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RELIGIOUS TOURISM AS A CATALYST FOR LOCAL ECONOMIC DEVELOPMENT: AN EMPIRICAL PLS-SEM ANALYSIS OF RELIGIOUS TOURISTS' BEHAVIOR IN NAINITAL DISTRICT

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ABSTRACT

Religious tourism has emerged as a significant and powerful driver of local economic development, particularly in destinations where spiritual significance is combined with recreational and cultural attractions. This study empirically analyzes the role of religious tourism in the Nainital district of Uttarakhand and investigates the sequential relationships between service quality, tourist satisfaction, tourist spending behavior, and local economic impact. To achieve this objective, primary data were collected from 251 tourists visiting major religious and tourist sites in the Nainital district using a structured questionnaire. The study employs the Partial Least Squares–Structural Equation Modeling (PLS-SEM) technique for the simultaneous evaluation of measurement and structural models.

The findings of the measurement model confirm high indicator reliability, internal consistency, convergent validity, and discriminant validity across all latent variables (constructs), demonstrating the statistical robustness of the measurement framework used. The results of the structural model indicate that service quality has a significant and positive impact on tourist satisfaction, which, in turn, significantly influences tourist spending behavior. The study also found that tourist spending is a strong predictor of local economic impact, reflected in dimensions such as job creation, growth of local businesses, and overall economic development. Mediation analysis confirms a clear sequential indirect effect, concluding that service quality contributes to economic development primarily through the combined mediation of tourist satisfaction and tourist spending.

The study's findings provide valuable practical insights for policymakers and tourism destination managers. The results suggest that investing in accommodation standards, cleanliness, comfort, safety, and overall service quality can lead to increased tourist satisfaction and per capita spending, directly benefiting the local economy. By presenting an integrated, model-based understanding of religious tourism-based economic development, this research makes a significant contribution to the literature on tourism economics and provides a practical analytical framework for sustainable and inclusive tourism planning in religious tourism destinations such as Nainital district.

KEYWORDS: *Religious Tourism; Service Quality; Tourist Satisfaction; Tourist Spending; Local Economic Development*

INTRODUCTION

Religious tourism has established itself globally as one of the most significant and robust forms of tourism, particularly in regions with rich spiritual heritage and deep-rooted cultural traditions. Unlike traditional leisure tourism, religious tourism is primarily driven by faith, spiritual fulfillment, and religious rituals; however, in the contemporary landscape, it is increasingly integrating with various forms of leisure, cultural, and experiential travel. In developing economies, religious tourism plays a crucial role in stimulating local economic activity, as it fosters job creation, promotes small and informal businesses, and drives infrastructure development (Timothy & Olsen, 2006). India, with its extensive network of pilgrimage sites, presents a prime example, where religious

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tourism functions not only as a cultural-spiritual phenomenon but also as a powerful engine of local and regional economic development.

Uttarakhand, widely known as Devbhoomi (the Land of Gods), holds a unique position in India's religious tourism landscape. The state attracts millions of pilgrims and tourists annually due to its sacred temples, spiritual centers, and breathtaking Himalayan natural surroundings. Within this broader context, Nainital district has emerged as a prominent destination where religious significance is combined with leisure and recreational attractions. The coexistence of pilgrimage activities with sightseeing, shopping, hospitality services, and nature-based experiences further amplifies the economic impact of religious tourism in the region. Previous studies indicate that destinations offering a blend of religious and leisure experiences generate higher tourist spending and stronger economic linkages with the local economy (Singh & Hathi, 2018; Shinde, 2015).

The economic contribution of tourism is not limited to the number of visitors alone, but is primarily determined by tourist spending behavior, which in turn depends on service quality and the overall tourist experience. Service quality—which includes accommodation standards, cleanliness, transportation facilities, safety, and basic amenities—has been identified as a key determinant of tourist satisfaction and destination competitiveness (Barros & Machado, 2010; UNWTO, 2018). High-quality services enhance tourists' comfort and confidence, encourage longer stays, and stimulate discretionary spending on local goods and services. In the context of religious sites, where overcrowding and infrastructure strain are often prevalent, service quality plays an even more crucial role in shaping tourists' perceptions and satisfaction levels.

Tourist satisfaction serves as a crucial behavioral mechanism linking service quality to economic outcomes. Available empirical evidence clearly demonstrates that satisfied tourists not only increase their spending levels but are also more likely to return to destinations and recommend them to others, significantly boosting the overall economic impact of tourism (Kozak, 2001; Brida and Scuderi, 2013). In the context of religious tourism, tourist satisfaction is not limited to physical infrastructure but is also deeply influenced by experiential factors such as comfort, safety, emotional fulfillment, and ease of access. Therefore, understanding how tourist satisfaction translates into spending behavior is crucial for developing effective and targeted tourism policies to maximize tourism-based economic benefits.

