

# Perceptions of Foreign Tourists Toward Local Wisdom and Natural Resources for Sustainability of Mount Ijen Banyuwangi Indonesia

<sup>1</sup> Endang Suprihatin, ST, MT, IPM

*Universitas 17 Agustus 1945 Banyuwangi,  
Senior Lecturer*

<sup>2</sup> Amiartuti Kusmaningtyas Dr, Professor

*Universitas 17 Agustus 1945 Surabaya,  
corresponding author*

<sup>3</sup> Nanis Susanti, Dr

*Universitas 17 Agustus 1945 Surabaya  
Associate Professor*

**Abstract:-** Tourism is something that can be offered to tourists to visit a tourist destination. The experience of tourists who are satisfied with the variables of natural products and local services, this study uses a quantitative approach and is a fundamental research tested on the Ijen Banyuwangi mountain tourist attraction in Indonesia which has been successfully designated as part of the UNESCO Global Geopark (UGG), namely as one of the world heritage tourist park areas, with an unknown population using the Lemeshow formula sample calculation obtained a total of 103 respondents, all of whom are foreign tourists with data processing analysis using SEM PLS. The research objective is to test and analyze the influence of environmental and non-environmental factors, namely perceived environmental value, friendly destination performance and sustainability tourism development on foreign tourist satisfaction. The results prove that Perceived environmental value has a significant effect on sustainability tourism development with a t-Statistic value (5.319) greater than the t-Tabell value (1.96) and p-value <0.05. The same effect, namely friendly destination performance, has a significant effect on sustainability tourism development. Tourists really like the natural landscape and the green crater area of Mount Ijen because it has the highest acidity level in the world, this supports the utility theory, namely when tourists feel the benefits of satisfaction both in terms of the natural environment and from the non-environmental side, namely the hospitality of local people who work as sulfur mining laborers who want to greet tourists in the midst of their work activities and also sustainability tourism development has an insignificant effect on tourist satisfaction with a t-Statistic value (0.890) smaller than the t-Tabell value (1.96) and p-value > 0.05. That the perceived value of the environment is still low so that it has not been able to provide a sense of satisfaction in the hearts of foreign tourists, this falsifies the utility theory, it can be seen from the still poorly maintained condition of the environmental ecosystem and cultural heritage around the tourist attraction that there are no supporting waste management facilities so that the cleanliness factor of the natural environment is still not well maintained, besides that the buildings for visitors' rest posts are less well maintained and look using perceived not to support the beauty of the natural environment in the tourist area so that sustainable tourism development still has not touched and felt by tourists who come to visit.

**Keywords:** *sustainability tourism development, perceived environmental value, friendly destination performance.*

## 1. Introduction

The tourism service industry is a sector of special attention that is being promoted and developed by every country in order to increase economic growth [1], the tourism business has emerged as a major driver of the country's economic growth this is because countries are increasingly proactive in improving governance standards to increase their tourism competitiveness in attracting foreign tourist inflows [2]. Organic tourism such as mountain nature-based tourism is becoming a stronger consideration to visit than the image of artificially constructed destinations [3]. Friendly service to tourists is a special allure to increase tourist visits. The application of friendly services will have an impact on positive environmental values such as building better road infrastructure and focusing on providing basic supporting ecosystems for tourism [4]. Satisfaction with a product can occur when tourists feel the experience of traveling with a pleasant environmental value, the tourist attraction is a pleasant place (friendly), when the manager carries out sustainable development of the tourist attraction, especially the tourist attraction has a positive image [5]. Sustainability tourism is the most important and fundamental idea that contains a summary of ideas to increase concern for the environment and its natural resources, as a concern for the health of the earth globally [6].

Consuming or using quality products will provide more benefit value to consumers and the results have a significant effect on customer satisfaction [7]. There is a positive and significant effect of location variables or places visited by tourists on tourist consumer satisfaction [8]. Research on the satisfaction of tourists visiting West Sumatra Indonesia with an unknown population took a sample of 690 respondents, the results stated that tourists want the new tourist attractions visited to be different from the tourist objects that have been visited, both in terms of nature and the arts and cultural attractions of the community, so that tourists will get a new experience that is unforgettable while bringing the impact of satisfaction benefits [9]. The perception of tourists is satisfied with the variable of local natural products and the price given, this is because the product offered is equivalent or comparable to the price given [10].

In Utility theory, it is conveyed that the satisfaction felt when consuming/using a product (goods/services) is due to the benefits of the product (goods/services). Based on theoretical studies in the development of Utility theory, the satisfaction felt by consumers is applied in the field of tourism services [11]. The use of continuous information support about the products offered is very important in order to have the use value or satisfaction benefits felt by customers [12]. Consumer satisfaction in tourism is reflected in the higher the income of tourists, the higher the value of the correlation coefficient on travel satisfaction because tourists will be able and not reluctant to pay for all access to the uniqueness and local culture offered [13]. Tourist attraction supporting facilities provided to consumers have a significant positive effect on customer satisfaction, the more attractions and tourist experiences offered, the more unforgettable the tourist experience will be [14].

Both tourists and residents want the best experience in traveling [15]. Tourist satisfaction has an impact on the high or low tourism season caused by weather factors and human disasters that cause damage to the natural environment [16]. Research that provides results that one of the biggest factors causing a decrease in the number of tourist visitors is due to the dissatisfaction of consumers or foreign tourists [17]. Efforts so that these tourists get satisfaction with the tourist destinations they visit and have a good assessment of the tourist destination environment (perceived destination value), namely by providing friendly tourist services to visitors (friendly performance destination) [18], in reality in tourist destinations it turns out that non-Muslim tourists who come to visit exceed Muslim tourists [19]. The behavior of dispositional optimism and explanatory optimism towards environmentally friendly tourism, from 400 tourist respondents in Turkey, gave the result that dispositional optimism gave better results than explanatory optimism [20].

