

How Local Culture and Memorable Tourism Experiences Drive Sustainable Tourism: The Mediating Role of Destination Satisfaction in the Ijen Mountains, Banyuwangi Indonesia.

Endang Suprihatin ^(1*) Endah Susanti⁽²⁾ Rais Dera Pua Rawi⁽³⁾

⁽¹⁾ Universitas 17 Agustus 1945 Banyuwangi, Indonesia

⁽²⁾ Universitas Muhammadiyah Berau, Indonesia

⁽³⁾ Universitas Muhammadiyah Sorong, Indonesia

Received: 2026, 05,01 Accepted: 2026, 06,15

Available online: 2026, 06,30

* Corresponding author.

E-mail addresses: * endangsuprihatin@untag-banyuwangi.ac.id

KEYWORDS	ABSTRACT
Keywords: Local Culture;Memorable Tourism Experiences;Sustainable Tourism; Destination Satisfaction. Conflict of Interest Statement: The author(s) declares that the research was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest. Copyright © 2026 AMAR. All rights reserved.	Purpose: This study aims to analyze the influence of local culture and memorable tourism experiences on sustainable tourism by placing destination satisfaction as a mediating variable in the Ijen Mountains destination of Banyuwangi. Research Design and Methodology: This study uses a quantitative approach with a fundamental research type. The research object was conducted in the Ijen Mountains of Banyuwangi with respondents consisting of tourists and local residents. Data were analyzed using the PLS-SEM method to test the predictive relationship between constructs, as well as to ensure the validity and reliability of the research instrument. Findings and Discussion: This study concludes that local culture and memorable tourism experiences have a significant influence on sustainable tourism both directly and through destination satisfaction as a mediating variable. Local culture is a key foundation for sustainable tourism development through the preservation of cultural values and community involvement. While memorable tourism experiences increase tourist satisfaction and engagement with destinations, encouraging sustainable travel behavior. Implications: Tourism destination managers need to prioritize strengthening local cultural management as a key strategy in developing sustainable tourism. Future research is recommended to expand the research object to various tourist destinations and develop models by adding other relevant variables.

Introduction

Society 5.0 emphasizes the utilization of technological advances to balance economic growth while addressing social and cultural sustainability(Astuti et al., 2025a). The development of nature- and culture-based tourism requires a deeper understanding of how tourists evaluate travel experiences and form satisfaction with destinations. Memorable sustainable tourism experiences, particularly those related to local culture, meaningfulness, and responsible practices, significantly influence tourist satisfaction and revisit intention.(Bakar et al., 2025)Local culture and memorable tourism experiences not only serve as destination attractions but also as sources of subjective value that shape tourists' perceptions of the destination's quality and meaning. Tourist satisfaction is a key determinant of tourist loyalty, reflected through revisit intention and positive word of mouth in tourism villages.(Wahyuningsih et al., 2025)Destination satisfaction is a key element in this context because it reflects tourists' evaluations of their experiences. Destination image positively influences revisit intention through memorable tourism experiences.(Mo et al., 2024), while also playing a strategic role in encouraging sustainable tourist behavior, such as loyalty, positive recommendations, and concern for environmental and socio-cultural preservation. Digital exhibitions and storytelling significantly enhance visitors' cultural understanding, emotional connection, and satisfaction.(Mo et al., 2024).

Sustainable cultural tourism requires integrated economic, cultural, and environmental strategies ([Luekveerawattana et al., 2025](#)). Therefore, the development of sustainable tourism cannot be separated from an understanding of tourists' internal evaluative mechanisms in interpreting local culture and tourism experiences.

United Nations World Tourism Organization The World Tourism Organization (UNWTO) has developed guidelines for tourism policymakers to incorporate cultural sustainability into national tourism strategies. Indonesia, as a signatory to the UNESCO convention and a supporter of the Sustainable Development Goals (SDGs), has incorporated cultural preservation into its national tourism strategy. The Ministry of Tourism and Creative Economy (Kemenparekraf) promotes the concept of "culture-based tourism" as a means to maintain economic and cultural capital. ([Mudana et al., 2025](#)).

Society 5.0-based tourism development supports sustainable tourism through innovation and human resource improvement ([Astuti et al., 2025c](#)). This research makes a significant theoretical contribution by expanding the application of **utility theory** in sustainable tourism studies through the integration of tourism studies, sustainability, and consumer behavior perspectives. Sustainable tourism management depends on community experience, government support, and social networks. ([Pambudi & Hariandi, 2021a](#)) This study conceptualizes destination satisfaction as a utility-based mediation mechanism. Innovative cultural tourism concepts support the integration of intangible cultural heritage into sustainable tourism. ([Suryani et al., 2025](#)), which explains how local culture and memorable tourism experiences shape tourists' subjective values and contribute to sustainable tourism development. Ecotourism is an alternative strategy to balance community economic growth with environmental and socio-cultural sustainability. ([Suarthana et al., 2024](#)).

The empirical context of the Ijen Mountains in Banyuwangi as a volcanic tourism destination based on nature and culture provides a contextual contribution. Tourist satisfaction mediates the effect of cultural image and local food on revisit intention. ([Pambudi & Hariandi, 2021b](#)), which extends the generalization of utility theory to tourism in developing countries. Local culture plays a crucial role in strengthening tourist loyalty through satisfaction. ([Fattah et al., 2025b](#)). Thus, this research not only enriches the tourism literature by shifting the focus from direct relationships to tourists' internal evaluative processes. Cultural heritage tourism contributes to cultural sustainability and destination positioning. ([Fattah et al., 2025c](#)), but also offers an integrative conceptual framework that can serve as a reference for developing a sustainable tourism model based on local experiences and culture. Cultural-based tourism development supports heritage preservation and sustainable local economic growth. ([Fattah et al., 2025b](#)).

Traditional customs can be transformed into viable coastal tourism assets when managed strategically ([Fattah et al., 2025c](#)). This research was conducted on the object of the Ijen Crater Mountains in Banyuwangi, a tourist destination that upholds strong local cultural wisdom. Memorable tourism experiences mediate the effect of destination image on revisit intention. ([Fattah et al., 2025c](#)), namely the Osing tribe who still upholds the unique cultural and ethnic values of their traditional culture that contains supernatural religious values that combine the natural power of forests and mountains. Based on this uniqueness, the Ijen mountain natural tourism in 2024 received an award from the UNESCO Global Geopark (UGG) of the United Nations (UN) as part of the world forest tourism park area. Based on the results of previous research there is a limitation that is still minimal concern for caring for and preserving the cultural heritage of natural beauty around the Ijen mountain national park so that the sustainability value of this natural tourism destination has a low sustainability tourism development value, so that there is still a need for sustainability research to develop sustainable Ijen mountain tourism and tourists who visit get a pleasant and memorable tourism destination experience. Memorable tourism experiences drive revisit and recommendation intentions through fun emotions ([Chen et al., 2020](#)).

Destination image influences behavioral intentions both directly and indirectly through trip quality, perceived value, and satisfaction ([Chen & Tsai, 2007](#)). Visitor satisfaction at tourist destinations is crucial for achieving sustainable tourism development, as visitors are satisfied and impressed with the destinations they visit. Beach attractions and the hospitality of local people significantly influence tourist satisfaction and destination loyalty. ([Sangpikul, 2018](#)), then visitors will recommend and at the same time will make repeat visits to this tourist attraction, therefore the concept of sustainable

tourism development is needed so that the Ijen Banyuwangi Mountains tourist destination continues to be sustainable and remains part of the World's national park.

Social engagement is the most influential factor in sustainable tourism development, followed by government competence and tourism service quality (Mai et al., 2020). From a theoretical perspective, tourist behavior can be explained through a utility approach, which emphasizes that individuals seek to maximize satisfaction from consuming an experience. The implementation of collaborative governance plays a crucial role in developing sustainable tourism villages through stakeholder collaboration and cultural preservation. (Nuh et al., 2024) Local culture and memorable tourism experiences are seen as the main components that form the utility or value perceived by tourists. Improving human resource quality is essential to enhance tourist services and comfort in sustainable tourism villages. (Astuti et al., 2025b), which is then evaluated in the form of destination satisfaction. Active community involvement is crucial for balancing conservation and socio-economic development in geoparks. (Sarwoprasodjo et al., 2025).

However, most previous research still positions tourist satisfaction as an outcome variable without explaining its role as a mechanism that bridges the tourism experience with the goal of sustainable tourism development. Cultural-based tourism development contributes to heritage preservation and community economic empowerment. (Fattah et al., 2025a). This research gap demonstrates the need for a conceptual approach that positions destination satisfaction as a utility-based mediating variable to more comprehensively understand the process by which tourists' subjective values are formed and contribute to destination sustainability. Cultural-based ecotourism supports sustainable tourism development in Banyuwangi Regency. (Zulianto et al., 2020). This study uses the dependent variable: "Sustainable tourism" which is influenced by two independent variables: local culture and memorable experiences with the mediating variable "Destination satisfaction".

Through an approach that integrates local culture and memorable tourism experiences, this study emphasizes that sustainability is not only determined by policies but also by the quality of tourists' interactions with the destination. Furthermore, by positioning destination satisfaction as a mediating variable, this research provides an important contribution in explaining the psychological mechanisms that link tourism experiences to sustainable behavior.