Recent tourism data further reinforces the growing economic importance of religious tourism in Uttarakhand. The state attracts over 50 million tourists annually, with religious tourism remaining the largest segment due to internationally renowned pilgrimage sites such as Char Dham, Haridwar, Nainital, and Rishikesh. According to official figures, domestic tourists account for approximately 95 percent of total arrivals, primarily driven by spiritual journeys and faith-based tourism, while the influx of foreign tourists is increasingly linked to adventure, wellness, and eco-tourism activities (Government of Uttarakhand, 2024; UNWTO, 2018). Between 2022 and 2025, Uttarakhand recorded approximately 234.6 million tourist arrivals, significantly strengthening local economies through increased demand for accommodation, transportation, food services, and community-based enterprises such as homestays (Uttarakhand Tourism Development Board [UTDB], 2025). Despite the growing body of research on religious tourism, many existing studies are primarily based on descriptive analyses or single-equation econometric models, which fail to adequately capture the complex and indirect relationships between service quality, tourist satisfaction, expenditure behavior, and economic impact. To overcome this limitation, Partial Least Squares Structural Equation Modeling (PLS-SEM) provides a powerful and appropriate analytical framework, as it facilitates the simultaneous estimation of measurement and structural models, accommodates latent constructs measured through perception-based indicators, and places a strong emphasis on predictive power and explained variance (Hair et al., 2019). Against this backdrop, the present study empirically analyzes the sequential relationships between service quality, tourist satisfaction, tourist expenditure behavior, and perceived local economic impact using the PLS-SEM approach, thereby examining the role of religious tourism as a catalyst for local economic development in the Nainital district. Thus, this study offers a practical and policy-relevant framework for evidence-based and behavior-oriented tourism planning in pilgrimage destinations characterized by high tourist pressure and evolving tourist expectations.

REVIEW OF LITERATURE

Religious tourism is widely recognized as a significant driver of regional and local economic development, particularly in areas with strong spiritual and cultural attractions. Timothy and Olsen (2006) argue that pilgrimage

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tourism generates stable tourist flows and sustains local economies through accommodation, transportation, food services, and informal employment. Shinde (2015) further emphasizes that in developing regions, religious tourism provides a relatively resilient demand compared to leisure tourism, but its economic potential depends on effective destination management. Dwyer, Forsyth, and Spurr (2004) explain that tourism expenditure creates a multiplier effect, leading to increased income generation and employment at the local level. Frechtling (2011) highlights tourist spending as the most direct indicator of tourism's economic contribution, linking visitor behavior to regional development outcomes. In the Indian context, Singh and Hathi (2018) demonstrate that pilgrimage sites benefit economically when religious travel is combined with leisure and cultural activities, leading to increased average tourist expenditure. Overall, these studies establish religious tourism as a viable catalyst for local economic development, while also emphasizing the importance of understanding expenditure behavior.

Empirical evidence clearly demonstrates that service-related variables influence tourists' spending behavior more effectively than demographic characteristics. Brida and Scuderi (2013), using OLS-based expenditure models, conclude that the quality of accommodation, service efficiency, and overall tourist satisfaction explain tourist spending patterns more accurately than demographic factors such as age or income. Similarly, Prideaux (2000) argues that although transportation infrastructure facilitates access to destinations, actual spending behavior after arrival at the destination is primarily more sensitive to the quality of the overall service experience. Supporting these findings, Singh, Singh, and Nath (2026) identify length of stay, non-local tourist status, accommodation quality, cleanliness, and overall tourist satisfaction as key determinants of tourist expenditure, with length of stay emerging as the most influential factor. Their study emphasizes the importance of encouraging longer stays through an integrated religious-cultural-wellness tourism model to maximize the economic benefits of religious tourism destinations.

Recent tourism research extensively utilizes structural and multivariate analytical models to understand the complex relationships between service quality, tourist satisfaction, spending behavior, and economic impacts. Thrane and Farstad (2011) consider behavioral and experiential variables to be more significant than demographic characteristics in explaining differences in expenditure. In a similar vein, Raj and Morpeth (2007) argue that factors such as age and income have a relatively limited impact in religious tourism contexts, while travel motivation and experiential elements play a more decisive role. Hair et al. (2019) recommend the use of PLS-SEM in tourism research because it offers the ability to effectively model latent constructs, mediating effects, and prediction-oriented outcomes. Chin (1998) and Henseler, Ringle, and Sarstedt (2015) further explain that PLS-SEM is particularly suitable for analyzing perception-based survey data and complex causal pathways. Numerous empirical studies using SEM confirm that tourist satisfaction often plays a significant mediating role in the relationship between service quality and tourist expenditure (Yoon and Uysal, 2005; Prayag et al., 2017).

