

Service Quality, Tourist Satisfaction and Loyalty in Sustainable Nature Tourism Supporting the SDGs

Tiomy B Adi^{1*}, Ayu Anggraini Tambunan², and Erick Karunia³

¹Postgraduate Program in Management Science, Univeritas Amal Ilmiah Yapis Wamena, 99511, Indonesia

²Department of Urban and Regional Planning, Faculty of Science and Technology, Univeritas Amal Ilmiah Yapis Wamena, 99511, Indonesia

³Department of Management, Faculty of Economics and Business, Universitas Borneo Tarakan, 77115, Indonesia

ABSTRACT

Purpose – This study aims to examine the influence of service quality, tourist satisfaction, tourist loyalty, and the role of local communities on the achievement of the Sustainable Development Goals (SDGs) in the natural tourism sector of Jayawijaya Regency. The study emphasizes the importance of tourism development that contributes to economic, social, and environmental sustainability.

Design/methodology/approach – This study employed a quantitative approach using a survey method. Primary data were collected from 250 tourists who had visited natural tourism destinations in Jayawijaya Regency. The data were analyzed using multiple linear regression to examine the effects of the independent variables on SDG achievement.

Findings – The results indicate that service quality, tourist satisfaction, tourist loyalty, and the role of local communities have positive and significant effects on SDG achievement. Among these variables, the role of local communities has the strongest influence, highlighting the importance of community participation in supporting sustainable tourism development.

Originality/value – This study contributes to the sustainable tourism literature by integrating tourist-related factors and community participation into the analysis of SDG achievement. The findings provide practical implications for policymakers and tourism stakeholders in improving destination management, tourist experiences, visitor loyalty, and local community empowerment to support sustainable tourism development.

ARTICLE INFO

Keywords:

Service quality,
Tourist Satisfaction,
Tourist Loyalty,
Role of Local
Communitie, SDGs

Article Information:

Received: 23/07/2026

Revise: 25/08/2026

Accepted: 20/09/2026

ISSN:

2985-3168 (Online)

2985-3222 (Print)

*Corresponding Author at:

Postgraduate Program in Management Science, Univeritas Amal Ilmiah Yapis Wamena, 99511, Indonesia

E-mail address: tiomybutsanto@unaim-wamena.ac.id (Tiomy B Adi)

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1. Introduction

Tourism is one of the strategic sectors in encouraging economic growth, job creation, and poverty alleviation in various developing countries. Globally, this sector contributes significantly to the world's Gross Domestic Product (GDP) and is an important instrument in encouraging inclusive and sustainable development. However, tourism development that is not properly managed has the potential to cause serious environmental, social, and cultural impacts, such as ecosystem degradation, commercialization of local culture, and economic inequality between community groups (United Nations World Tourism Organization, 2018). In the context of global development, the tourism sector is directly related to the United Nations agenda through the Sustainable Development Goals (SDGs) program. Tourism is explicitly listed in Goal 8 (Decent Work and Economic Growth), Goal 12 (Responsible Consumption and Production), and Goal 14 (Marine Ecosystems), and implicitly supports other goals through strengthening local economies and empowering communities. Therefore, tourism development is no longer solely oriented towards increasing the number of tourist visits, but must prioritize the principle of sustainability.

The concept of sustainable tourism emphasizes a balance between economic, social, and environmental aspects. In this perspective, service quality is an important factor because it determines tourists' perception of destinations. Good service quality enhances the travel experience, creates added value, and promotes a positive image of the destination (Parasuraman et al., 1988). However, the quality of service alone is not enough to guarantee sustainability if it is not followed by sustainable tourist satisfaction.

Tourist satisfaction is a reflection of the evaluation of the experience of consumption of tourism services that has been felt. Satisfied travelers tend to exhibit positive behaviors, such as recommendations to others, support for environmentally friendly practices, and a willingness to pay more for socially responsible destinations (Oliver, 1999). Further, consistent satisfaction will shape tourist loyalty, which is demonstrated through the intention to revisit and commitment to the destination (Chen & Tsai, 2007). Loyalty is a strategic asset because it maintains the stability of visits without excessive exploitation of natural resources.

On the other hand, tourism sustainability is highly dependent on the involvement of local communities. The community-based tourism approach places the community as the main actor in planning, managing, and distributing economic benefits. Active community participation not only improves local welfare, but also strengthens social legitimacy and acceptance of development (Tosun, 2000). Without the support of local communities, tourism development is vulnerable to social conflict and cultural resistance.

In the context of mountainous areas and eastern regions of Indonesia such as Jayawijaya, tourism development has great potential to encourage regional economic development while preserving the culture and environment of Tukijan, Tambunan et al. (2026). However, the challenges of infrastructure, service quality, and community involvement are still issues that need to be studied empirically. Therefore, research is needed that is able to integrate service quality factors, tourist satisfaction, tourist loyalty, and the role of local communities in explaining their contribution to the achievement of the SDGs.

Based on this background description, this study aims to analyze the influence of service quality, tourist satisfaction, tourist loyalty, and the role of local communities on the achievement of the Sustainable Development Goals (SDGs) in the tourism sector. This research departs from the idea that regional tourism development is not solely oriented to

increase the number of tourist visits, but must also be able to make a real contribution to sustainable development economically, socially, and environmentally. Therefore, an empirical understanding of the factors that affect the sustainability of regional tourism development is needed, so that the results of this research are expected to make a theoretical contribution to the development of sustainable tourism models as well as practical implications for local governments and stakeholders in formulating policies that are in line with the SDGs agenda.

Table 1. Research Question

No	Research Question
1	Does service quality affect the achievement of the SDGs in the tourism sector?
2	Does tourist satisfaction affect the achievement of the SDGs in the tourism sector?
3	Does tourist loyalty have an effect on the achievement of the SDGs in the tourism sector?
4	Does the role of local communities affect the achievement of the SDGs in the tourism sector?