These findings are relevant for destination managers, governments, and tourism industry stakeholders in designing strategies that not only attract visitors but also preserve cultural and environmental sustainability. Therefore, this study contributes to the development of a more holistic, experience-based, and long-term oriented sustainable tourism model.

Literature Review

2.1. Relevant Theoretical Foundations

Sustainable tourism has become an important concept in tourism development, particularly in destinations that rely on natural and cultural resources. Sustainable tourism emphasizes balancing environmental preservation, socio-cultural sustainability, and economic benefits for local communities. The development of sustainable tourism requires understanding tourists' internal evaluation processes when experiencing tourism destinations.

This research is grounded in Utility Theory, which explains that individuals tend to maximize satisfaction or utility obtained from consuming goods or services, including tourism experiences. In tourism studies, tourists evaluate destination attributes such as local culture and memorable tourism experiences to generate satisfaction, which subsequently influences behavioral intentions toward sustainable tourism. Destination satisfaction reflects tourists' overall evaluation of tourism experiences and determines post-visit behavior such as loyalty and sustainable tourism support (Acharya et al., 2023).

Local culture plays a strategic role in sustainable tourism development. Cultural authenticity, traditions, and community involvement create meaningful tourism experiences that increase tourists' emotional attachment to destinations. Local culture also contributes to preserving cultural heritage and strengthening destination competitiveness. Empirical studies indicate that local culture enhances perceived value and destination loyalty through authentic cultural experiences and community interaction (Satrya et al., 2024; Suarathana et al., 2024).

Furthermore, cultural preservation has been identified as a key factor in sustainable tourism development. Community participation, preservation of traditions, and cultural-based tourism development contribute to long-term tourism sustainability and economic empowerment of local communities ([Soeswoyo et al., 2025](#)). This indicates that local culture not only acts as a tourism attraction but also as a foundation for sustainable tourism.

Memorable tourism experiences also play an important role in sustainable tourism development. Memorable tourism experiences involve novelty, meaningfulness, involvement, and emotional engagement that create lasting impressions on tourists. These experiences increase perceived value and strengthen tourists' emotional attachment to destinations, leading to higher destination satisfaction and sustainable tourism behavior ([Chen et al., 2020](#)).

Research by ([Bakar et al., 2025](#)) also explains that memorable sustainable tourism experiences influence tourist satisfaction and encourage responsible tourist behavior. Memorable tourism experiences strengthen tourists' emotional engagement with destinations and support sustainable tourism development.

Destination satisfaction is another important concept in sustainable tourism. Destination satisfaction reflects tourists' evaluation of tourism experiences and influences revisit intention and sustainable tourism behavior. Previous research confirms that satisfied tourists tend to support environmental preservation and cultural sustainability ([Papadopoulou et al., 2023](#)).

Furthermore, research conducted by ([Zulvianti et al., 2022](#)) explains that environmental and non-environmental factors influence tourist satisfaction, which subsequently affects tourism sustainability. This study reinforces the importance of destination satisfaction in sustainable tourism development.

2.2. Previous Empirical Research

Previous empirical studies have examined the relationship between local culture and sustainable tourism. Research shows that local culture significantly influences tourist satisfaction and destination loyalty. Authentic cultural experiences enhance emotional engagement and improve tourist satisfaction ([Satrya et al., 2024](#)).

Similarly, ([Suarthana et al., 2024](#)) found that local culture plays a significant role in increasing tourist loyalty and destination competitiveness. Cultural interaction and cultural learning enhance tourists' experience and improve satisfaction.

Research by ([Soeswoyo et al., 2025](#)) also found that cultural preservation and community participation contribute significantly to sustainable tourism development. Cultural tourism strengthens destination sustainability and promotes long-term tourism benefits.

Memorable tourism experiences have also been widely studied. [Chen et al \(2020\)](#) found that memorable tourism experiences influence destination satisfaction and revisit intention. Memorable tourism experiences generate emotional value and strengthen tourists' attachment to destinations.

[Bakar et al. \(2025\)](#) also found that memorable tourism experiences influence sustainable tourism behavior. Tourists who experience meaningful tourism activities tend to support environmental preservation and cultural sustainability.

Destination satisfaction also plays an important role in sustainable tourism. ([Acharya et al., 2023](#)) [Acharya et al. \(2023\)](#) found that tourist satisfaction significantly influences revisit intention and destination loyalty. [Papadopoulou et al. \(2023\)](#) also confirmed that destination satisfaction encourages sustainable tourism behavior.

[Zulvianti et al. \(2022\)](#) also found that tourist satisfaction is influenced by environmental and non-environmental factors and significantly influences tourism sustainability.

Although previous studies have examined these variables, most studies examine partial relationships. Limited studies integrate local culture, memorable tourism experiences, and destination satisfaction simultaneously in explaining sustainable tourism.

2.3. Hypotheses

Previous studies have highlighted that full potential of local culture and the challenges of preserving the heritage of tourist villages are an important part of the process of transforming them

into sustainable tourist destinations (Soeswoyo et al., 2025). Local culture is a key resource in the tourism industry because many tourists are interested in experiencing and learning about local culture when visiting a destination. (Satrya et al., 2024).

H1. Local Culture has a significant influence on sustainable tourism.

Memorable experiences and sustainable tourism are a strategic combination that creates long-term positive impacts on the local environment, society, culture, and economy. Authentic, unique, and engaging emotional experiences with local communities increase tourist loyalty and environmentally responsible behavior. Research results (Haries, Alfatah et al., 2024). Memorable tourism experience elements such as novelty and emotional engagement can encourage responsible tourist behavior, including repeat visits and support for sustainable practices. Sustainable tourism experts recommend that tourism service providers prioritize the design of memorable and sustainable tourism experiences. (Chen et al., 2020a).

H2. Memorable experiences have a significant influence on sustainable tourism.

Local culture is a crucial component in shaping the value of a tourism experience because it conveys authenticity, social identity, and symbolic meaning, enhancing tourists' positive evaluations of a destination. Empirically, research shows that local culture is a major attraction of a destination and contributes to tourist satisfaction through authentic experiences and community interactions. (Satrya et al., 2024). Cultural preservation and local community involvement in tourism activities also strengthen the perception of the quality of the tourism experience and destination satisfaction. (Soeswoyo et al., 2025).

H3. Local culture has a significant influence on destination satisfaction.

A memorable tourism experience is one that leaves a profound emotional, cognitive, and psychological impression, thus enhancing tourists' positive evaluation of the destination. Empirically, research shows that all dimensions of memorable tourism experience have a significant influence on destination satisfaction. (Gohary et al., 2018). In addition, authentic and memorable tourism experiences have also been shown to increase tourists' loyalty and positive evaluations of sustainable tourism destinations. (Haries, Alfatah et al., 2024).

H4. Memorable experiences have a significant influence on destination satisfaction.

Satisfaction serves as a mechanism that strengthens tourists' emotional attachment to a destination, thereby increasing social engagement and support for the destination's sustainability. Empirically, research shows that tourist satisfaction is a key determinant of destination loyalty and sustainable tourist behavior. (Chen et al., 2020a). In addition, tourist satisfaction has been shown to increase revisit intentions, destination recommendations, and tourist participation in sustainable tourism practices through social engagement and support for local communities. (Mai et al., 2020).

H5. Destination satisfaction has a significant impact on sustainable tourism

Within the utility theory framework, local culture serves as a source of experiential value that shapes the perception of destination quality, which is then evaluated by tourists in the form of destination satisfaction before influencing tourist behavior towards sustainable tourism. Empirically, research shows that local culture influences tourist loyalty through destination satisfaction. (Fattah et al., 2025a). In addition, the development of culture-based tourism has been proven to contribute to the preservation of cultural heritage and the economic empowerment of local communities, which are the main foundations of sustainable tourism. (Soeswoyo et al., 2025).

H6: Local culture has a significant influence on sustainable tourism through destination satisfaction.

Unique, meaningful, and actively engaging tourism experiences can increase perceived value and emotional attachment to a destination, thereby strengthening satisfaction and encouraging environmentally and socio-culturally responsible tourist behavior. Empirically, research shows that memorable tourism experiences influence revisit intentions and recommendations through destination

satisfaction.(Chen et al., 2020a). In addition, memorable tourism experiences have been shown to encourage tourist behavior that supports sustainable tourism practices through emotional engagement and authentic experiences.(Fattah et al., 2025a;(Bakar et al., 2025).

H7: Memorable experiences have a significant influence on sustainable tourism through destination satisfaction.