Tourists who get satisfaction when enjoying the beauty of nature, will contribute back to the environment to maintain sustainable tourism [21]. A review of facilities that support tourism activities and direct observation of tourist objects is used as material for analysis in structuring tourism to attract visitors who come [22]. On the territory of Poland, 364 important landscape places associated with environmental, cultural, aesthetic / scenic, or personal reasons, using indicators of naturalness, uniqueness and diversity proved that forest and mountain landscapes obtained the best results [23]. As the main component in tourism development, the community plays an important role in supporting regional tourism development, especially in developing local potential based on

natural resources for sustainable tourism development [24]. Analysis of the sustainability of nature tourism, in terms of ecological, social, economic, potential resources, legal and institutional dimensions [25]. The purpose of tourism development is not only to increase economic growth but also to preserve nature and the environment, there are still many tourism support facilities that are not in accordance with the zoning or area so that they can have a negative impact on the environment [26]. Based on data collected on typical nature-based tourist destinations in China, it is revealed that there is a positive relationship between the emotions of tourists or tourists towards a sense of caring and taking responsibility for the environment they visit [27]. Environmental sensitivity has a significant positive effect on environmental responsible behavior [28].

Based on theoretical studies from the development of Utility theory about the value of use or the value of benefits [29] that will be obtained by consumers when traveling and strengthened by some of the results of previous research on services that have an impact on tourist satisfaction so that the tourism offered can run well and become a favorite destination frequented by foreign tourists in realizing sustainable natural tourism, this research is feasible and important to be carried out on the Ijen Banyuwangi mountain tourism object in Indonesia, because it has a natural phenomenon in the form of blue fire bursts that are very rare in the world and have different unique natural characteristics [30].

There are several potentials found in the research in the tourist area of the Ijen Mountains of Banyuwangi Indonesia which are grouped into three categories, namely the natural potential of the protected forest and crater zone, artificial potential, and the potential of indigenous culture owned by the local community. The results of this analysis are used to determine several special interest tourism activities that are feasible and can be carried out in the Ijen Crater as a tourist destination [31]. Ijen Crater Tourism park destination Banyuwangi Indonesia is that tourists are very fascinated by the beauty and uniqueness of nature, but the number of visitors is still small and the competitiveness of this tourist attraction is still low. The small number of visits causes the Ijen Crater Tourism Park to be characterized by special interest tourism which makes tourists happy with a special adventure, where reaching the crater requires a very heavy struggle [32]. An interesting phenomenon about the current tourist attraction of Mount Ijen and very supportive for this research is that the natural attractions of the Ijen mountains located in the Banyuwangi Regency area which are visited by many foreign tourists or tourists every day, and on May 24, 2023 at the UNESCO annual session in Paris, France, declared that Mount Ijen was officially designated as part of the UNESCO Global Geopark (UGG), namely as one of the world heritage tourist park areas [33].

This research by taking tourist objects on Mount Ijen is Fundamental research or basic research with the basis for developing knowledge from previous research, namely [9] which examines the direct influence of perceived environmental and non-environmental values, halal-friendly destination performance, sustainable tourism development, and halal destination image on tourist satisfaction in halal tourist destinations in West Sumatra Indonesia. The results showed that sustainable tourism development did not mediate the influence between halal-friendly destination performance and tourist satisfaction. The limitation of previous research discussed is still the lack of focus on the segmentation of visiting research subjects, namely using a sample of local tourists, therefore as a development of previous research, the samples taken are more focused on taking subjects specifically from foreign tourists, as well as research objects that use urban tourist areas in the West Sumatra region of Indonesia, which are then tested on the tourist attraction of the Ijen Mountains Banyuwangi Indonesia.

The gap that can be taken from this research is that there is research that takes the subject of conceptualizing the theory of the experience of Muslim tourists who meet religious needs for halal-friendly tourism must be developed with new constructions outside the Muslim context [34]. In taking research subjects that provide studies only on the assessment of muslim friendly satisfaction variables must be developed again because statistical evidence shows that the number of non-Muslim foreign tourists is far above Muslim tourists [19]. In future research studies, it is necessary to understand the rationality and balance between Muslim and non-Muslim tourism in more detail [35]. As well as differences in location or research objects between urban and mountain tourism objects, and research subjects consisting of domestic tourists and foreign tourists [9]. The selection of Muslim variables is adjusted to meet the tourism needs of foreign tourists who come to visit the Ijen Banyuwangi mountain area in Indonesia.

## 2. Objectives

The purpose of this research is to develop a conceptual framework model by replicating and modifying previous research conducted by [9]. The next stages carried out are to test and analyze:

1. The effect of perceived environmental value on sustainability tourism development in the Ijen Mountains of Banyuwangi.

### **H1: Perceived Environmental Value berpengaruh terhadap Sustainability Tourism Development**

In research [9], the need for tourists to experience the introduction of nature and the essence of nature-based tourism and the development of sustainable tourism is important to be a concern of tourist destination managers, so that development is in line with regional tourism development. Research that looks at damage to environmental impacts due to the number of tourist arrivals or tourists who exceed visitor capacity [36], requires various synergistic management efforts between tourism managers and visitors in order to realize responsible behavior in the tourist attractions they visit while requiring policy support from the local government. The difference is in other studies that convey the results of the negative effects of tourism such as damage to the natural and social environment, even to the point of causing psychological effects of tourism phobia, so it is necessary to prove that the policy of quality institutions and good performance tourism will change the negative stigma of the adverse effects of tourism so that the environment can be maintained in the long term (Sustainability), [37].

2. The influence of friendly destination performance on sustainability tourism development in the Ijen Mountains of Banyuwangi.