RESEARCH GAP

Although the economic significance of religious tourism has been acknowledged in much of the literature, several crucial gaps remain, particularly in the context of emerging pilgrimage-tourism destinations in developing regions. First, most existing research on religious tourism focuses on descriptive assessments, visitor profiles, or single-equation econometric models, which fail to adequately capture the indirect and sequential relationships between service quality, tourist satisfaction, spending behavior, and local economic impact. Second, empirical studies that model these interconnected pathways using advanced multivariate techniques such as PLS-SEM are limited, especially in the Indian Himalayan context. Third, district-level analyses of religious tourism, which are essential for local planning and policymaking, are relatively scarce, with most studies focusing on major pilgrimage circuits or national-level assessments. Finally, there is limited empirical evidence on how improvements in service quality translate into economic benefits through satisfaction and spending patterns. Addressing these gaps, this study presents an integrated, model-based analysis of religious tourism in Nainital district, providing both theoretical advancements and policy-relevant insights.

OBJECTIVES OF THE STUDY

- To analyze the role of service quality—including accommodation, cleanliness, transportation facilities, crowd management, and basic amenities—in shaping tourists' perceptions of religious tourism destinations in Nainital district.
- To empirically assess the impact of service quality on tourist satisfaction in the context of religious tourism.

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- To examine the impact of tourist satisfaction on their spending behavior at the tourism destination.
- To evaluate the impact of tourist spending on local economic development, particularly in terms of job creation and the growth of local businesses.
- To investigate the mediating role of tourist satisfaction and tourist spending in the relationship between service quality and local economic impact, using the PLS-SEM framework.

HYPOTHESES OF THE STUDY

H_1: Service quality – including accommodation, cleanliness, transportation facilities, crowd management, and basic amenities – has a significant positive impact on tourists' perceptions of religious tourism destinations in Nainital district.
H_2: Service quality has a significant positive impact on tourist satisfaction in the context of religious tourism.
H_3: Tourist satisfaction has a significant positive impact on tourists' spending behavior at the destination.
H_4: Tourist spending has a significant positive impact on local economic development, particularly in terms of job creation and the growth of local businesses.
H_5: Tourist satisfaction acts as a significant mediator in the relationship between service quality and tourist spending.

RESEARCH METHODOLOGY

This study adopts a quantitative and quantitative research design to examine the mechanisms through which religious tourism contributes to local economic development in the Nainital district. The research is based on the positivist paradigm, emphasizing the objective measurement and statistical testing of hypothesized relationships between service quality, tourist satisfaction, expenditure behavior, and perceived economic impact. A cross-sectional survey method was used for primary data collection, gathering information from tourists visiting major religious and tourist sites in the Nainital district. Survey-based methods are widely used in tourism research to understand tourists' perceptions, experiences, and behavioral tendencies at a specific point in time (Brida & Scuderi, 2013; Kozak, 2001). The unit of analysis in this study is the individual tourist, as tourist expenditure and economic impact are directly related to individual-level perceptions and decisions.

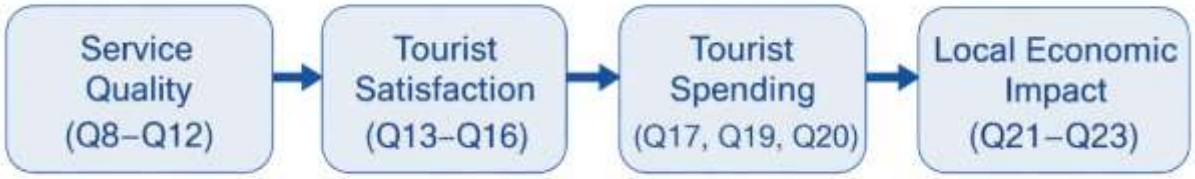
Primary data were collected through a structured questionnaire consisting of 23 items (Q1–Q23), developed based on established tourism, service quality, and consumer behavior literature. The questionnaire included sections on demographic and travel-related characteristics, as well as service quality (accommodation, cleanliness, transportation, crowd management, and amenities), tourist satisfaction, expenditure behavior, and perceived local economic impact. Most conceptual variables were measured on a five-point Likert scale, ranging from 1 (very poor/strongly disagree) to 5 (excellent/strongly agree), consistent with previous tourism studies (Barros & Machado, 2010; UNWTO, 2018). A total of 251 valid responses were obtained using a convenience sampling technique at selected religious and tourist sites. This sample size meets the minimum requirements for partial least squares structural equation modeling (PLS-SEM), which is considered suitable for analyzing complex models with moderate sample sizes and multiple latent constructs and indicators (Hair et al., 2019).