Based on this description, the conceptual framework in this research is as follows:

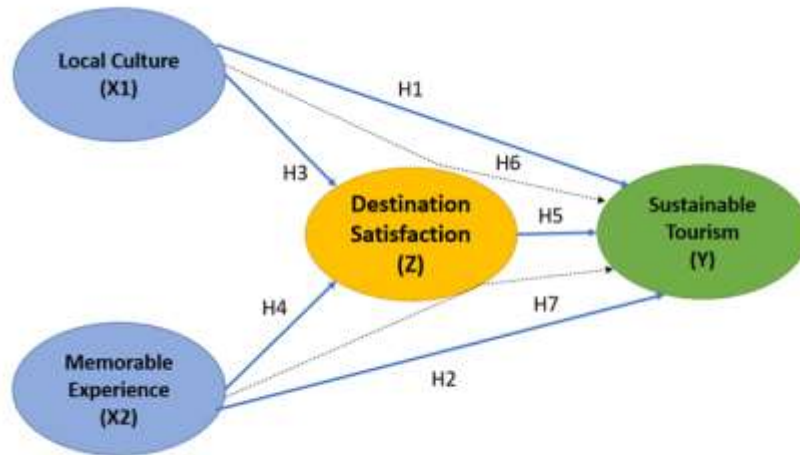


Figure 1: Research Framework

Research Design and Methodology

The research was conducted in the Ijen Mountains of Banyuwangi, involving respondents consisting of tourist visitors and the local community, to test their concern for sustainable tourism so that it can be enjoyed by future generations, in order to realize destination satisfaction.(Hull & Richins, 2016).Based on the nature of scientific exploration, this research is fundamental research or basic research or pure research, namely research aimed at supporting the advancement of science.(Gujarati, 2012)and aims to develop knowledge by referring to previous research(Zulvianti et al., 2022), by using a quantitative approach to complete research and to gain further knowledge(Cooper, 2014)Quantitative research tests several variables and question indicators by using statistical data in the form of numbers to be tested objectively by examining the relationship between these variables, where each variable is then tested and measured with other variables using statistical procedure instruments.(Hair, Risher, et al., 2019).

The hypothesis taken must be clear by using validity and reliability instruments.(Suprihatin & Rawi, 2023)The sampling technique uses the cross-section method, which is a sampling data collection technique carried out over a certain period of time. The use of samples is based on the Lameshow formula with a sampling error rate of 10%.(Paramita, 2021)with a minimum total of 96 respondents, as follows:

$$n = \frac{z^2 p(1-p)}{d^2}$$

Formula description:

n = Number of samples

z = Standard value = 1.96

p = Maximum probability = 50% = 0.5

d = alpha (0.10) or sampling error = 10%

$n = \frac{1.96^2 \cdot 0.5(1-0.5)}{10\%^2} = 96.04$ respondents.

Next, the researcher created a questionnaire in the Google Forms application and distributed it to respondents. Measurements were carried out using a Likert scale. The Likert scale is used to measure the attitudes, opinions, influences, and perceptions of an individual or group of people regarding social phenomena. The Likert scale contains 5 (five) levels of response preference options,

namely: Strongly Disagree (STS), Disagree (TS), Neutral (N), Agree (S), and Strongly Agree (SS). Testing was carried out with a series of complex analyses. Meanwhile, PLS-SEM aims to test the predictive relationship between constructs by seeing whether there is a relationship or influence between these constructs. (Solling, 2019).

Table 1. Variables and measures used in this study to test the research hypotheses.

Variables	Indicator	Reference
Sustainable Tourism	1. Ecological sustainability	(Soeswoyo et al., 2025) and Zulvianti (2022)
	2. Economic sustainability	
	3. Social and cultural sustainability	
	4. Community support for sustainable tourism	
	5. Willingness to participate in sustainable tourism	
	6. Willingness to comply with the applicable sustainable tourism regulations	
	7. Regulatory tightness	
Destination Satisfaction	1. A travel experience that exceeded expectations	(Papadopoulou et al., 2023)
	2. Tourists can enjoy traveling to tourist destinations	
	3. Tourists are satisfied with the trip to this destination	
	4. Tourists intend to revisit the tourist destination	
	5. Tourists recommend this tourist destination	
	6. Tourists encourage others to visit tourist destinations	
	7. Positive feedback from tourists regarding their visit	
Local Culture	Cultural richness:	(Suarthana et al., 2024)
	1. diversity of arts and crafts	
	2. authenticity of traditions	
	3. heritage preservation	
	4. community interaction	
	5. cultural experiences in tourism activities	
	Cultural Interaction:	
Memorable Experience	6. Learning about local culture	(Chen et al., 2020)
	7. Culinary experience	
	1. Hedonism	
	2. Novelty	
	3. Local Culture	
	4. Refreshment	
	5. Meaningfulness	
	6. Involvement	
	7. Knowledge	

Findings and Discussion

Findings

Preliminary Analysis

In the initial analysis, the researcher will conduct two tests, first testing the validity and reliability of the questionnaire, and second is conducting a bias evaluation to ensure there is no bias in the data.

Testing for validity and reliability

Validity testing was conducted to ensure the accuracy of each statement item in measuring the research variables. Validity testing was conducted through criterion validity and convergent validity. Criterion validity is used to measure the relationship between an item and the measured variable, while convergent validity is used to assess the item's contribution in representing the variable. Criterion validity was tested using the intercorrelation method through the corrected item-total correlation value, with the requirement that the correlation value must be positive and greater than 0.30. (Malhotra & Birks, 2007). Meanwhile, convergent validity was tested using the factor loading values from Exploratory Factor Analysis (EFA). The minimum factor loading value is 0.50 and the recommended value is 0.70, but values above 0.40 are still acceptable (Hair et al., 2018).

Reliability testing aims to measure the consistency of a research measurement instrument. Reliability testing is conducted using the internal consistency method through Cronbach's Alpha values.

A research instrument is considered reliable if its Cronbach's Alpha value is ≥ 0.60 . (Malhotra & Birks, 2007). Hair et al. (2018) states that the reliability value ranges from 0 to 1, with values above 0.70 categorized as good reliability, while values of 0.60-0.70 are still acceptable.

Table 1. Validity and reliability test

Variables	Items	Corrected Item-Total Correlation	EFA Factor Loadings	Cronbach's Alpha
Local Culture (X1)	X1.1	0.734	0.828	0.844 (good reliability)
	X1.2	0.779	0.853	
	X1.3	0.624	0.744	
	X1.4	0.534	0.651	
	X1.5	0.558	0.696	
	X1.6	0.479	0.605	
	X1.7	0.554	0.676	
Memorable Experience (X2)	X2.1	0.770	0.860	0.862 (good reliability)
	X2.2	0.562	0.693	
	X2.3	0.492	0.613	
	X2.4	0.608	0.726	
	X2.5	0.696	0.788	
	X2.6	0.651	0.748	
	X2.7	0.694	0.788	
Destination Satisfaction (Z)	Z.1	0.458	0.561	0.871 (good reliability)
	Z.2	0.684	0.759	
	Z.3	0.744	0.830	
	Z.4	0.615	0.714	
	Z.5	0.700	0.820	
	Z.6	0.746	0.856	
	Z.7	0.700	0.796	
Sustainable Tourism (Y)	Y.1	0.517	0.641	0.805 (good reliability)
	Y.2	0.447	0.580	
	Y.3	0.779	0.861	
	Y.4	0.490	0.668	
	Y.5	0.702	0.843	
	Y.6	0.465	0.607	
	Y.7	0.488	0.622	
Rule of thumb		≥ 0.30	≥ 0.50	≥ 0.70

Based on the validity test results, all statement items in the variables Local Culture, Memorable Experience, Destination Satisfaction, and Sustainable Tourism were declared valid. This is indicated by the corrected item-total correlation values, which are all positive and above the minimum limit of 0.30, which means each item has a good correlation with the measured variable construct. In addition, the results of the convergent validity test through the EFA factor loading value show that all indicators have values above 0.50 and most are above 0.70, although several items are in the acceptable range of 0.50-0.60. Thus, all indicators are considered capable of representing the research variable construct adequately and are suitable for use in further analysis.

The results of the reliability test using Cronbach's Alpha showed that all variables had a good level of internal consistency. The Local Culture variable had a Cronbach's Alpha value of 0.844, Memorable Experience of 0.862, Destination Satisfaction of 0.871, and Sustainable Tourism of 0.805. All of these values were above the minimum limit of 0.60 and even exceeded the value of 0.70, indicating good reliability. This indicates that the research instrument has a high level of consistency in measuring the

constructs studied, so that the resulting data is reliable and suitable for use in further structural analysis.

Testing for Common Method Bias (CMB) & non-response bias

Bias in research data can affect the accuracy of analysis results and reduce the generalizability of research findings. Common Method Bias (CMB) can arise from using the same measurement method for multiple variables or from the influence of respondents' emotional states when completing the questionnaire. To anticipate this, this study employed bias control strategies through procedural and statistical approaches. (Jordan & Troth, 2019; Podsakoff et al., 2003).

In the procedural approach, the questionnaire was compiled based on reputable journal references and adapted to field conditions. Items were arranged based on separate variable groups, respondents were carefully selected, and respondent anonymity was fully maintained. (Podsakoff et al., 2003) This procedure aims to ensure that respondents provide objective and accurate answers.

The statistical approach was conducted through Harman's single factor test using EFA and CFA. The EFA results showed that the first factor only explained 46.5% of the variance and a TLI value of 0.718. The CFA results showed a CFI value of 0.726 and a TLI of 0.704, as well as an SRMR value of 0.091 and an RMSEA of 0.126, indicating the model did not meet the goodness-of-fit criteria. Thus, it can be concluded that CMB is not a major threat in this study.

Non-response bias can occur when response rates are uneven in a population. (Cheung et al., 2017; Sedgwick, 2014) To anticipate this, this study conducted a test by comparing the initial and final respondent responses. (Armstrong & Overton, 1977; Jordan & Troth, 2020). The results of the analysis showed no significant difference between the two groups of respondents (multivariate p-value 0.079 > 0.05; univariate p-value 0.434 > 0.05), so it can be concluded that non-response bias is not a problem in this study.