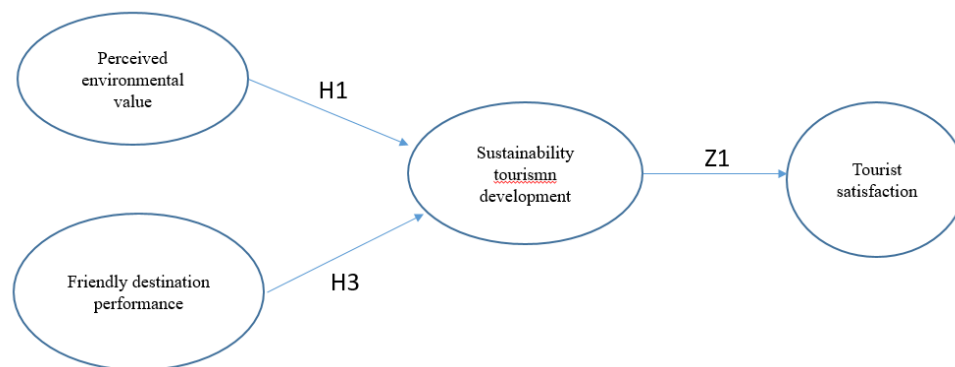
### **H2: Friendly Destination Performance berpengaruh terhadap Sustainability Tourism Development**

Research on halal friendly destinations on tourist visits to tourist destinations will have an impact on the environment and the hospitality response of local communities combined so that the results support sustainable tourism [9]. Now is the time for a win-win solution to promote the development of healthy and sustainable tourism activities and realize the situation of winning the pandemic storm, where tourist destinations develop economically while promoting their tourist destinations [38]. One of the studies that support friendly tourist destinations is conducted by this is very important for tourists, especially those who are seniors, to get satisfaction from two sides, namely from beautiful tourist scenery and the second is the support of local people and friendly services [39].

3. The effect of sustainability tourism development on tourist satisfaction in the Ijen Mountains of Banyuwangi

### **H3: Sustainability Tourism Development effect to Tourist Satisfaction.**

Tourism contributes significantly to both national wealth and cultural diffusion. However, whether institutional quality moderates the impact of tourism on economic growth has not received adequate academic attention, the results of a study conducted by [40] by taking world bank data on 33 countries in the world, resulting in the Dumitrescu-Hurlin panel causality test applied to check the robustness of the empirical results show that a 1% increase in tourist arrivals or air freight causes an increase of 0.41% and 0.17%. in economic growth, the term between institutional quality and tourist arrivals is indicated to reverse the impact of tourism on growth from positive to negative in high-income countries and depends on the tourism sector. The value and satisfaction felt by tourists are important elements in shaping the tourism experience. Tourists who are satisfied with the travel experience will be happy with the perceived environmental value so that it can encourage environmentally responsible behavior [9]. Studies on environmental responsible behavior or environmentally responsible behavior tested on tourists visiting nature-based tourism in China adopt a moral or rational perspective, the results of the study have marginalized the effect of the emotional state of tourists to be more concerned about the natural environment, [41].



**Figure 1. Conceptual Framework**

### 3. Methods

Based on the nature of scientific exploration, Fundamental research or basic research or pure research is research aimed at supporting the advancement of science and aims to develop science by referring to previous research conducted by [9]. Basic research essentially seeks further knowledge from previously conducted research [42]. Quantitative research tests several variables and question indicators using statistical data in the form of numbers to be tested objectively by examining the relationship between several variables, where each variable is then tested and measured with other variables using certain statistical procedure instruments so as to produce a final report that has a set structure consisting of introduction, literature and theory, methods, results, and discussion [43]. Every research must be clear in using validity and reliability instruments in accordance with the hypothesis taken [44]. Based on the nature of the explanation, this research is causal research, because it examines the effect of the causal relationship between exogenous variables on endogenous variables through mediating variables using hypothesis testing [45].

#### Object of Research

This research was conducted in the Mount Ijen area located in Banyuwangi Regency, an area on the eastern tip of the island of Java (sun east of Java) bordering Bali province of Indonesia.



Source: shutterstock.com/mazzur

**Figure 2. Mount Ijen Crater**

#### Population and Sample

The population in this study were foreign tourists visiting Mount Ijen Banyuwangi whose numbers were unknown, by taking samples by chance at the research location along with data collection, sampling was carried out based on the availability of participants who wanted to be involved in the study [42]. The sampling technique uses the cross section method, which is a sample data collection technique carried out at a certain time, the use of samples based on the Lameshow formula with a sampling error rate of 10%, with the formula [46] which is as follows:

Formula Description:

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

n = Number of samples; z = Standard value = 1.96; p = Maximum probability = 50% = 0.5; d = alpha (0.10) or sampling error = 10%

From the calculation results, the number of respondents was 103 foreign tourists.

### Perceived Environmental Value

The perceived environmental value in tourism is a natural environment that is still pristine and has a function well in accordance with the existence of habitat in its natural environment so as to provide the impact of both physical and non-physical welfare benefits for individuals who visit it. [5]. Tourists who feel satisfaction with the travel experience will be happy with the perceived environmental value so that it can encourage responsible behavior towards the environment they visit [9].

### Friendly Destination Performance

A friendly and memorable tourist destination is one of the most valuable experiences for tourists, according to [47] the appearance of a friendly tourist destination is to receive hospitality from the local community family around the tourist destination, the hospitality of the residents contributes greatly to an unforgettable travel experience. Tourists are involved in the culture of the community and feel its authenticity by receiving and greeting tourists with love, warmth, and ready to help, giving attention with special feelings from the heart.

### Sustainability Tourism Development

Sustainable tourism is tourism that pays attention to the current economic, socio-cultural, and environmental impacts into the future. Community participation is part of one of the principles of sustainable tourism development [48]. Sustainable tourism development is the concept of tourism destination performance that aims to increase economic growth and more comprehensive production, with reference to the readiness of tourist destinations for the development of global tourism markets, efficiency and management of natural resources, and also improving the quality of social and environmental social improvements, through tourism. sustainable, the behavior of tourism in the future will maintain the sustainability of natural environmental objects and at the same time maintain the satisfaction of visiting tourists [9]. Sustainable tourism is also interpreted as a whole of environmental, social, cultural, and economic assets in order to be utilized by local communities and tourists for current and future generations.

### Tourist satisfaction

Tourist satisfaction is a feeling of disappointment or pleasure felt by someone after a tourist trip, this feeling arises because of a perceived difference in the performance of a tourist service. Tourist satisfaction is a measure of the overall opinion of tourists about the quality or performance of each tourist destination [9]. Satisfaction is the value felt by most people as indicated by the greatest numerical value and creates interest to do but with little risk [49].