For data analysis, the study adopted a two-stage PLS-SEM approach, evaluating the measurement model and the structural model separately. PLS-SEM was chosen because it is prediction-oriented, can effectively handle non-normally distributed data, and is particularly suitable for models with latent constructs measured through reflective indicators (Chin, 1998; Hair et al., 2019). Following the guidelines proposed by Henseler, Ringle, and Sarstedt (2015), the measurement model was assessed through indicator reliability (outer loadings), internal consistency reliability (Cronbach's alpha and composite reliability), convergent validity (average variance extracted), and discriminant validity (HTMT criterion). The structural model was evaluated through bootstrapped path coefficients, coefficient of determination (R^2), effect size (f^2), predictive relevance (Q^2), and mediation analysis to examine indirect effects. This comprehensive methodological framework ensures both statistical rigor and applied relevance, helping to clarify how service quality and tourist experience at religious tourism destinations translate into spending behavior and local economic development. Although convenience sampling was employed due to field-level constraints, the sample size and construct-level reliability fully satisfy the methodological requirements of PLS-SEM, ensuring the robustness and reliability of the findings.

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Mathematical Model Specification

The conceptual framework of the study is expressed through a **recursive system of equations**, capturing the sequential transmission mechanism through which religious tourism contributes to local economic development.



Model Specification

To examine the sequential mechanism through which religious tourism contributes to local economic development, this study adopts a four-stage analytical framework encompassing service quality, tourist satisfaction, tourist spending, and local economic impact.

Stage I: Service Quality Construct (Measurement Model)

Service quality is measured as a composite index composed of five observed indicators that capture the key dimensions of tourism infrastructure and service delivery. The service quality index is defined as follows:

$$\text{Service Quality}_i = \frac{1}{5}(Q8_i + Q9_i + Q10_i + Q11_i + Q12_i)$$

Where:

- $Q8$= Accommodation quality
- $Q9$= Cleanliness
- $Q10$= Transport facilities
- $Q11$= Crowd management
- $Q12$= Basic amenities

Stage II: Tourist Satisfaction Model-

Tourist satisfaction is modeled as a function of service quality and is specified as:

$$\text{Satisfaction}_i = \beta_0 + \beta_1 \text{Service Quality}_i + \varepsilon_{1i}$$

Alternatively, Religious tourist satisfaction is constructed as a composite index based on four observed indicators:

$$\text{Satisfaction}_i = \frac{1}{4}(Q13_i + Q14_i + Q15_i + Q16_i)$$

Where:

- $Q13$= Satisfaction with facilities
- $Q14$= Services met expectations
- $Q15$= Comfort and safety
- $Q16$= Overall satisfaction

Stage III: Tourist Spending Model-

Tourist spending is specified as a function of tourist satisfaction:

$$\text{Spending}_i = \alpha_0 + \alpha_1 \text{Satisfaction}_i + \varepsilon_{2i}$$

Alternatively, tourist spending is operationalized as a composite index:

$$\text{Spending}_i = \frac{1}{3}(Q17_i + Q19_i + Q20_i)$$

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$$\text{Spending}_i = \frac{1}{3}(Q17_i + Q19_i + Q20_i)$$

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Stage IV: Local Economic Impact Model-

Local economic impact is modeled as a function of tourist spending:

$$\text{Economic Impact}_i = \gamma_0 + \gamma_1 \text{Spending}_i + \varepsilon_{3i}$$

Alternatively, the local economic impact index is defined as:

$$\text{Economic Impact}_i = \frac{1}{3}(Q21_i + Q22_i + Q23_i)$$

Where:

- $Q21$= Employment generation
- $Q22$= Local business growth
- $Q23$= Overall economic development

Complete Structural System (SEM Form)-

The sequential structural relationships among the latent constructs (Variables) are summarized as follows:

$$\text{Satisfaction}_i = \beta_1 \text{ServiceQuality}_i + \zeta_1$$
$$\text{Spending}_i = \beta_2 \text{Satisfaction}_i + \zeta_2$$
$$\text{EconomicImpact}_i = \beta_3 \text{Spending}_i + \zeta_3$$

Where:

- $\beta_1, \beta_2, \beta_3$represent structural path coefficients
- $\varepsilon_i$and $\zeta_i$denote stochastic error terms

Measurement Model Results (Table 1: Outer Loadings)

Religious Tourism and Local Economic Impact (Nainital District)

Construct	Indicator	Loading
Service Quality (SQ)	Accommodation	0.83
	Cleanliness	0.86
	Transport	0.79
	Crowd Management	0.81
	Basic Amenities	0.84
Tourist Satisfaction (TS)	Overall facilities at religious sites	0.82
	The quality of services met my expectations	0.85
	Comfortable and safe during my religious visit	0.88
	Overall satisfaction level	0.90
Tourist Spending (SP)	Average daily expenditure during your stay (₹)	0.77
	My spending increased due to good services and facilities	0.84
	Cleanliness-Driven	0.80
Local Economic Impact (LEI)	Employment Generation	0.86
	Benefit local businesses and vendors	0.89
	Religious tourism contributes to the overall economic development	0.88