Descriptive Statistics

The descriptive results of the respondents' characteristics show that the majority of respondents are female at 59.4%, while men are 40.6%. Based on age, respondents are dominated by the 17-24 age group at 47.2%, followed by 25-34 years old at 23.6%, then 50-64 years old at 15.1%, 35-49 years old at 13.2%, and over 65 years old at 0.9%. In terms of education, the majority of respondents have a Bachelor's degree (S1) at 43.4%, followed by High School/equivalent at 27.4%, Master's (S2) at 19.8%, Diploma at 6.6%, and Doctorate (S3) at 2.8%. Based on occupation, respondents were dominated by students at 25.5%, followed by private employees at 18.9%, self-employed at 14.2%, educators at 13.2%, and a variety of other jobs with smaller percentages.

The composition of respondents indicates that the majority of visitors to the destination are young and highly educated, who tend to have higher levels of information literacy and awareness of sustainability issues, tourism experiences, and local cultural values. The dominance of students and professional workers indicates that the Ijen Mountains destination has a strong appeal to the productive and educational tourist segment, which has the potential to become destination promotion agents through recommendations and digital media. Furthermore, the diversity of occupational backgrounds indicates that this destination has appeal across socioeconomic segments, supporting the potential for developing sustainable tourism based on local experiences and culture.

Next, a descriptive analysis was conducted on each variable. The results of respondents' responses to each statement item and variable can then be categorized using the following class interval formula guide. (Malhotra & Birks, 2007), that is:

1.00	<mean ≤	1.80	:	strongly disagree (SD) / very poor
1.80	<mean ≤	2.60	:	disagree (D) / poor
2.60	<mean ≤	3.40	:	neutral (N) / fair
3.40	<mean ≤	4.20	:	agree (A) / good
4.20	<mean ≤	5.00	:	strongly agree (SA) / excellent

Table 2. Descriptive statistics of items

Variables	Items	Descriptions	Mean	Elementary School
Local Culture (X1)	X1.1	Diversity of arts and crafts	3.80	0.90
	X1.2	Authenticity of traditions	4.01	0.78
	X1.3	Heritage preservation	4.08	0.79
	X1.4	Community interaction	4.33	0.67
	X1.5	Cultural experiences in tourism activities	3.97	0.77
	X1.6	Learning about local culture	4.03	0.80
	X1.7	Culinary experience	4.03	0.90
Memorable Experience (X2)	X2.1	Hedonism	4.27	0.80
	X2.2	Novelty	4.31	0.70
	X2.3	Local Culture	3.95	0.80
	X2.4	Refreshment	4.25	0.79
	X2.5	Meaningfulness	4.30	0.75
	X2.6	Involvement	4.14	0.81
	X2.7	Knowledge	4.26	0.72
Destination Satisfaction (Z)	Z.1	A travel experience that exceeded expectations	4.04	0.79
	Z.2	Tourists enjoy their trip to a tourist destination	4.20	0.71
	Z.3	Tourists are satisfied with the trip to the destination	4.21	0.81
	Z.4	Tourists intend to visit again	4.09	0.81
	Z.5	Tourists recommend tourist destinations	4.31	0.76
	Z.6	Tourists encourage others to visit tourist destinations	4.24	0.70
	Z.7	Positive feedback from tourists regarding their visit	4.24	0.68
Sustainable Tourism (Y)	Y.1	Ecological sustainability	4.01	0.87
	Y.2	Economic sustainability	4.26	0.75
	Y.3	Social and cultural sustainability	4.08	0.66
	Y.4	Community support for sustainable tourism	4.25	0.78
	Y.5	Willingness to participate in sustainable tourism	4.01	0.82
	Y.6	Willingness to comply with the applicable sustainable tourism regulations	4.28	0.79
	Y.7	Regulatory tightness	3.98	0.86

Variable mean:
Local Culture (X1) 4.04; Memorable Experience (X2) 4.21; Destination Satisfaction (Z) 4.19; Sustainable Tourism (Y) 4.12

The Local Culture variable has a mean value of 4.04, which is in the agree (good) category, indicating that respondents generally assess the local culture at the Ijen Mountains destination as good and able to provide a positive cultural experience for tourists. In detail, the indicator with the highest mean value is community interaction (4.33) which is in the strongly agree (very good) category, indicating that tourist interaction with the local community is the main strength of the destination's cultural appeal. Conversely, the indicator with the lowest mean value is diversity of arts and crafts (3.80) which is still in the agree (good) category, but relatively lower than the other indicators, indicating that tourist perceptions of the diversity of local arts and crafts can still be improved. In general, these results indicate that the authenticity of traditions, preservation of cultural heritage, cultural tourism experiences, learning about local culture, and culinary experiences have been perceived positively by tourists. Therefore, destination managers need to maintain strengths in the aspects of community interaction and cultural authenticity, and increase the development of creative cultural products such as local arts and crafts as part of tourist attractions, so as to strengthen the destination's competitiveness while supporting the development of sustainable tourism based on local culture.

The Memorable Experience variable has a mean value of 4.21, which is in the strongly agree category (very good), indicating that tourists experience a very memorable tourism experience when visiting the Ijen Mountains. In detail, the indicators with the highest mean values are novelty (4.31) and meaningfulness (4.30) which are in the strongly agree category, indicating that tourists experience

new and personally meaningful experiences during their travels. Meanwhile, the indicator with the lowest mean value is local culture (3.95) which is still in the agree category (good), indicating that although local culture has become part of the tourism experience, its integration in creating memorable experiences can still be improved. In general, tourists also experience pleasure (hedonism), physical and mental freshness (refreshment), active involvement (involvement), and increased knowledge (knowledge). Therefore, destination managers need to continue to develop unique, meaningful, and educational tourism experience designs, as well as strengthen the integration of local culture in tourism experience packages to be able to enhance memorable tourism experiences.

The Destination Satisfaction variable has a mean value of 4.19, which is in the agree to strongly agree category (good to very good), indicating that tourists are generally satisfied with the Ijen Mountains destination. In detail, the indicator with the highest mean value is tourists recommending the tourist destination (4.31) which is in the strongly agree category, indicating a high level of positive word of mouth from tourists. Conversely, the indicator with the lowest mean value is the travel experience exceeding expectations (4.04) which is still in the agree category, indicating that the tourism experience has met tourists' expectations, but has not yet fully exceeded expectations optimally. Other indicators such as enjoying the trip, satisfaction with the visit, intention to revisit, encouragement to others to visit, and positive feedback also show high ratings. Therefore, destination managers need to improve the quality of the wow experience tourism experience to be able to exceed tourists' expectations, thereby strengthening tourist loyalty and supporting the long-term sustainability of the destination.

The Sustainable Tourism variable has a mean value of 4.12, which is in the agree (good) category, indicating that tourists have a positive perception of the implementation of sustainable tourism principles in the Ijen Mountains destination. In detail, the indicators with the highest mean values are willingness to comply with sustainable tourism regulations (4.28) and economic sustainability (4.26) which are in the strongly agree category, indicating that tourists have a high awareness of complying with sustainable tourism regulations and see the economic benefits of tourism development. Meanwhile, the indicator with the lowest mean value is regulatory tightness (3.98) which is still in the agree category, indicating that tourists' perceptions of the strictness of sustainable tourism regulations can still be strengthened. Therefore, destination managers need to strengthen the implementation and socialization of sustainability regulations, increase community and tourist participation in sustainability practices, and maintain a balance between environmental, socio-cultural, and economic sustainability in managing tourist destinations.

Partial Least Square-Structural Equation Modeling (PLS-SEM)

Measurement Model Evaluation Results (Outer Model)

Measurement model evaluation aims to ensure the quality of the data used in PLS-SEM analysis by assessing construct validity and reliability. This step is crucial to ensure that each indicator accurately represents the latent construct, ensuring that research results are free from measurement error and more accurately reflect empirical reality. (Hair et al., 2022). The PLS Algorithm estimation results are presented in Figure 2 below:

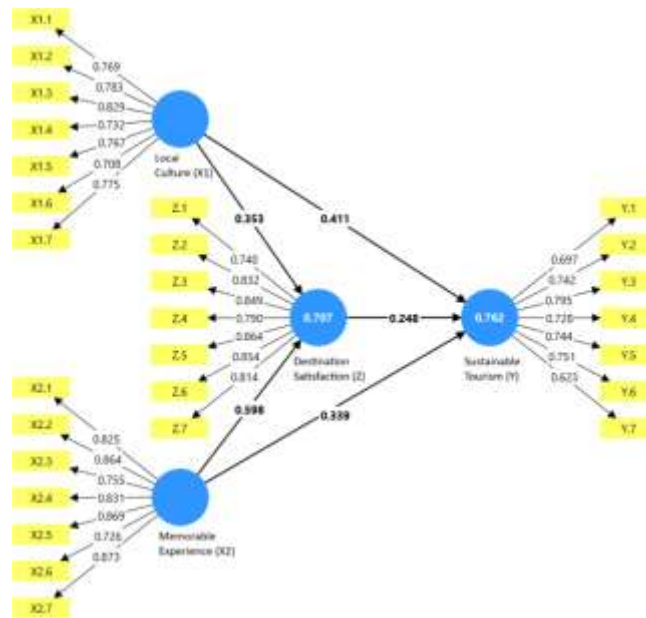


Figure 2. PLS Algorithm

Furthermore, based on the results of the PLS Algorithm estimation, an evaluation of the measurement model will be carried out, including indicators of reliability, internal consistency, convergent validity, and discriminant validity.(Hair et al., 2022), also evaluation of confirmatory tetrad analysis as a robustness check effort to ensure that the results of the measurement model are in accordance with the theoretical concept(Hair et al., 2022)The results of the measurement model evaluation are presented in Table 3.