## 4. Results

### Profil Responden

Respondents in this study were foreign tourists from abroad who came to visit Mount Ijen tourist attraction in Banyuwangi Regency, East Java Indonesia, totaling 103 foreign tourists, then a resume table was made to facilitate the grouping of respondent profiles based on the characteristics of age, gender, education level, profession and country of origin of the respondents.

**Table 1. Resume Respondent Profile**

Respondent Profile				
No.	Respondent Characteristics		Frequency	%
1	Age	10-20	14	13,59%
		20-30	75	72,82%
		30-40	8	7,77%



		40-50	3	2,91%
		50-60	3	2,91%
2	Gender	Male	60	58,25%
		Female	43	41,75%
3	Education Level	Bachelor	53	51,46%
		Magister	25	24,27%
		Senior High School	21	20,39%
		Unknown	4	3,88%
		Doctoral	0	0,00%
4	Profession	Unknown	41	39,81%
		Student	35	33,98%
		Freelance	15	14,56%
		Photographer	2	1,94%
		Model	2	1,94%
		Enginer	2	1,94%
		Fisioterapi	2	1,94%
		Sales	1	0,97%
		Staff	1	0,97%
		Chef	1	0,97%
		Retired	1	0,97%
5	Country of Origin	Austria	15	14,56%
		Jerman	13	12,62%
		Norway	10	9,71%
		Amerila	9	8,74%
		Swedia	9	8,74%
		Russia	8	7,77%
		Belanda	7	6,80%
		Inggris	7	6,80%
		Italia	7	6,80%
		Australia	6	5,83%
		Spayol	4	3,88%
		Argentina	3	2,91%
		Kanada	2	1,94%
		Turki	1	0,97%
		Portugal	1	0,97%
		Timor Leste	1	0,97%

Based on Table 1 above, the age of tourist visitors to Mount Ijen Banyuwangi Indonesia is dominated by the age between 20-30 years. Male gender is greater in number, as much as 58%, based on country of origin, European continent citizens are countries that often visit, namely Austria, Germany and Norway.

#### Descriptive analysis of respondents answers

All variables and indicators of questions filled in by respondents as in the following table;

Table 2. Respondents' answers for all variables

Variable	Item	Respondent's Answer Distribution										Mean
		1		2		3		4		5		
		f	%	f	%	f	%	f	%	f	%	
Perceived environmental value (X1)	I feel become one with nature when I visited Mount Ijen, Banyuwangi, Indonesia. (X1.1)	3	0,03	2	0,02	10	0,10	74	0,7	14	0,14	3,912621
	The Mount Ijen area of Banyuwangi Indonesia has grown my sense of concern for the authenticity of nature. (X1.2)	3	0,03	4	0,04	8	0,08	45	0,4	43	0,42	4,213592
	I feel satisfied spending time exploring the beauty of Mount Ijen, Banyuwangi, Indonesia. (X1.3)	1	0,01	4	0,04	3	0,03	38	0,4	57	0,55	4,417476
	The beauty of Mount Ijen area in Banyuwangi Indonesia is worth fighting. The journey is difficult, the roads that are steep and fraudulent is a challenge for me. (X1.4)	8	0,08	9	0,09	8	0,08	29	0,3	49	0,48	4,019417
Mean of perceived environmental value (X1)												4,140777
Friendly destination performance (X2)	Communities around Mount Ijen Banyuwangi Indonesia give attention to a foreign tourist by greeting us. (X2.1)	5	0,05	0	0,00	11	0,11	49	0,5	38	0,37	4,106796
	I am impressed by the attitude of the people around Mount Ijen Banyuwangi Indonesia who cares about us by greeting even though they are in their daily activities. (X2.2)	4	0,04	2	0,02	10	0,10	40	0,4	47	0,46	4,213592
	Preventive security management at Mount Ijen Banyuwangi Indonesia guarantees my safety (X2.3)	2	0,02	25	0,24	23	0,22	32	0,3	21	0,2	3,446602
	The environmental ecosystem around Mount Ijen Banyuwangi Indonesia is very clean and well maintained. (X2.4)	13	0,13	29	0,28	9	0,09	24	0,2	28	0,27	3,203883
Mean of friendly destination performance (X2)												3,742718
Sustainability tourism development (Z1)	The attitude of the local community supports Mount Ijen Banyuwangi Indonesia become a sustainable tourist destination (Z1.1)	2	0,02	4	0,04	7	0,07	81	0,8	9	0,09	3,912621
	I am willing to promote Mount Ijen Banyuwangi so that it can develop as a sustainable tourism destination. (Z1.2)	0	0,00	3	0,03	13	0,13	41	0,4	46	0,45	4,262136
	I am willing to promote to friends and through social media that Mount Ijen Banyuwangi Indonesia is a tourist destination that must be preserved their sustainability. (Z1.3)	1	0,01	3	0,03	11	0,11	52	0,5	36	0,35	4,15534
	I don't mind with the regulations that apply so that the sustainability of tourist destinations on Mount Ijen Banyuwangi are maintained (Z1.4)	0	0,00	4	0,04	14	0,14	58	0,6	27	0,26	4,048544
	The regulations that apply to Mount Ijen Banyuwangi are not too restrictive. (Z1.5)	1	0,01	8	0,08	47	0,46	24	0,2	23	0,22	3,582524
Mean of sustainability tourism development (Z1)												3,992233
Mean of destination image (Z2)												
Tourist satisfaction (Y)	I have a very pleasant experience when I am traveling on Mount Ijen, Banyuwangi, Indonesia (Y1.1)	4	0,04	1	0,01	6	0,06	67	0,7	25	0,24	4,048544
	I feel the happiness when I am on Mount Ijen, Banyuwangi Indonesia beyond the happiness of visiting other tourist attractions. (Y1.2)	1	0,01	8	0,08	38	0,37	23	0,2	33	0,32	3,76699
	The natural beauty of Mount Ijen Banyuwangi tourism is the best that I have ever visited compared to other mountains. (Y1.3)	2	0,02	13	0,13	31	0,30	35	0,3	22	0,21	3,601942
	It turned out that my trip in enjoying the beauty of the tourist area of Mount Ijen, Banyuwangi, Indonesia, exceeded my previous expectations (Y1.4)	4	0,04	1	0,01	10	0,10	51	0,5	37	0,36	4,126214
Mean of tourist satisfaction (Y)												3,885922

Source: Data processed, 2023



Based on table 2 above, the Likert scale is used to measure the attitudes, opinions, influences and perceptions of a person or group of people about social phenomena. The Likert scale contains 5 (five) levels of preference for answer choices, namely: (1). Strongly disagree, (2). Disagree, (3). Neutral, (4). Agree, and (5). Strongly Agree.