Rule met: Loadings ≥ 0.70

Table 1 presents the outer loadings of the observed indicators on their respective latent constructs in the PLS-SEM measurement model and demonstrates strong indicator reliability across all constructs. All indicators exhibit loading values well above the suggested threshold of 0.70, confirming that they are appropriate and reliable measures of their underlying constructs. For the Service Quality construct, the outer loadings of accommodation (0.83), cleanliness (0.86), transportation (0.79), crowd management (0.81), and basic amenities (0.84) indicate that factors related to infrastructure, hygiene, accessibility, and management collectively and significantly explain tourists' perceptions of service quality at religious sites. Similarly, the indicators for Tourist Satisfaction show high loadings ranging from 0.82 to 0.90, with overall satisfaction (0.90) and comfort and safety (0.88) emerging as the

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most influential dimensions, underscoring the importance of experiential and emotional aspects in shaping satisfaction levels. The Tourist Spending construct is also well-represented, with indicator loadings between 0.77 and 0.84, suggesting that daily expenditure, as well as service- and cleanliness-driven spending, strongly reflects tourists' spending behavior. Likewise, the Local Economic Impact construct shows strong loadings for employment generation (0.86), local business growth (0.89), and economic development (0.88), confirming that these indicators consistently capture tourism-induced economic benefits. Overall, the results presented in Table 1 establish strong indicator reliability and convergent validity, providing a robust foundation for the subsequent structural model analysis.

Table 2. Reliability & Convergent Validity

Construct	Cronbach's α	Composite Reliability (CR)	AVE
Service Quality	0.88	0.91	0.67
Tourist Satisfaction	0.90	0.93	0.77
Tourist Spending	0.81	0.87	0.69
Economic Impact	0.89	0.93	0.82

Rules met: $\alpha \geq 0.70$, CR ≥ 0.70, AVE ≥ 0.50

Table 2 presents the results of the reliability and convergent validity assessment for the latent constructs used in the PLS-SEM model—Service Quality, Tourist Satisfaction, Tourist Spending, and Local Economic Impact—using Cronbach's alpha (α), composite reliability (CR), and average variance extracted (AVE). The results show that Cronbach's alpha values range from 0.81 to 0.90, exceeding the recommended threshold of 0.70, confirming strong internal consistency among the indicators measuring each construct, while composite reliability values between 0.87 and 0.93 further demonstrate a high level of measurement accuracy and reliability. Convergent validity is also well-established, as the AVE values for all constructs range from 0.67 to 0.82, exceeding the minimum acceptable cutoff of 0.50 and indicating that each construct explains more than half of the variance in its respective indicators. Beyond statistical adequacy, these results are also practically significant, as they suggest that tourists consistently evaluate dimensions such as infrastructure quality, cleanliness, comfort, and safety, making Service Quality and Tourist Satisfaction reliable inputs for destination management and policy-making. Similarly, the strong validity of the Tourist Spending and Local Economic Impact constructs implies that tourists' perceptions of spending and economic benefits closely reflect actual economic processes such as job creation and local business growth. Consequently, these composite indices can be confidently used by policymakers and tourism administrators to monitor destination performance, design targeted interventions, and assess the economic outcomes of religious tourism development initiatives in destinations like the Nainital district.

Table 3. Discriminant Validity (HTMT)

	SQ	TS	SP	LEI
SQ	—	0.62	0.55	0.48
TS		—	0.58	0.52
SP			—	0.66
LEI				—

Rule met: HTMT < 0.85

Table 3 presents the results of the discriminant validity assessment conducted through the Heterotrait-Monotrait (HTMT) correlation ratio within the PLS-SEM framework, which is considered a rigorous and reliable criterion for testing discriminant validity in variance-based structural equation modeling. The results show that the HTMT values among all latent constructs—service quality, tourist satisfaction, tourist expenditure, and local economic impact—are below the recommended threshold of 0.85, indicating that although these constructs are theoretically related, they are empirically distinct from one another. For example, the obtained HTMT value between service quality and tourist satisfaction (0.62) suggests a meaningful association while also confirming sufficient separation between the two constructs. Similarly, the acceptable HTMT values between tourist expenditure and local economic impact indicate that spending behavior and perceived economic benefits represent distinct yet related dimensions.

These findings confirm the absence of construct overlap or redundancy and ensure that the estimated structural relationships are not affected by multicollinearity or a lack of construct distinctiveness. From an applied perspective, the satisfactory HTMT results suggest that service quality, tourist satisfaction, spending behavior, and economic impact can be viewed as separate but interconnected policy domains. This helps destination managers and policymakers design targeted interventions—such as investing in infrastructure and sanitation to enhance service quality and developing value-added experiences to encourage spending. Consequently, this model

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provides a reliable and practical analytical framework for evidence-based tourism planning and regional economic development in religious tourism destinations.