Table 3. Evaluation of the Measurement Model

Constructs	Indicators	Outer Loadings	T statistics	P values
Local Culture (X1)	X1.1	0.769	16,956	0,000
	X1.2	0.783	12,666	0,000
	X1.3	0.829	18,622	0,000
	X1.4	0.732	9,308	0,000
	X1.5	0.767	15,170	0,000
	X1.6	0.708	10,573	0,000
	X1.7	0.775	16,648	0,000
Memorable Experience (X2)	X2.1	0.825	18,904	0,000
	X2.2	0.864	24,070	0,000
	X2.3	0.755	12,655	0,000
	X2.4	0.831	15,662	0,000
	X2.5	0.869	20,544	0,000
	X2.6	0.726	8,057	0,000
	X2.7	0.873	28,746	0,000
Destination Satisfaction (Z)	Z.1	0.740	10,528	0,000
	Z.2	0.832	18,082	0,000
	Z.3	0.849	23,789	0,000
	Z.4	0.790	15,252	0,000
	Z.5	0.864	26,250	0,000
	Z.6	0.854	17,604	0,000
	Z.7	0.814	12,472	0,000
Sustainable Tourism (Y)	Y.1	0.697	10,307	0,000
	Y.2	0.742	10,888	0,000

	Y.3	0.795	9,578	0,000
	Y.4	0.728	10,128	0,000
	Y.5	0.744	11,762	0,000
	Y.6	0.751	11,530	0,000
	Y.7	0.623	5,511	0,000
<u>Fornell-Larcker Criterion:</u>				
	X1	X2	Z	Y
Local Culture (X1)	0.767			
Memorable Experience (X2)	0.535	0.822		
Destination Satisfaction (Z)	0.673	0.787	0.822	
Sustainable Tourism (Y)	0.759	0.753	0.790	0.728
<u>HTML:</u>				
	X1	X2	Z	Y
Local Culture (X1)				
Memorable Experience (X2)	0.573			
Destination Satisfaction (Z)	0.732	0.845		
Sustainable Tourism (Y)	0.849	0.847	0.882	
<u>Construct Reliability and Validity:</u>				
	Cronbach's alpha	rho_c	AVE	
Local Culture (X1)	0.883	0.909	0.588	
Memorable Experience (X2)	0.919	0.936	0.676	
Destination Satisfaction (Z)	0.919	0.935	0.675	
Sustainable Tourism (Y)	0.851	0.887	0.529	
<u>Robustness check:</u>				
Local Culture (X1)	p-CTA value 0.468			
Memorable Experience (X2)	p-CTA value 0.518			
Destination Satisfaction (Z)	p-CTA value 0.407			
Sustainable Tourism (Y)	p-CTA value 0.488			

Reliability Indicator The results of the indicator reliability test show that all indicators in each construct have outer loading values that exceed the minimum limit of 0.70, which indicates that each indicator is able to reflect the latent construct strongly and significantly according to the criteria. Hair et al. (2022) All indicators for each construct met reliability criteria, meaning no indicators needed to be eliminated from the model. Thus, the indicators used were proven to have good ability to represent the constructs being measured.

Internal Consistency. Internal consistency testing shows that all constructs have Cronbach's Alpha and composite reliability (pC) values above the threshold of 0.70, indicating a very good level of reliability. The Local Culture construct has a Cronbach's Alpha value of 0.883 and a pC of 0.909; Memorable Experience of 0.919 and 0.936; Destination Satisfaction of 0.919 and 0.935; and Sustainable Tourism of 0.851 and 0.887. Overall, these findings indicate that the indicators in each construct have a high level of consistency in measuring the same concept, so that the research instrument can be declared reliable.

Convergent Validity The Average Variance Extracted (AVE) values for all constructs were above 0.50, namely 0.588; 0.676; 0.675; and 0.529. These results indicate that each construct is able to explain more than 50% of the variance of the indicators that make it up, so that convergent validity is declared fulfilled in accordance with the recommendations. (Hair et al., 2022) The constructs of Memorable Experience and Destination Satisfaction have the highest AVE values, indicating that the indicators in both constructs have a high degree of homogeneity in reflecting their constructs. Overall, these results indicate that the measurement model has a good fit with the theoretical concepts used.

Discriminant Validity Discriminant validity testing was conducted using the Fornell-Larcker Criterion and Heterotrait-Monotrait Ratio (HTMT) approaches. Based on the Fornell-Larcker criteria, the square root of the AVE value for each construct is greater than the correlation value between

other constructs, indicating that each construct is able to clearly differentiate itself from other constructs. In addition, the HTMT value between constructs is also below the threshold of 0.90, indicating that there are no problems of conceptual overlap between constructs. Thus, both approaches confirm that each construct measures conceptually different concepts and has good discriminant validity.

Robustness Check. The results of the Confirmatory Tetrad Analysis (CTA) show that all constructs have p-values above 0.05, namely 0.468; 0.518; 0.407; and 0.488. This indicates that the null hypothesis (H_0 : tetrad = 0) cannot be rejected, so the measurement model used is suitable for specification as a reflective model. Thus, the indicators in each construct reflect the latent construct being measured. The results of this robustness test strengthen the suitability of the measurement model with the theoretical basis and indicate that the model is free from potential specification errors that could affect the analysis results.

Structural Model Evaluation Results (Inner Model)

Evaluation of structural models in PLS-SEM aims to assess the extent to which the model is able to explain and predict the relationships between latent constructs theoretically and empirically. (Hair et al., 2022) This process includes checking for collinearity between exogenous constructs, testing the significance and relevance of path coefficients through bootstrapping, and assessing explanatory power by looking at the R^2 value to measure the ability of exogenous constructs to explain endogenous constructs. Furthermore, predictive power is evaluated using PLSpredict to assess model accuracy on out-of-sample data, along with model comparison and model fit measures to ensure the best model fit. (Hair et al., 2022) As a robustness check step, linearity, endogeneity, and heterogeneity evaluations are carried out to ensure the reliability of the analysis results and the high predictive validity of the model. (Hair et al., 2022) The results of the structural model evaluation are presented in Table 4.

Table 4. Evaluation of the Structural Model

Path	VIF	f-square	R-square
X1 -> Z	1,402	0.303	0.707
X2 -> Z	1,402	0.871	
X1 -> Y	1,826	0.389	0.762
X2 -> Y	2,622	0.184	
Z -> Y	3,416	0.076	

PLSpredict MV summary			
	PLS RMSE	LM RMSE	IA RMSE
Z.1	0.618	0.656	0.796
Z.2	0.473	0.505	0.714
Z.3	0.581	0.635	0.818
Z.4	0.635	0.675	0.816
Z.5	0.519	0.566	0.766
Z.6	0.532	0.542	0.702
Z.7	0.524	0.518	0.688
Y.1	0.701	0.723	0.872
Y.2	0.559	0.562	0.752
Y.3	0.472	0.496	0.660
Y.4	0.624	0.685	0.786
Y.5	0.687	0.689	0.825
Y.6	0.596	0.609	0.794
Y.7	0.768	0.874	0.865

PLSpredict LV summary (Q²predict)

Destination Satisfaction (Z) 0.713; Sustainable Tourism (Y) 0.743

CVPAT LV summary (PLS-SEM vs IA)

	PLSloss	HEloss	loss difference	tvalue	pvalue
Overall	0.358	0.605	-0.247	2,539	0.013

CVPAT LV summary (PLS-SEM vs LM)

	PLSloss	LMloss	loss difference	tvalue	pvalue
Overall	0.358	0.399	-0.042	2,967	0.004

Model fit measure:SRMR 0.086 ; GoF 0.673

Endogeneity:

Correlation between X1 and error term, p-value = 0.162
Correlation between X2 and error term, p-value = 0.257
Correlation between Z and error term, p-value = 0.471

CollinearityThe results of the collinearity test show that all predictor constructs have Variance Inflation Factor (VIF) values ranging from 1.402 to 3.416, which is still far below the maximum threshold of 5. This finding indicates that there is no multicollinearity problem among the exogenous variables in the structural model. Thus, each predictor construct is able to contribute unique information in explaining the endogenous variables without information redundancy or overlapping influences between constructs. This condition strengthens the stability of the parameter estimates of the structural model and supports the validity of the relationship between variables in the research model.(Hair et al., 2022).

Explanatory Power. The coefficient of determination (R-square) value shows that the Destination Satisfaction construct (Z) has a value of 0.707, which means that 70.7% of the variation in destination satisfaction can be explained by Local Culture and Memorable Experiences, and is included in the strong or substantial category. Meanwhile, the Sustainable Tourism construct (Y) has an R-square value of 0.762, which indicates that 76.2% of the variation in sustainable tourism can be explained by Local Culture, Memorable Experiences, and Destination Satisfaction. In addition, the effect size (f-square) value which ranges from 0.076 to 0.871 indicates that the influence between constructs is in the small to large category. Overall, these results indicate that the model has strong explanatory power in describing the structural relationships between research variables.(Hair et al., 2022).