### Convergent Validity Test Results.

The test results of all instruments on each are presented in the following table:

**Table 3. Convergent Validity Test Results**

Variabel	Indikator	Factor Loading	AVE	Description
Perceived Environmental Value (X1)	X1.1	0,866	0,619	Valid
	X1.2	0,746		
	X1.3	0,796		
	X1.4	0,732		
Friendly Destination Performance (X2)	X2.1	0,866	0,628	Valid
	X2.2	0,899		
	X2.3	0,713		
	X2.4	0,667		
Sustainability Tourism Development (Z1)	Z1.1	0,853	0,689	Valid
	Z1.2	0,857		
	Z1.3	0,827		
	Z1.4	0,781		
	Z1.5	0,568*		
Tourist satisfaction (Y)	Y1.1	0,719	0,645	Valid
	Y1.2	0,790		
	Y1.3	0,808		
	Y1.4	0,887		

Source: Data processed, 2023

Based on Table 3. it can be seen that the questionnaire indicators. in this study have a factor loading value above 0.6, it can be concluded that the questionnaire in this study. meets the validity requirements. convergent and these indicators can be said. valid as a measure of latent variables. Likewise. when viewed from the Average Variance Extracted (AVE). Variables in this study have a value. AVE value above 0.5. so it is certain that the questionnaire in this study meets. convergent validity. Therefore, it can be stated that overall the Indicators that are built. able to accurately explain the variables.

### Goodness of Fit Model Test

The test results can be seen in the following table:

**Table 4. Goodness of Fit Model**

Variabel	R <sup>2</sup>
Sustainability Tourism Development (Z1)	0,600
Tourist satisfaction (Y)	0,701
$Q^2 = 1 - (1 - R1^2) \times (1 - R2^2)$	
$Q^2 = 1 - (0,600^2) \times (0,701^2)$	
$Q^2 = 1 - (0,360) \times (0,491)$	
$Q^2 = 1 - 0,177$	
$Q^2 = 0,823$	

Source: Data processed, 2023

The data in Table 4. above illustrates that the R<sup>2</sup> sustainability tourism development variable has a value of 0.600 or 60.0%. This value explains that the sustainability tourism development variable can be formed by perceived environmental value, and friendly destination performance by 60.0%. While the remaining percentage of 40.0% is the contribution of other variables that are not related in this study.

$R^2$  tourist satisfaction variable shows a value of 0.701 (70.1%). This explains the diversity of tourist satisfaction variables can be formed through the role of perceived environmental value, friendly destination performance and sustainability tourism development with an accuracy of 70.1%. While the remaining percentage of 29.9% is the contribution of other variables that have no connection with this study.

The  $Q^2$  value in this study is 0.823 or 82.3%. This value also indicates that the diversity of perceived environmental value, friendly destination performance and sustainability tourism development variables has an accuracy of 82.3% in shaping tourist satisfaction. While the remaining 17.7% is the contribution of other variables that have no relevance to this study.

### Hypothesis Testing Results of Direct and Moderating Effects

Hypothesis testing intends to test the causal relationship developed in the model (framework), namely the effect of exogenous variables on endogenous variables. Hypothesis testing in this study uses the T-statistic value and the significance value (p-value), where the assessment is that the T-statistic value must be greater than the T-table (1.96) and the p-value  $<0.05$ , then the hypothesis is accepted. The results of hypothesis testing obtained based on the PLS bootstrapping method. The test results are presented in the following table:

**Table 5. Hasil Pengujian Hipotesis Pengaruh Langsung**

HP	Correlation between Variables	Original Sample	T Statistics	P Values	Description
H1	Perceived Environmental Value (X1) → Sustainability Tourism Development (Z1)	0,523	5,319	0,000	Accepted
H2	Friendly destination Performance (X2) → sustainability tourism development (Z1)	0,338	4,590	0,000	Accepted
H3	Sustainability Tourism Development (Z1)→ Tourist Satisfaction (Y)	0,109	0,890	0,374	Rejected

Source: Data processed, 2023

Based on the results of direct hypothesis testing, which have been presented in the table above, the detailed analysis is described in the following explanation:

#### H1: Perceived Environmental Value has an affect on Sustainability Tourism Development

The hypothesis result of the direct effect of perceived environmental value on turnover intention has a path coefficient value of 0.523, a t-Statistic value of 5.319 and a p-value of 0.000. Given that the t-Statistic value (5.319) is greater than the t-Tabell value (1.96) and the p-value  $<0.05$ , empirically this value indicates that perceived environmental value directly has a significant effect on sustainability tourism development. That is, the higher the perceived environmental value owned by foreign tourists, the higher the sustainability tourism development. Thus hypothesis 1 is accepted.

#### H2: Friendly Destination Performance has an affect on Sustainability Tourism Development

The results of the hypothesis of the direct effect of friendly destination performance on turnover intention are accepted by having a path coefficient value of 0.338, a t-Statistic value of 4.590 and a p-value of 0.000. Considering that the t-Statistic value (4.590) is greater than the t-Tabell value (1.96) and p-value  $<0.05$ , empirically this value indicates that friendly destination performance directly has a significant effect on sustainability tourism development. That is, the higher the friendly destination performance perceived by foreign tourists, the higher the sustainability tourism development. Thus hypothesis 2 is accepted.

#### H3: Sustainability Tourism Development has an effect on Tourist Satisfaction

The results of the hypothesis of the direct effect of sustainability tourism development on tourist satisfaction have a path coefficient of 0.109, a t-statistic value of 0.890 and a p-value of 0.374. Given that the t-Statistic value

(0.890) is smaller than the t-Tabell value (1.96) and  $p\text{-value} > 0.05$ , empirically this value indicates that sustainability tourism development directly has an insignificant effect on tourist satisfaction, thus hypothesis 5 is rejected.