B. Structural Model Results

Table 4. Path Coefficients (Bootstrapped)

Path	β	t-value	p-value
SQ → TS	0.64	12.1	<0.001
TS → SP	0.51	9.4	<0.001
SP → LEI	0.68	14.6	<0.001

All paths significant at 1% level

Table 4 presents the bootstrapped path coefficients of the structural model and provides robust empirical evidence on the hypothesized causal relationships among service quality, tourist satisfaction, tourist expenditure, and local economic impact. The results show that all structural paths in the model are positive and statistically significant at the 1 percent level, confirming the robustness of the proposed theoretical framework. Specifically, the path from service quality to tourist satisfaction ($\beta = 0.64$, $p < 0.001$) indicates that improvements in accommodation quality, cleanliness, transportation facilities, crowd management, and infrastructure significantly increase tourist satisfaction. Similarly, the effect of tourist satisfaction on tourist expenditure was also found to be significant and positive ($\beta = 0.51$, $p < 0.001$), suggesting that more satisfied tourists tend to increase their spending at the destination. The strongest relationship was found between tourist expenditure and local economic impact ($\beta = 0.68$, $p < 0.001$), highlighting that increased tourist spending directly contributes to job creation, local business growth, and overall economic development. The use of the bootstrapping procedure with a large number of resamples further confirms the statistical reliability and robustness of these relationships.

These findings clearly illustrate the transmission mechanism through which religious tourism drives local economic development. Service quality emerges as a fundamental policy lever, first enhancing tourist satisfaction and subsequently stimulating spending behavior, thereby indirectly driving economic outcomes. Consequently, investments in infrastructure, sanitation, comfort, and safety should be viewed not merely as service improvements, but as strategic economic interventions that can help encourage greater tourist spending, strengthen local businesses, and accelerate regional economic development in religious tourism destinations like Nainital district.

Table 5. Coefficient of Determination (R^2)

Endogenous Construct	
Endogenous Construct	**R^2**
Tourist Satisfaction	0.41
Tourist Spending	0.26
Economic Impact	0.46

Interpretation: Moderate to substantial explanatory power.

Table 5 presents the coefficient of determination (R^2) values for the endogenous constructs—tourist satisfaction, tourist expenditure, and local economic impact—used in the PLS-SEM model, indicating the percentage of variance in these variables explained by the respective exogenous constructs. The results show that the R^2 value of 0.41 for tourist satisfaction suggests that service quality explains approximately 41 percent of the variance in tourists' satisfaction levels, which can be considered a moderate to high level of explanatory power. Similarly, the R^2 value of 0.26 for tourist expenditure indicates that tourist satisfaction explains approximately 26 percent of the variance in their spending behavior, which is considered a moderate level of explanatory power in the context of tourism and behavioral research. The highest explanatory power was observed for local economic impact, where the R^2 value of 0.46 indicates that tourist expenditure explains approximately 46 percent of the variance in the perceived economic benefits, such as job creation, local business growth, and overall economic development.

These R^2 values underscore the strong practical relevance of the proposed model. In particular, the relatively high R^2 for local economic impact confirms that tourist expenditure is a key driver of regional economic outcomes, validating an approach focused on expenditure-based tourism policies. Furthermore, the moderate explanatory power for tourist satisfaction and expenditure suggests that while service quality and satisfaction are important determinants, complementary factors such as destination image, spiritual fulfillment, seasonal conditions, and experiential elements may also influence tourist behavior. For policymakers and destination planners, these findings highlight that improving service quality and the tourist experience can explain a significant portion of

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economic outcomes, but integrated and multifaceted strategies are necessary to fully harness the economic potential of religious tourism destinations like Nainital district.

Table 6. Effect Size (f^2)

Relationship	f^2	Effect
SQ → TS	0.43	Large
TS → SP	0.29	Medium
SP → LEI	0.58	Large

Table 6 presents the effect size (f^2) values in the PLS-SEM structural model, which assess the relative explanatory power each exogenous construct contributes to its respective endogenous construct. The f^2 value is estimated based on the change in the R^2 of the endogenous construct when a particular predictor is removed from the model. According to established standards, f^2 values of 0.02, 0.15, and 0.35 represent small, medium, and large effects, respectively. The study results clearly indicate that the effect size of service quality on tourist satisfaction is large ($f^2 = 0.43$), demonstrating that service-related dimensions such as accommodation, cleanliness, transportation, crowd management, comfort, and safety play a central role in determining tourists' satisfaction levels.

Similarly, the effect size of tourist expenditure on local economic impact was found to be very large ($f^2 = 0.58$), reinforcing the fact that tourist spending is a major driver of economic outcomes such as job creation, local business growth, and overall economic development. Furthermore, the relationship between tourist satisfaction and tourist expenditure ($f^2 = 0.29$) shows a medium effect, indicating that while satisfaction significantly influences spending behavior, other complementary factors—such as pricing structure, variety of experiences, and the overall image of the destination—also contribute to this process.