Predictive Power. The results of the PLSpredict test show that the Root Mean Square Error (RMSE) value in the PLS model is generally lower than the comparison models Linear Model (LM) and Indicator Average (IA), both at the indicator and latent construct levels. In addition, the Q²predict value shows a positive value, namely 0.713 for Destination Satisfaction and 0.743 for Sustainable Tourism, which indicates that the model has good predictive ability for out-of-sample data. This finding confirms that the model not only has the ability to explain research data well, but also has adequate generalization ability to predict phenomena in a wider population.(Hair et al., 2022).

Fit Measure Model. The model fit evaluation results show a Standardized Root Mean Square Residual (SRMR) value of 0.086, which is still below the maximum limit of 0.10, thus indicating a good level of model fit. In addition, the Goodness-of-Fit (GoF) value of 0.673 is included in the high category, which indicates that the model has a strong level of fit between the theoretical model and empirical data. These results indicate that the constructed structural model is able to represent the relationship between constructs accurately and does not show any indication of model misspecification.

Model Comparison. The results of the model comparison using the Cross-Validated Predictive Ability Test (CVPAT) show that the PLS-SEM model has a negative loss difference value when compared to the Indicator Average (IA) and Linear Model (LM) models. This indicates that the PLS-SEM model produces a lower prediction error rate than the comparison models. In addition, the significant t-statistic value and p-value smaller than 0.05 further strengthen that the PLS-SEM model has better predictive performance. Thus, the PLS-SEM model can be considered superior and more efficient in predicting endogenous variables compared to alternative modeling approaches.

Robustness CheckThe results of the robustness test using the endogeneity test indicate that all p-values of the correlation between the predictor variables and the error term in the endogenous construct are greater than 0.05. This indicates that there is no indication of causal bias due to the relationship between the independent variables and the error term. Thus, the structural model used can be considered stable, free from endogeneity issues, and produces reliable parameter estimates.

These results strengthen the model's reliability in supporting hypothesis testing and drawing research conclusions. (Hair et al., 2022).

• Hypothesis Testing

The results of testing the direct influence and mediation influence using the bootstrapping results of the PLS model are as follows:

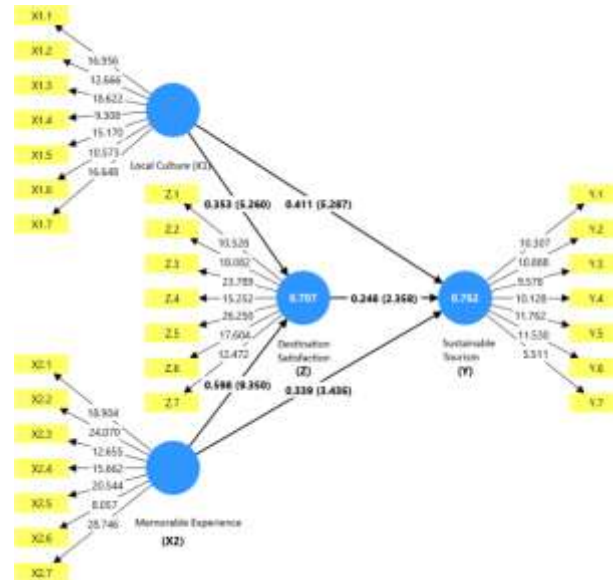


Figure 3. PLS Bootstrapping

Analysis of the Direct Effect

Testing the significance of the influence paths between variables according to the research hypothesis using SmartPLS software was carried out using the path coefficient table from the bootstrapping results (Figure 3). In the 2-tailed test, the research hypothesis is accepted if the calculated t-value (T-statistic) ≥ 1.96 or the p-value is smaller than the error rate (α) of 5%. The following are the path coefficient values (original sample estimate), calculated t-value (T-statistic), and p-value in the model resulting from the PLS Bootstrapping of the main model:

Table 5. Summary of the direct effect analysis

Direct Effects	Estimate	T-Stat	P-Values	Decision
Local Culture (X1) -> Sustainable Tourism (Y)	0.411	5,287	0,000	H1 accepted
Memorable Experience (X2) -> Sustainable Tourism (Y)	0.339	3,436	0.001	H2 accepted
Local Culture (X1) -> Destination Satisfaction (Z)	0.353	5,260	0,000	H3 accepted
Memorable Experience (X2) -> Destination Satisfaction (Z)	0.598	9,350	0,000	H4 accepted
Destination Satisfaction (Z) -> Sustainable Tourism (Y)	0.248	2,358	0.018	H5 accepted

Based on the results of the direct influence test, all relationships between variables show a positive and statistically significant influence. Local Culture has a significant influence on Sustainable Tourism with a coefficient value of 0.411, a T-statistic value of 5.287, and a p-value of 0.000. Memorable Experience also has a significant influence on Sustainable Tourism with a coefficient value of 0.339, a T-statistic value of 3.436, and a p-value of 0.001. In addition, Local Culture has a significant influence on Destination Satisfaction with a coefficient value of 0.353, a T-statistic value of 5.260, and a p-value of 0.000. Memorable Experience shows the strongest influence on Destination Satisfaction with a coefficient value of 0.598, a T-statistic value of 9.350, and a p-value of 0.000. All these results indicate that the hypotheses H1, H2, H3, and H4 are accepted.

Furthermore, Destination Satisfaction is also proven to have a positive and significant effect on Sustainable Tourism with a coefficient value of 0.248, a T-statistic value of 2.358, and a p-value of 0.018, so that the H5 hypothesis is accepted. Overall, the T-statistic value of all paths is above the minimum limit of 1.96 and the p-value is below 0.05, which indicates that all direct influences in the research model have strong statistical significance. In addition, the magnitude of the path coefficient

indicates that Memorable Experience is the most dominant predictor of Destination Satisfaction, while Local Culture has a relatively stronger direct influence on Sustainable Tourism compared to Memorable Experience.

These results indicate that sustainable tourism development is not only influenced by structural factors such as regulations or destination management, but also significantly influenced by tourists' subjective experiences with local culture and memorable tourism experiences. Local culture has been shown to be a key foundation in building destination sustainability through the preservation of cultural values and community involvement, while memorable tourism experiences are a key factor in shaping tourist satisfaction. Destination satisfaction further serves as a reinforcement for tourist behaviors that support tourism sustainability, such as loyalty, recommendations, and concern for environmental and local cultural preservation. These findings emphasize the importance of integrating local cultural management, tourism experience design, and improving the quality of tourist experiences in supporting sustainable tourism development.

Analysis of the Indirect Effect

Testing the significance of the mediation effect uses CR and p-value ($CR \geq 1.96$ or $p\text{-value} \leq 0.05$). After testing the significance of the mediation effect, the next step is to determine the nature of the mediation. Detecting the nature of mediation can be seen from its mediation influence, if the direct influence of the exogenous variable on the endogenous variable is significant, and its indirect influence through the mediating variable also passes through a significant path, then it is said to be partial mediation, conversely if the direct influence of the exogenous variable on the endogenous variable is not significant, while its indirect influence through the mediating variable passes through a significant path, then it is said to be full mediation or perfect mediation (Baron & Kenny, 1986; Zhao et al., 2010).

Table 6. Summary of the indirect effect analysis

Indirect effect	Estimate	T-Stat	P-Values	Type of mediation	Decision
Local Culture (X1) -> Destination Satisfaction (Z) -> Sustainable Tourism (Y)	0.087	2,089	0.037	Partial mediation	H6 accepted
Memorable Experience (X2) -> Destination Satisfaction (Z) -> Sustainable Tourism (Y)	0.148	2,244	0.025	Partial mediation	H7 accepted

Based on the results of the indirect effect test, Destination Satisfaction is proven to significantly mediate the relationship between Local Culture and Sustainable Tourism, as well as between Memorable Experiences and Sustainable Tourism. The path $X1 \rightarrow Z \rightarrow Y$ has a coefficient value of 0.087 with a T-statistic value of 2.089 and a p-value of 0.037, which indicates a significant indirect effect so that the hypothesis H6 is accepted. Meanwhile, the path $X2 \rightarrow Z \rightarrow Y$ has a coefficient value of 0.148 with a T-statistic value of 2.244 and a p-value of 0.025, which also indicates a significant indirect effect so that the hypothesis H7 is accepted. In addition, because the direct effect on both paths is also significant, the type of mediation that occurs is partial mediation, which indicates that Destination Satisfaction acts as a partial mediator in the relationship between these variables.

These results indicate that Destination Satisfaction is an important evaluative mechanism that bridges how tourists translate local cultural experiences and memorable tourist experiences into support for sustainable tourism. Local culture and memorable experiences not only directly influence tourism sustainability but also shape tourists' perceptions of value and satisfaction, which then strengthen tourist behavior in supporting destination sustainability. These findings emphasize that sustainable tourism management needs to focus not only on developing cultural attractions and tourist experiences, but also on improving the quality of the overall tourist experience to be able to create high destination satisfaction and encourage pro-sustainability tourist behavior.

Analysis of the Total Effect

The analysis of total or dominant influence in PLS-SEM uses Importance-Performance Map Analysis (IPMA). IPMA is a technique used to identify exogenous variables that have the most influence (importance) but have relatively low performance (performance) compared to endogenous variables. This analysis considers both the total influence and the average performance of each variable, thus

helping researchers determine improvement priorities and more effective development strategies.(Hair et al., 2022). IPMA can provide practical guidance for decision makers in allocating resources to aspects that contribute most to improving endogenous variables.