Sources: Ambrosius 2023

**Figure 3. Sulfur Miners**

The results of observations in the field prove that the management of environmental ecosystems carried out on Mount Ijen Banyuwangi is still low, natural resources that continue to be mined in figure 3, resulting in the condition of the environmental ecosystem is not well maintained.

## 5. Discussion

That the perceived environmental value variable is significant with sustainable tourism development, although there are differences in environmental aspects in previous reference research [9] which uses urban objects and respondents who come from domestic tourists, while the research object at Mount Ijen uses a mountainous tourist attraction area with respondents purely from foreign tourists, but from empirical results prove that there are significant support results between perceived environmental value variables on sustainability tourism development. In line and synergistic together between perceived environmental value that supports sustainability tourism development, tourists feel one with the natural environment, that is, if the tourism environment with natural wealth of unique blue fire bursts is well managed and sustainable, it will have a positive impact on tourism, namely the satisfaction of tourists when enjoying the natural atmosphere that is felt as well as tourists want to promote the natural beauty of Mount Ijen Banyuwangi. To attract the number of tourists to come to visit besides using friendly variables and indicators, it is necessary to segment visitors so that the existing environment can adjust to the character of visiting tourists, this is in line and supports the research of [35]. And also supports research on the journey of tourists in making tourist visits to foster feelings of happiness when getting a friendly travel experience [50].

Friendly destination performance that has a significant effect on sustainability tourism development, the empirical results of this influence show support for previous research [9], and at the same time have justified the development of utility theory, that services in the form of friendly greetings that have been given by local residents and sulfur miners to tourist visitors to Mount Ijen provide a benefit value in the form of feeling happy and feeling considered part of their own family, giving rise to a sense of satisfaction in the hearts of tourists.

Furthermore, from this positive influence together between local residents, miners, tourist visitors and tourism managers will provide support by preserving nature through the management of the natural tourist environment around Mount Ijen properly and sustainably and in the long term. that sustainability tourist development is still not done and managed properly, thus reducing the level of satisfaction felt.

The utility theory used as the basis or grand theory in the development of mountain tourism satisfaction research at Mount Ijen Banyuwangi Indonesia, has been proven not to support the results of this study, namely that sustainable tourism development is still low, it will have an impact on the lack of benefits of foreign tourist satisfaction. so that automatically the value or value owned by the government or tourism management companies is also still low, and vice versa [29]. So the results of research conducted on Mount Ijen Banyuwangi with the subject of tourist respondents who are purely from abroad are proven to falsify the utility theory and based on

references to the results of previous studies show a positive relationship between sustainable tourism development and tourist satisfaction, while the results of this study provide insignificant effect results, so this research also does not support previous research [9].

## References

- [1] M. Bradu, "Competitivitatea economiei naționale în proces de renaștere," vol. 338, no. 478, pp. 80–86, 2021.
- [2] V. Swamy and L. M.A, "Does good-governance influence foreign tourist inflows?," *Tour. Anal.*, Apr. 2022, doi: 10.3727/108354222X16484969062783.
- [3] I. Bilynets, L. Knezevic Cvelbar, and S. Dolnicar, "Can publicly visible pro-environmental initiatives improve the organic environmental image of destinations?," *J. Sustain. Tour.*, vol. 31, no. 1, pp. 32–46, 2023, doi: 10.1080/09669582.2021.1926469.
- [4] S. Purnomo, E. S. Rahayu, A. L. Riani, S. Suminah, and U. Udin, "Empowerment model for sustainable tourism village in an emerging country," *J. Asian Financ. Econ. Bus.*, vol. 7, no. 2, pp. 261–270, 2020, doi: 10.13106/jafeb.2020.vol7.no2.261.
- [5] J. S. Hull and H. Richins, *Mountain tourism: implications and sustainable futures*. 2016. doi: 10.1079/9781780644608.0363.
- [6] M. Mowforth and I. Munt, *Tourism and Sustainability*. 2015. doi: 10.4324/9781315795348.
- [7] I. Cahyo, M. E. Supriyadi, T. C. Anggraeni, and I. Purwanto, "Pengaruh Kualitas Produk, Citra Merek Dan Harga Terhadap Kepuasan Konsumen Pada Produk Kosmetik Emina Di Bekasi," *J. Ilm. Multidisiplin*, vol. 2, no. 01, 2023, doi: 10.56127/jukim.v2i01.351.
- [8] H. D. H. Hapsari, N. R. Ningrum, D. A. Setiawan, and C. W. Utomo, "Pengaruh Lokasi, Harga dan Kualitas Pelayanan terhadap Kepuasan Konsumen Art Samurai Koi Yogyakarta," *UPY Bus. Manag. J.*, vol. 2, no. 1, 2023, doi: 10.31316/ubmj.v2i1.4241.
- [9] N. Zulvianti, H. Aimon, and A. Abror, "The Influence of Environmental and Non-Environmental Factors on Tourist Satisfaction in Halal Tourism Destinations in West Sumatra, Indonesia," *Sustain.*, vol. 14, no. 15, 2022, doi: 10.3390/su14159185.
- [10] N. M. Suma Riyanti, "Pemasaran Makanan Lokal Sebagai Produk Daya Tarik Wisata Kuliner Di Kawasan Wisata Tanah Lot," *J. Penelit. Agama Hindu*, vol. 1, no. 1, 2017, doi: 10.25078/jpah.v1i1.141.
- [11] P. S. Bakti and A. Wahyudi, "Utilitas Konsumen Muslim," *Al-Kharaj J. Ekon. Keuang. Bisnis Syariah*, vol. 4, no. 3, pp. 853–866, Jan. 2022, doi: 10.47467/alkharaj.v4i3.742.
- [12] S. Sadic, A. Puska, and A. Beganovic, "Information support model and its impact on utility, satisfaction and loyalty of users," *Eur. J. Appl. Econ.*, vol. 13, no. 2, 2016, doi: 10.5937/ejae13-10675.
- [13] - Yusdin, - Budiyanto, and - Rosmawati, "Hubungan Umur, Tingkat Pendidikan Dan Pendapatan Dengan Kepuasan Pengunjung Wisata Pantai Membuku Di Kabupaten Buton Utara," *J. Sos. Ekon. Perikan.*, vol. 6, no. 4, 2022, doi: 10.33772/jsep.v6i4.23016.
- [14] R. Yulita and Safrizal, "Pengaruh Kualitas Pelayanan, Harga, Dan Fasilitas Terhadap Kepuasan Konsumen Pada Grand Hawaii Hotel Pekanbaru," *J. Ilm. Multidisiplin*, vol. 2, no. 01, 2023, doi: 10.56127/jukim.v2i01.455.
- [15] F. A. N. Valverde and A. C. Lama, "Over tourism in the city of granada?: An analysis of the perception of tourists, residents and local political parties," *Cuad. Geogr.*, vol. 60, no. 1, 2020, doi: 10.30827/cuadgeo.v60i1.13717.
- [16] Dwi Debora Sitanggang, "Study of Seasonality Tourism in Simanindo Sub-district, Samosir Regency," *Int. J. Archit. Urban.*, vol. 5, no. 1, 2021, doi: 10.32734/ijau.v5i1.6031.
- [17] F. Javier, "Jumlah kunjungan wisman ke Indonesia th. 2019 - 2022," *Tempo.co*, Indonesia, p. 1343, 2022. [Online]. Available: <https://data.tempo.co/data/1343/bps-kunjungan-wisatawan-asing-pada-2021-terendah-dalam-5-tahun-terakhir>
- [18] I. Mohammad Ali, N. A. Mohd Radzuan, M. F. Mat Yasin, W. S. Z. Wan Hamdan, and M. A. Hassin,