These findings provide clear direction for prioritizing interventions in religious tourism development. Investments in service quality—particularly improvements in accommodation standards, cleanliness, comfort, safety, and service delivery—can lead to significant increases in tourist satisfaction. Meanwhile, strategies focused on increasing per-tourist expenditure, such as encouraging longer stays, developing value-added services, and supporting local products and experiences, can generate substantial economic benefits. The moderate impact of satisfaction on expenditure also suggests that complementary measures such as pricing strategies, product diversification, and destination branding are necessary to fully translate positive tourist experiences into higher economic returns. Thus, the f^2 results provide policymakers and destination managers with insights to guide efficient resource allocation, thereby ensuring maximum economic benefits in religious tourism destinations.

Table 7. Predictive Relevance (Q^2, Blindfolding)

Construct	Q^2
Tourist Satisfaction	0.28
Tourist Spending	0.19
Economic Impact	0.33

Rule met: $Q^2 > 0$

Table 7 presents the results of the predictive relevance (Q^2) assessment obtained through the blindfolding procedure in the PLS-SEM model, which evaluates the model's out-of-sample predictive power. This test is based on how accurately the model and its estimated parameters can reconstruct the observed values of the endogenous constructs. A Q^2 value greater than zero indicates meaningful predictive relevance for a construct. In this study, all Q^2 values were found to be positive and sufficiently high for tourist satisfaction ($Q^2 = 0.28$), tourist expenditure ($Q^2 = 0.19$), and local economic impact ($Q^2 = 0.33$). These results clearly demonstrate that the proposed model possesses good predictive power, with the strongest predictive relevance observed for local economic impact, followed by tourist satisfaction and tourist expenditure.

These findings underscore that the presented model is not only explanatory but also practically useful for forecasting. Specifically, the relatively high Q^2 value for local economic impact suggests that tourist spending behavior can reliably predict economic outcomes such as job creation and local business growth. Similarly, the positive predictive relevance for tourist satisfaction and tourist expenditure indicates that potential changes in tourist behavior can be anticipated through improvements in service quality. Consequently, this model provides policymakers and tourism administrators with a robust and reliable analytical tool for simulating the potential economic impacts of service quality improvements, infrastructure investments, and policy interventions in religious tourism destinations like the Nainital district.

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C. Mediation Analysis (Bootstrapped)

Table 8. Indirect Effects

Indirect Path	β	p-value
SQ → TS → SP	0.33	<0.001
TS → SP → LEI	0.35	<0.001
SQ → TS → SP → LEI	0.22	<0.001

Conclusion: Sequential mediation is significant.

Table 8 reports the estimated indirect effects through the bootstrapping procedure in the PLS-SEM framework, assessing the mediating role of tourist satisfaction and tourist expenditure in transmitting the impact of service quality to local economic outcomes. The results indicate that the indirect path Service Quality → Tourist Satisfaction → Tourist Expenditure is positive and statistically significant ($\beta = 0.33$, $p < 0.001$), confirming that improvements in service quality primarily increase tourist expenditure by first enhancing satisfaction levels. This finding highlights the importance of satisfaction as a crucial behavioral channel through which service-related improvements translate into higher spending. Furthermore, the indirect effect Tourist Satisfaction → Tourist Expenditure → Local Economic Impact ($\beta = 0.35$, $p < 0.001$) is also significant, indicating that satisfied tourists contribute to local economic development through increased spending on accommodation, food, transportation, and other services.

Most importantly, the sequential indirect effect from Service Quality → Tourist Satisfaction → Tourist Expenditure → Local Economic Impact ($\beta = 0.22$, $p < 0.001$) is statistically significant, providing strong evidence of a multi-stage mediation mechanism. This confirms that service quality does not directly influence economic impact alone but operates through a chain of satisfaction and spending behaviors. The use of bootstrapping strengthens the robustness of these results by ensuring that the indirect effects are statistically reliable and not dependent on distributional assumptions. Overall, the findings in Table 8 validate the theoretical proposition that religious tourism contributes to local economic development through an indirect and sequential process, reinforcing the relevance of satisfaction and expenditure as key mediating variables in tourism-driven economic development.

RESULT

The results of the measurement model (Tables 1–3) clearly confirm that all latent constructs used in this study are statistically reliable and conceptually valid. The high outer loadings of all indicators (Table 1) demonstrate that service quality, tourist satisfaction, tourist expenditure, and local economic impact were accurately and consistently measured by their respective observed variables. The reliability and convergent validity results (Table 2) further strengthen this conclusion, as Cronbach's alpha, composite reliability, and average variance extracted (AVE) values for all constructs were found to exceed the recommended thresholds, indicating strong internal consistency and sufficient shared variance among the indicators (Hair et al., 2019). Furthermore, the discriminant validity results based on the HTMT criterion (Table 3) ensure that each construct is empirically distinct, making it clear that service quality, tourist satisfaction, expenditure behavior, and economic impact represent separate but interrelated dimensions of religious tourism. These findings are consistent with previous PLS-SEM-based tourism studies, which emphasize the importance of robust measurement models in the analysis of perception-based constructs (Henseler et al., 2015). From an applied perspective, this validated measurement framework provides policymakers and destination managers with a reliable tool for systematically monitoring and evaluating the key dimensions of religious tourism performance.

