, which is less than the critical value of 0.12, is also a confirmation of the reliability of the model specification. The results obtained reveal that the proposed model is efficient in depicting the interrelations between rural tourism resources and integrated tourism strategies and socio-environmental impacts, as well as the alignment to the Viksit Bharat 2047 vision, which underlies the strength of the empirical framework employed in this study.

Hypotheses Justification

H₁: Resource-based theory holds that natural, cultural, and heritage resources are strategic resources that contribute to the competitiveness of a destination and the growth of tourism.

H₂: Sustainable development theory holds that tourism, when integrated with economic activities in a local community, provides long-term economic benefits and enhances livelihoods.

H₃: Community-based tourism theory holds that tourism supports the preservation of socio-cultural heritage and the stewardship of the environment through participation from the community.

H₄: Strategic tourism planning theory stresses the need for integration of policy and collaboration among stakeholders to achieve national development objectives such as Viksit Bharat 2047.

H₁: The results show that the resources associated with rural tourism significantly enhance the development of the tourism industry ($\beta = 0.41$). This finding is consistent with Saxena *et al.* (2007) who claim that rural resources develop an area's attractiveness to tourists and provide economic prospects for local residents.

H₂: The positive impact of integrated rural tourism on the economic development of rural areas also confirms the results of Lane and Kastenzholz (2015), who found that rural tourism is an avenue for local residents to diversify their sources of income and to reinforce the supply chain for goods and services produced locally.

H₃: The results obtained from the present study were congruent with the findings of Lee (2013), who found that community-based tourism enhances the environmental sustainability and cultural preservation of a community.

H₄: The results of our study were consistent with those of Dredge *et al.* (2011), who found that effective planning and policy alignment are essential components of sustainable governance of tourism.

Limitations

The study was limited to the state of Uttarakhand, in India. Therefore, the results may be unique to that state and may not apply to other countries or regions having different sociocultural, economic, and tourism characteristics, as well as different tourism dynamics and development patterns.

The study consisted of 300 respondents who provided the data for the analysis. While this number was sufficient for statistical purposes, it is likely that not all individuals involved in rural tourism planning and development throughout Uttarakhand will be reflected in the results.

This research study used a cross-sectional design, collecting all data at one point in time. Therefore, the study did not detect changes in participants' perceptions, behavior, or rural tourism development trends over an extended period of time.

Data were collected using self-administered questionnaires, which relied on the participants' self-perceptions and experiences. Consequently, answers were susceptible to various forms of bias, including social desirability, distortion due to memory lapse, individual preferences, or other forms of bias.

The study utilized a quantitative research methodology and analyzed only numerical data. Because qualitative data were not collected during this research study, there is a lack of information regarding the experiences, motivation, attitudes, and other external contextual factors related to the stakeholders involved in rural tourism in Uttarakhand.

Future Scope

Future studies could expand to include research of rural (and related aspects of) tourism in other regions of (and/or types of) geographic and cultural areas of India.

Comparison of tourism development between Uttarakhand and other state(s) in the Himalayan region could assist in identifying commonalities and differences among the various ways tourism is developed within this region and beyond.

Longitudinal research would be helpful for identifying trends related to tourism development, community engagement, and sustainability over time.

Future studies could use a mixed-method approach by gathering quantitative and qualitative data to allow researchers to receive more complete or holistic stakeholder perspectives.

Future research could study how advances in technology and development of smart villages help to develop rural tourism through the utilization of online platforms.

Future studies could measure the effectiveness of existing government tourism programs and policies on rural economic development through the lens of sustainability.

Conclusion

The current research area looks at how the integrated rural tourism contributes to the sustainable economic development and tourism development of the state of Uttarakhand. The results demonstrate that the rural tourism resources of traditional villages, cultural heritage, agro-based livelihoods as well as the natural landscapes of the region will play an important role in developing tourism and providing diversification of the local economy. These conclusions were made through empirical data collected from a population of 300 individuals, of whom analysis was conducted using PLS-SEM results, which indicate that integrated rural tourism supports sustainable economic development, preservation of socio-cultural heritage and raised levels of environmental awareness in rural communities.

In addition, the study findings suggest that community participation; supportive policy infrastructure; and integrated governance structures must be attained to support sustainable outcomes from tourism. A few examples of the use of integrated rural tourism to create economic opportunities for local communities are through homestays, agro-tourism and community-based tourism. These initiatives help create employment for the locals, enhance local supply chains and maintain and promote cultural identity within destinations, such as Uttarakhand, in the mountains. The research findings further illustrate that developing appropriate tourism management plans and developing sustainable tourism practices can contribute significantly to the long-term development of rural areas as tourism destinations.

The authors recommend to Policy-makers and Tourism Stake-holders to develop an infrastructure that includes transportation, digital connectivity, develop skills of personnel related to tourism and manage resources sustainably so that the rural tourism ecosystem in Uttarakhand could be improved. In conclusion, integrated rural tourism will provide a sustainable means of achieving regional balance in rural areas, economic growth and long-term sustainability of tourism in the mountainous rural areas of Uttarakhand.

CRedit Authorship Contribution Statement

D.S.B.: Conceptualization, methodology, software, data curation, writing original draft preparation. A.J.: Visualization, investigation. supervision. N.K.: Software, validation, project administration, writing original draft preparation. writing reviewing, editing.

AI Assistance Declaration

The authors declare that generative AI tools were used only for language enhancement and grammar correction during the preparation of this manuscript. The authors have carefully reviewed and revised the content and taken full responsibility for the final version of the manuscript.

Conflict of Interest

The authors declare that they have no competing interests.

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