- “Sustainable Facilities Management for Muslim Friendly Tourism and Hospitality,” *Int. J. Acad. Res. Bus. Soc. Sci.*, vol. 12, no. 11, Oct. 2022, doi: 10.6007/ijarbs/v12-i11/14885.
- [19] A. A. Asthu and R. Adwiyah, “Analysis Of Muslim Friendly Tourism Indicators Toward The Number Of Foreign Tourist Visitations,” *Amwaluna J. Ekon. dan Keuang. Syariah*, vol. 5, no. 1, pp. 13–28, 2020, doi: 10.29313/amwaluna.v5i1.5988.
- [20] F. Rafiq, S. K. Chishty, and M. Adil, “Explanatory or Dispositional Optimism: Which Trait Predicts Eco-Friendly Tourist Behavior?,” *Sustain.*, vol. 14, no. 5, Mar. 2022, doi: 10.3390/su14052994.
- [21] L. S. Solihin, T. Kusumastanto, A. Fauzi, and F. Yulianda, “Kontribusi Payment For Environment Services (Pes) Terhadap Keberlanjutan Wisata Selam Di Kawasan Konservasi Laut Gili Matra,” *J. Kebijak. Sos. Ekon. Kelaut. dan Perikan.*, vol. 9, no. 2, 2019, doi: 10.15578/jksekp.v9i2.7621.
- [22] A. Rauf, “Do tourism development, energy consumption and transportation demolish sustainable environments? Evidence from Chinese provinces,” *Sustain.*, vol. 13, no. 22, 2021, doi: 10.3390/su132212361.
- [23] I. Solecka, T. Rinne, R. Caracciolo Martins, M. Kytta, and C. Albert, “Important places in landscape – investigating the determinants of perceived landscape value in the suburban area of Wrocław, Poland,” *Landsc. Urban Plan.*, vol. 218, 2022, doi: 10.1016/j.landurbplan.2021.104289.
- [24] S. N. Hamzah, S. Nursinar, and N. F. Ahmad, “Tingkat Partisipasi Masyarakat Terhadap Pengelolaan Wisata Pantai Minanga Kabupaten Gorontalo Utara,” *J. Sos. Ekon. Kelaut. dan Perikan.*, vol. 17, no. 1, 2022, doi: 10.15578/jksekp.v17i1.10333.
- [25] F. F. Muhsoni, M. Zainuri, and I. W. Abida, “Evaluasi Pemanfaatan Pelabuhan Kamal Untuk Wisata Bahari Pasca Pembangunan Jembatan Suramadu Menggunakan Pemodelan Rappfish,” *J. Kebijak. Sos. Ekon. Kelaut. dan Perikan.*, vol. 11, no. 1, 2021, doi: 10.15578/jksekp.v11i1.8230.
- [26] I. A. P. Widiati and I. Permatasari, “Strategi Pengembangan Pariwisata Berkelanjutan (Sustainable Tourism Development) Berbasis Lingkungan Pada Fasilitas Penunjang Pariwisata di Kabupaten Badung,” *KERTHA WICAKSANA*, vol. 16, no. 1, 2022, doi: 10.22225/kw.16.1.2022.35-44.
- [27] C. Gezhi and H. Xiang, “From good feelings to good behavior: Exploring the impacts of positive emotions on tourist environmentally responsible behavior,” *J. Hosp. Tour. Manag.*, vol. 50, pp. 1–9, Mar. 2022, doi: 10.1016/J.JHTM.2021.11.017.
- [28] W. H. Putra and F. E. Saputra, “Pengaruh Daya Tarik Wisata, Kepekaan Lingkungan, dan Kepuasan Layanan Terhadap Keterikatan Tempat Serta Implikasinya Pada Sikap Berprilaku Bertanggung Jawab Lingkungan,” *J. Sains Pemasar. Indones. (Indonesian J. Mark. Sci.)*, vol. 19, no. 1, 2020, doi: 10.14710/jspi.v19i1.1-14.
- [29] P. C. Fishburn, *Utility theory For Decision Making*, 23 of 130. New York: John wiley & Sons Inc, 1970.
- [30] E. Suprihatin and A. Hamid, “Rebound Model To Toward Regional Economic Resurrection Post Covid-19 Pandemic in Banyuwangi Regency,” *Die*, vol. 13, no. 2, pp. 206–219, 2022, doi: 10.30996/die.v13i2.7302.
- [31] B. Madafuri, “Pengembangan Kawasan Kawah Ijen Sebagai Destinasi Wisata Di Kabupaten Banyuwangi,” *J. Destin. Pariwisata*, vol. 1, pp. 83–92, 2013, [Online]. Available: <https://erepo.unud.ac.id/id/eprint/11069/1/a7a91ff82156e73f2eeffa5e4ecc0be9.pdf>
- [32] S. Riyadi, “DAYA SAING DAERAH TUJUAN WISATA (Studi Kasus Rendahnya Daya Saing Taman Wisata Alam Kawah Ijen Banyuwangi),” *Pap. Knowl. . Towar. a Media Hist. Doc.*, pp. 12–26, 2013.
- [33] CNN, “Geopark Ijen Resmi Ditetapkan sebagai UNESCO Global Geopark Baca artikel CNN Indonesia ‘Geopark Ijen Resmi Ditetapkan sebagai UNESCO Global Geopark’ selengkapnya di sini.” CNN Indonesia, Jakarta, p. 1, 2023. doi: <https://app.cnnindonesia.com/>.
- [34] M. Battour, K. Mady, M. Salaheldeen, M. Elstouhy, I. Elbendary, and E. Boğan, “AI-enabled technologies to assist Muslim tourists in Halal-friendly tourism,” *J. Islam. Mark.*, 2022, doi: 10.1108/JIMA-01-2022-0001.
- [35] S. Hasanah, “Muslim Friendly Tourism And Western Creative Tourism: The Conceptual Intersection Analysis,” *Int. J. Islam. Bus. Ethics*, vol. 5, no. 1, 2020, doi: 10.30659/ijibe.5.1.21-32.