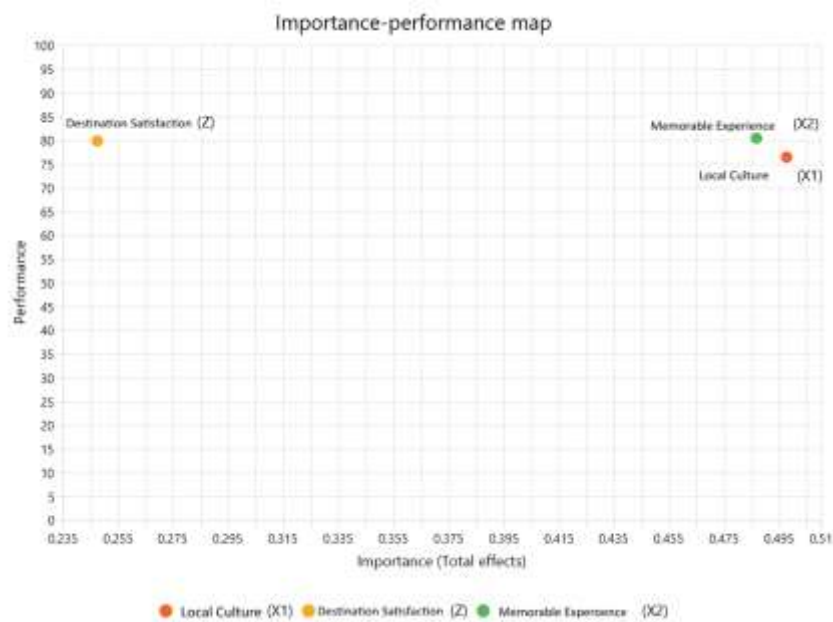


Figure 5. PLS IPMA

The IPMA results show that the Local Culture variable (X1) has the highest importance value for Sustainable Tourism at 0.498, followed by Memorable Experience (X2) at 0.487, and Destination Satisfaction (Z) at 0.248. This indicates that Local Culture is the most dominant factor in influencing the development of sustainable tourism as a whole. However, in terms of performance, Memorable Experience has the highest value of 80.494, followed by Destination Satisfaction at 79.883, while Local Culture has the lowest performance value of 76.458. These findings indicate that although Local Culture has the greatest influence on sustainable tourism, its performance is relatively lower compared to other variables, so it is a top priority for improvement. Practically, the IPMA results show that strengthening local cultural management, such as developing cultural attractions, preserving cultural heritage, and increasing cultural interaction between tourists and local communities, is the most effective strategy to improve sustainable tourism development in the Ijen Mountains destination.

Discussions

The test results indicate that local culture has a positive and significant influence on sustainable tourism, thus the first hypothesis is accepted. This finding aligns with the theoretical basis that places local culture as a key element in sustainable tourism development because it can provide authenticity, strengthen community social identity, and support local economic sustainability through community-based tourism activities. Cultural preservation through local community involvement and an ecotourism approach has also been shown to maintain the sustainability of traditions while minimizing environmental and social impacts, allowing for long-term tourism benefits.(Soeswoyo et al., 2025). In addition, local culture is a key resource in the tourism industry because tourists have a high interest in learning and experiencing local culture firsthand when visiting a destination.(Satrya et al., 2024). Thus, the results of this study reinforce previous empirical findings that local cultural development is a crucial foundation in transforming destinations toward sustainable tourism. The implications of these findings suggest that destination managers need to strengthen the development of culture-based tourism through the preservation of local traditions, strengthening creative cultural products, and increasing community participation in tourism activities, thereby enhancing destination competitiveness while maintaining long-term tourism sustainability.

Memorable experiences also have a positive and significant impact on sustainable tourism, thus accepting the second hypothesis. This finding aligns with the theoretical basis stating that memorable

tourism experiences are a strategic combination in sustainable tourism development because they can create long-term positive impacts on the environment, socio-cultural environment, and local economy. Authentic, unique tourism experiences that involve local communities can increase tourists' emotional engagement and encourage responsible tourist behavior towards the environment and socio-cultural environment.(Bakar et al., 2025). Empirically, elements of memorable experiences such as novelty and emotional engagement have been shown to encourage tourist behavior that supports sustainable practices, including repeat visits and support for destination preservation.(Haries, Alfatah et al., 2024). In addition, the development of sustainable tourism experiences is recommended as a key strategy in improving the quality of modern tourism.(Chen et al., 2020)The implications of these findings suggest that destination managers need to design tourism experiences that are not only visually appealing, but also emotionally meaningful and educational, and that involve local communities to raise tourists' awareness of the importance of destination sustainability.

Local culture has a positive and significant effect on destination satisfaction, thus the third hypothesis is accepted. This finding aligns with the utility perspective, which states that tourists seek to maximize satisfaction through consuming experiences that have emotional, social, and cultural value. Local culture provides authenticity, social identity, and symbolic meaning, which enhance tourists' positive evaluations of the destination. Destination attributes such as local traditions, community hospitality, and direct cultural experiences have been shown to be key factors in shaping tourist satisfaction, both in terms of attributes and overall.(Acharya et al., 2023)Empirically, research shows that local culture is the main attraction of a destination through authentic experiences and direct interaction with local communities.(Satrya et al., 2024). In addition, cultural preservation and community involvement in tourism activities have also been shown to improve the quality of the tourism experience and tourist satisfaction.(Soeswoyo et al., 2025)The implications of these findings suggest that destination managers need to strengthen the management of cultural attractions, improve the quality of cultural interpretation, and expand tourist interactions with local communities to sustainably enhance tourist satisfaction.

Memorable experiences also have a positive and significant effect on destination satisfaction, thus the fourth hypothesis is accepted. This finding is consistent with consumer behavior and utility theory, which states that unique, meaningful, and actively engaging travel experiences will increase the perceived value of the experience, which then shapes destination satisfaction. Dimensions of memorable experiences such as novelty, emotional involvement, meaningfulness, and learning have been shown to be important determinants in shaping overall tourist satisfaction.(Acharya et al., 2023)Empirically, all dimensions of memorable tourism experience have been proven to influence destination satisfaction.(Gohary et al., 2018). In addition, authentic and memorable tourism experiences have also been shown to increase tourists' positive evaluations of sustainable tourism destinations and strengthen tourist loyalty.(Haries, Alfatah et al., 2024)The implications of these findings suggest that destination managers need to develop innovative, interactive, and meaningful tourism experience designs, including strengthening destination storytelling, experiential activities, and enriching educational and cultural elements within tourism activities.

Destination satisfaction has a positive and significant effect on sustainable tourism, thus the fifth hypothesis is accepted. This finding aligns with the utility and consumer behavior perspectives, which explain that satisfaction is the result of tourists' overall evaluation of the tourism experience they have consumed, which then influences post-visit behaviors such as loyalty, positive recommendations, and support for sustainable tourism practices. Satisfied tourists tend to exhibit pro-environmental behavior, support the preservation of local culture, and are willing to comply with sustainable tourism regulations.(Chen et al., 2020)Empirically, tourist satisfaction has been shown to be a major determinant of destination loyalty and tourist behavior that supports sustainability through social engagement and support for local communities.(Mai et al., 2020)The implications of these findings suggest that destination managers need to ensure consistent quality of tourism experiences, improve the quality of tourism services, and strengthen the emotional experience of tourists in order to increase tourist satisfaction and encourage tourist behavior that supports destination sustainability.

Local culture significantly influences sustainable tourism through destination satisfaction, thus the sixth hypothesis is accepted. This finding strengthens the utility theory framework, which explains

that local culture functions as a source of value for tourism experiences, which tourists then evaluate in the form of destination satisfaction before influencing tourist behavior towards sustainable tourism. Authentic local culture, strong community interaction, and cultural heritage preservation can increase tourists' emotional and social value, thereby strengthening destination satisfaction, which ultimately encourages tourist behavior that supports environmental and socio-cultural sustainability. Empirically, research shows that local culture can increase tourist loyalty through destination satisfaction. (Fattah et al., 2025a). In addition, the development of culture-based tourism has been proven to support the preservation of cultural heritage and the economic empowerment of local communities as the main foundation of sustainable tourism. (Soeswoyo et al., 2025) The implications of these findings indicate that local cultural development not only serves as a tourist attraction but also as a mechanism for shaping tourist satisfaction, which plays a strategic role in supporting the sustainability of tourist destinations.

Memorable experiences significantly influence sustainable tourism through destination satisfaction, thus the seventh hypothesis is accepted. This finding supports the utility framework, which explains that memorable tourism experiences generate utility value through the formation of emotional, cognitive, and psychological impressions, which are then evaluated by tourists in the form of destination satisfaction before influencing tourist behavior towards sustainable tourism. Unique, meaningful, and actively engaging tourism experiences can increase perceived value and emotional attachment to the destination, thereby strengthening satisfaction and encouraging environmentally and socio-culturally responsible tourist behavior. Empirically, memorable tourism experiences have been shown to influence revisit intentions and recommendations through destination satisfaction. (Chen et al., 2020). In addition, memorable tourism experiences have also been shown to increase tourist behavior that supports sustainable tourism practices through emotional engagement and authentic experiences. (Fattah et al., 2025a; Bakar et al., 2025) The implications of these findings suggest that destination managers need to develop tourism experience designs that are oriented toward emotional engagement, experiential meaning, and the integration of cultural values and environmental education to enhance tourist satisfaction while supporting tourism sustainability.