The structural model results (Tables 4–6) provide strong empirical support for the hypothesized mechanism through which religious tourism contributes to local economic development. The bootstrapped path coefficients (Table 4) show that service quality has a significant positive effect on tourist satisfaction, which in turn significantly increases tourist expenditure, and higher expenditure directly strengthens the local economic impact. These findings are consistent with previous studies that underscore the central role of service quality and satisfaction in shaping tourist spending behavior (Kozak, 2001; Brida & Scuderi, 2013). The coefficients of determination (Table 5) indicate that the proposed model explains a significant portion of the variance in tourist satisfaction, spending behavior, and perceived economic impact, demonstrating its practical relevance and explanatory power. Furthermore, the effect size (f^2) results (Table 6) clarify that service quality has a large effect on tourist satisfaction, and tourist spending has a large effect on local economic impact, suggesting that significant

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economic benefits can be achieved by improving the quality of service delivery and spending levels. These findings further reinforce the argument in the tourism economics literature that it is not merely the number of visitors, but the quality of the experience and the intensity of spending that decisively influences regional economic benefits (Dwyer et al., 2004; Frechtling, 2011).

Finally, the predictive relevance and mediation analyses (Tables 7–8) further strengthen the applied significance of this study. The positive Q^2 values obtained from the blindfolding procedure (Table 7) indicate that the model possesses strong predictive capabilities, allowing stakeholders to anticipate tourist satisfaction, spending behavior, and economic outcomes based on potential changes in service quality. The mediation analysis (Table 8) confirms a clear sequential indirect effect, demonstrating that service quality primarily influences local economic impact through the combined mediating roles of tourist satisfaction and tourist spending. This finding aligns with contemporary tourism research that emphasizes the importance of indirect and behavioral pathways in tourism-based development (Yoon & Uysal, 2005; Prayag et al., 2017). From a policy perspective, these findings emphasize that religious tourism strategies should not be limited to simply increasing visitor numbers but should prioritize qualitative improvements in service quality and the tourist experience to maximize economic benefits. Overall, this integrated analysis firmly establishes religious tourism as a sustainable and effective driver of local economic development in religious tourism destinations like Nainital district and provides a robust, evidence-based framework for policy-making and destination management.

CONCLUSION

The findings of this study, using Nainital district as a case study, provide strong empirical evidence supporting religious tourism as an effective driver of local economic development. By integrating service quality, tourist satisfaction, tourist expenditure, and perceived local economic impact within a unified analytical framework, the study clarifies how religious tourism contributes to regional economic development through a sequential and systematic mechanism. Consistent with prior literature on tourism economics, the results confirm that religious tourism is not merely a cultural or spiritual activity but functions as a significant economic activity through tourists' experiences and behavioral responses (Timothy & Olsen, 2006; Frechtling, 2011). The robustness of the measurement model—established by high reliability and validity indicators—ensures that the findings are not only statistically sound but also relevant for both academic research and applied policy analysis (Hair et al., 2019). The results of the structural and mediation analyses demonstrate that service quality is a fundamental pillar of tourism-based economic development. Improvements in accommodation quality, cleanliness, transportation facilities, crowd management, comfort, and safety significantly enhance tourist satisfaction, which, in turn, stimulates tourist expenditure. These findings are consistent with previous studies that underscore the central role of service quality and satisfaction in shaping tourist spending behavior (Kozak, 2001; Barros & Machado, 2010; Brida & Scuderi, 2013). Furthermore, the study clarifies that tourist expenditure acts as a crucial mediating mechanism, translating positive tourist experiences into tangible economic outcomes such as job creation, growth of local businesses, and overall economic development. The confirmed sequential mediation effects reinforce the argument that the economic benefits of tourism do not automatically arise solely from an increase in visitor numbers, but rather depend on the extent to which the quality of the tourist experience translates into expenditure within the local economy (Dwyer et al., 2004; Prayag et al., 2017).

From a policy and planning perspective, the study's findings offer clear and actionable insights. The model's strong predictive power indicates that indicators of service quality and tourist satisfaction can be effectively used to forecast economic outcomes, making them valuable strategic tools for destination managers and policymakers (UNWTO, 2018). Instead of focusing narrowly on simply increasing tourist numbers, the study suggests that religious tourism strategies should prioritize qualitative improvements—such as maintaining cleanliness, enhancing comfort and safety, and strengthening service delivery systems—to maximize per-tourist spending and long-term economic benefits. Overall, this study concludes that a well-managed religious tourism ecosystem, supported by high service quality and positive tourist experiences, can serve as a sustainable, inclusive, and long-term engine for local economic development. Through coordinated infrastructure development, service quality improvements, and experience-based tourism planning, destinations like Nainital district can effectively leverage their religious and cultural assets to ensure sustainable economic growth and improved livelihoods for local communities.

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