- 
- [36] M. S. Cruz, "Territorial governance and power relations in tourist areas: The conflicts derived from the public policies of renewal of consolidated tourist destinations on the coast," *An. Geogr. la Univ. Complut.*, vol. 38, no. 2, pp. 435–460, 2018, doi: 10.5209/AGUC.62487.
  - [37] M. García-Hernández, M. de la Calle-Vaquero, and C. Yubero, "Cultural heritage and urban tourism: Historic city centres under pressure," *Sustain.*, vol. 9, no. 8, 2017, doi: 10.3390/su9081346.
  - [38] W. T. Wang, "The impact of inertia and user satisfaction on the continuance intentions to use mobile communication applications: A mobile service quality perspective," *Int. J. Inf. Manage.*, vol. 44, pp. 178–193, 2019, doi: 10.1016/j.ijinfomgt.2018.10.011.
  - [39] S. L. Liew, S. R. Hussin, and N. H. Abdullah, "Attributes of Senior-Friendly Tourism Destinations for Current and Future Senior Tourists: An Importance-Performance Analysis Approach," *SAGE Open*, vol. 11, no. 1, 2021, doi: 10.1177/2158244021998658.
  - [40] F. F. Adedoyin, N. Erum, and F. V. Bekun, "How does institutional quality moderates the impact of tourism on economic growth? Startling evidence from high earners and tourism-dependent economies," *Tour. Econ.*, vol. 28, no. 5, pp. 1311–1332, 2022, doi: 10.1177/1354816621993627.
  - [41] W. Zheng, H. Qiu, and A. M. Morrison, "Applying a Combination of SEM and fsQCA to Predict Tourist Resource-Saving Behavioral Intentions in Rural Tourism: An Extension of the Theory of Planned Behavior," *Int. J. Environ. Res. Public Health*, vol. 20, no. 2, p. 1349, 2023, doi: 10.3390/ijerph20021349.
  - [42] D. R. Cooper, *Business Research Methods*, Twelfth ed. www.mhhe.com, 2014. [Online]. Available: <http://www.mim.ac.mw/books/Donald R Cooper's Business Research Methods, 12th Edition.pdf>
  - [43] C. T. K.-H. Stadtländer, "Qualitative, Quantitative, and Mixed-Methods Research," *Microbe Mag.*, vol. 4, no. 11, pp. 485–485, 2009, doi: 10.1128/microbe.4.485.1.
  - [44] E. Suprihatin and R. D. P. Rawi, "Corporate Research social Responsibility Disclosure in Indexed Journals Scopus : Critical thinking Research to Data Analysis," *DiE J. Ilmu Ekon. dan Manaj.*, vol. 14, no. 1, pp. 95–101, 2023, doi: 10.30996/die.v14i1.8339.
  - [45] R. E. A. Joseph F, Hair Jr, William C Black, Barry J Babin, *Multivariate data analysis*, 7th ed. 2015.
  - [46] "Forum Akademik," 2022. <https://forumakademik.com/rumus-lemeshow-rumus-perhitungan-sampel-apabila-populasi-tidak-diketahui/>
  - [47] A. Folmer, A. Tengxiage, H. Kadijk, and A. J. Wright, "Exploring Chinese millennials' experiential and transformative travel: a case study of mountain bikers in Tibet," *J. Tour. Futur.*, vol. 5, no. 2, pp. 142–156, 2019, doi: 10.1108/JTF-02-2019-0018.
  - [48] M. Satrio Wibowo and L. Arviana Belia, "Partisipasi Masyarakat dalam Pengembangan Pariwisata Berkelanjutan," *J. Manaj. Perhotelan Dan Pariwisata*, vol. 6, no. 1, pp. 25–32, 2023.
  - [49] T. Lankia, R. Venesjärvi, and E. Pouta, "Importance-performance analysis of the fishing tourism service structure: Recreational anglers' preferences on the remote salmon river of Teno in Finland," *Fish. Res.*, vol. 254, Oct. 2022, doi: 10.1016/j.fishres.2022.106425.
  - [50] C. C. Chen, "Determinants of behavioral intention to use the Personalized Location-based Mobile Tourism Application: An empirical study by integrating TAM with ISSM," *Futur. Gener. Comput. Syst.*, vol. 96, pp. 628–638, 2019, doi: 10.1016/j.future.2017.02.028.