Conclusion

This study demonstrates that local culture and memorable tourism experiences are crucial factors in driving sustainable tourism development. Local culture has been shown to play a key role in building destination sustainability through the preservation of cultural values, strengthening local identity, and increasing community involvement in tourism activities. Furthermore, memorable tourism experiences have been shown to enhance tourists' emotional attachment to the destination, thereby encouraging behavior that supports environmental, social, and cultural sustainability. These findings demonstrate that sustainable tourism development depends not only on the physical aspects of destination management but also on the quality of tourists' subjective experiences with the culture and tourism activities they experience. This study also demonstrates that destination satisfaction acts as a mediating mechanism, bridging the influence of local culture and memorable tourism experiences on sustainable tourism. Destination satisfaction has been shown to strengthen the relationship between tourism experiences and tourist behaviors that support destination sustainability.

This study reinforces the utility perspective in sustainable tourism, which emphasizes that tourists will support destination sustainability if they experience high experiential value and optimal satisfaction during their travels. The implications of this research indicate that tourism destination managers need to prioritize strengthening local cultural management as a key strategy in developing sustainable tourism. This strengthening can be achieved through preserving local traditions, developing community-based cultural attractions, strengthening culture-based creative economic products, and improving the quality of interactions between tourists and local communities. Furthermore, local governments and destination managers need to strengthen culture-based tourism management policies through multi-stakeholder collaboration, including local communities, tourism businesses, and cultural institutions, to maintain a balance between cultural preservation, environmental protection, and improving local community welfare. This strategy is crucial because local culture has been proven to be a dominant factor in driving long-term sustainable tourism

development. Furthermore, enhancing the quality of the tourist experience needs to be accompanied by strengthening the quality management of destination services to continuously improve tourist satisfaction. Increased tourist satisfaction will encourage tourist loyalty, positive recommendations, and tourist behavior that supports sustainable tourism practices, thus supporting the long-term sustainability of the tourist destination.

Future research is recommended to expand the scope of the study by involving more nature- and culture-based tourist destinations in different regions, thereby increasing the generalizability of the research results. Furthermore, further research can develop the research model by adding other variables such as destination image, digital tourism experience, community engagement, or collaborative governance to enrich the understanding of the factors influencing sustainable tourism. Future research can also use a longitudinal approach to examine changes in tourist perceptions over time, and combine quantitative and qualitative approaches to capture tourist experiences in greater depth.

Acknowledgment

The author expresses gratitude to community members and visitor in Ijen Mountains for their participation and insights. Appreciation is extended to local government officials, conservation practitioners, and tourism operators who facilitated this research. Special thanks to our colleagues for institutional support and to research assistants who contributed to data collection activities.

References :

- Acharya, S., Mekker, M., & De Vos, J. (2023). Linking travel behavior and tourism literature: Investigating the impacts of travel satisfaction on destination satisfaction and revisit intention. *Transportation Research Interdisciplinary Perspectives*, 17(December 2022), 100745. <https://doi.org/10.1016/j.trip.2022.100745>
- Armstrong, J. S., & Overton, T. S. (1977). Estimating Nonresponse Bias in Mail Surveys. *Journal of Marketing Research*, 14(3), 396-402. <https://doi.org/10.1177/002224377701400320>
- Bakar, NA, Rahim, MA, Nawi, NMM, Hashim, NAAN, & Velayuthan, SK (2025). Memorable sustainable tourism experiences (MSTE) A mixed-method study. *Turyzm/Tourism*, 35(2), 155-170. <https://doi.org/10.18778/0867-5856.2025.27>
- Baron, M.R., & Kenny, A.D. (1986). The moderator-mediator variable distinction in social psychological research: Conceptual, strategic, and statistical considerations. *Journal of Personality and Social Psychology*, 51(6), 1173-1182.
- Chen, X., Cheng, Z.-F., & Kim, G.-B. (2020). Make it memorable: Tourism experience, fun, recommendation and revisit intentions of Chinese outbound tourists. *Sustainability (Switzerland)*, 12(5), 1-24. <https://doi.org/10.3390/su12051904>
- Cheung, K.L., Ten Klooster, P.M., Smit, C., De Vries, H., & Pieterse, M.E. (2017). The impact of non-response bias due to sampling in public health studies: A comparison of voluntary versus mandatory recruitment in a Dutch national survey on adolescent health. *BMC Public Health*, 17(1). <https://doi.org/10.1186/s12889-017-4189-8>
- Cooper, D. R. (2014). *Business Research Methods* (J. Ducham (ed.); Twelfth ed). www.mhhe.com.
- Gohary, A., Pourazizi, L., Madani, F.F., Eugene, Y., Gohary, A., Pourazizi, L., Madani, F.F., Eugene, Y., & Gohary, A. (2018). Current Issues in Tourism Examining Iranian tourists' memorable experiences on destination satisfaction and behavioral intentions satisfaction and behavioral intentions. 3500. <https://doi.org/10.1080/13683500.2018.1560397>
- Gujarati, DN (2012). *Fundamentals of Econometrics Volume 1* (p. 252).
- Hair, J.F., Black, W., Babin, B., & Anderson, R. (2019). *Multivariate Data Analysis (Eight)*. Pearson Education Limited.
- Hair, J.F., Hult, G.T.M., Ringle, C.M., & Sarstedt, M. (2022). *A Primer on Partial Least Squares Structural Equation Modeling (PLS-SEM) (Third)*. SAGE Publications, Inc.
- Hair, J.F., Risher, J.J., Sarstedt, M., & Ringle, C.M. (2019). When to use and how to report the results of PLS-SEM. *European Business Review*, 31(1), 2-24. <https://doi.org/10.1108/EBR-11-2018-0203>
- Haries, Alfatah et al., 2024. (2024). *Journal of Scientific Research and Development Volume 6, Issue 2, December 2024*. 6(2), 550-560.
- Hull, J. S., & Richins, H. (2016). Mountain tourism: implications and sustainable futures. In *Mountain tourism: experiences, communities, environments and sustainable futures*. <https://doi.org/10.1079/9781780644608.0363>

- Jordan, P. J., & Troth, A. C. (2019). Common method bias in applied settings: The dilemma of researching in organizations. *Australian Journal of Management*, 45(1), 3-14. <https://doi.org/10.1177/0312896219871976>
- Malhotra, N. K., & Birks, D. F. (2007). *Marketing Research: An Applied Approach*. Prentice Hall.
- Mudana, IW, Sinaga, F., & Suarja, IK (2025). Preserving local culture as a strategy for sustainable tourism in Bali. *Indonesian Institute of the Arts, Bali, INDONESIA1*. 4(3), 450-460.
- Papadopoulou, N.M., Ribeiro, M.A., & Prayag, G. (2023). Psychological Determinants of Tourist Satisfaction and Destination Loyalty: The Influence of Perceived Overcrowding and Overtourism. *Journal of Travel Research*, 62(3), 644-662. <https://doi.org/10.1177/00472875221089049>
- Paramita, et all. (2021). *Quantitative research methods (III)*. Widyagama Press.
- Podsakoff, P. M., MacKenzie, S. B., Lee, J. Y., & Podsakoff, N. P. (2003). Common Method Biases in Behavioral Research: A Critical Review of the Literature and Recommended Remedies. *Journal of Applied Psychology*, 88(5), 879-903. <https://doi.org/10.1037/0021-9010.88.5.879>
- Satrya, IDG, Adityaji, R., Susilo, C., & Karya, DF (2024). *International Journal of Sustainable Development and Planning The Role of Authenticity, Local Culture, Tourism Perceived Value, and Memorable Tourism Experience for Heritage Tourism Revisit Intention*. 19(3), 1163-1170.
- Sedgwick, P. (2014). Non-response bias versus response bias. *BMJ (Online)*, 348. <https://doi.org/10.1136/bmj.g2573>
- Soeswoyo, DM, Arafah, W., Oktadiana, H., & Budiman, SF (2025). Cultural preservation as a catalyst for sustainable tourism: Challenges and potentials in Cimande tourism village, Indonesia. 6(2), 161-178.
- Solling, R. (2019). *Variance-Based Structural Equation Modeling (SEM) (Abiratno (ed.); 1st ed.)*. PT. Inkubator Indonesia.
- Suarthana, IKP, Wisnawa, IMB, Karta, NLPA, & Sarukunaselan, K. (2024). Unlocking Loyalty: The Power of Local Culture in Bali Tourism. *Journal of Bali Studies*, 14(2), 498-521. <https://doi.org/10.24843/JKB.2024.v14.i02.p09>
- Suprihatin, E., & Rawi, RDP (2023). Corporate Research Social Responsibility Disclosure in Scopus-Indexed Journals: Critical Thinking Research to Data Analysis. *DiE: Journal of Economics and Management*, 14(1), 95-101. <https://doi.org/10.30996/die.v14i1.8339>
- Zhao, X., Lynch, J. G., & Chen, Q. (2010). Reconsidering Baron and Kenny: Myths and Truths about Mediation Analysis. *Journal of Consumer Research*, 37, 197 - 206.
- Zulvianti, N., Aimon, H., & Abror, A. (2022). The Influence of Environmental and Non-Environmental Factors on Tourist Satisfaction in Halal Tourism Destinations in West Sumatra, Indonesia. *Sustainability (Switzerland)*, 14(15). <https://doi.org/10.3390/su14159185>