2. Literature Review & Hypothesis Development

2.1 The Effect of Service Quality on the SDGs

Service quality is a major determinant in the service industry because it shapes tourists' perception and experience of destinations. The SERVQUAL theory developed by Parasuraman et al. (1988) explains that service quality includes tangible dimensions, reliability, responsiveness, assurance, and empathy. In the context of sustainable tourism, good service quality not only increases tourist satisfaction, but also reflects the professionalism of sustainability-oriented destination management. Destinations that provide quality services tend to be able to maintain their reputations, increase local economic value, and support responsible consumption practices. Therefore, service quality has the potential to contribute to the achievement of the SDGs.

H1: The quality of service has a positive effect on the achievement of the SDGs.

2.2 The Influence of Tourist Satisfaction on the SDGs

Tourist satisfaction is the result of an evaluation of the experience felt during the visit. According to Oliver (1999), satisfaction arises when perceived performance meets or exceeds expectations. Satisfied travelers tend to show positive behaviors, such as support for environmental policies, participation in local activities, and spreading a positive image of the destination. In a sustainability perspective, tourist satisfaction plays a role in creating a long-term relationship between tourists and destinations. This relationship contributes to economic stability, social strengthening, and the reduction of overexploitation of resources. Thus, tourist satisfaction can strengthen the achievement of sustainable development goals.

H2: Tourist satisfaction has a positive effect on the achievement of the SDGs.

2.3 The Influence of Tourist Loyalty on the SDGs

Tourist loyalty reflects a commitment to revisit and recommend destinations to others (Chen & Tsai, 2007). Loyalty has strategic implications because it maintains the continuity of visits without having to increase promotional pressure or over-exploitation of resources. In the framework of sustainability, loyalty helps create local economic stability, increase

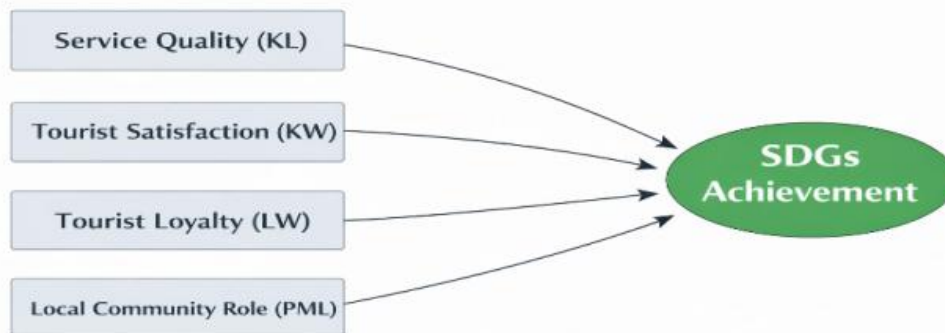
community employment opportunities, and strengthen the competitiveness of destinations. Loyal travelers are also more likely to support responsible and sustainable tourism practices. H3: Tourist loyalty has a positive effect on the achievement of the SDGs.

2.4 The Influence of the Role of Local Communities on the SDGs

Local community participation is a key pillar in sustainable tourism development. According to Tosun (2000), community involvement in tourism planning and management increases the distribution of economic benefits and minimizes social conflicts. The community-based tourism approach places the community as the central actor that determines the direction of destination development. When the community plays an active role, development not only generates economic benefits, but also maintains cultural and environmental sustainability. Thus, the role of local communities is a key factor in supporting the achievement of the SDGs.

H4: The role of local communities has a positive effect on the achievement of the SDGs.

Figure 1. Research Model



3. Methodology

This study uses a quantitative approach with explanatory research. This approach was chosen because the research aims to test the influence of service quality, tourist satisfaction, tourist loyalty, and the role of local communities on the achievement of the Sustainable Development Goals (SDGs) in the tourism sector. Explanatory design is used to explain causal relationships between variables through empirical hypothesis testing (Creswell, 2014). The research population is tourists who visit tourist destinations in Jayawijaya Regency. The sampling technique uses purposive sampling, which is a sample determination technique based on certain criteria that are relevant to the research objectives (Sugiyono, 2018). Respondents in this study were tourists aged at least 17 years old who had visited tourist destinations in Jayawijaya and were willing to fill out a research questionnaire. The number of samples used was 250 respondents, which was considered adequate for quantitative research with multivariate analysis (Hair et al., 2010).

The data used consists of primary data and secondary data. Primary data was obtained through the distribution of questionnaires to respondents. The research instruments are prepared based on theoretical studies that are relevant to each research variable. Meanwhile, secondary data is obtained from official local government reports, tourism statistics publications, as well as documents and reports published by the United Nations World

Tourism Organization related to sustainable tourism development. Variable measurements were carried out using a seven-point (1–7) Likert scale, with a range of answers ranging from 1 (Strongly Disagree) to 7 (Strongly Agree). The seven-point scale was chosen because it provides a higher level of sensitivity in capturing variations in respondents' perceptions as well as improving the accuracy of measurements in social and management research (Likert, 1932).

The data analysis in this study was carried out using SPSS software. The analysis was used to test the research model and determine the influence of service quality, tourist satisfaction, tourist loyalty, and the role of local communities on the achievement of the SDGs in the tourism sector.

4. Result and Discussion

4.1 Respondent Characteristics

Table 2. Respondent Characteristics

Features	Category	Frequency (People)	Percentage (%)
Gender	Male	138	55,2
	Women	112	44,8
	Total	250	100
Age	17–25 years old	96	38,4
	26–35 years old	82	32,8
	36–45 years old	46	18,4
	> 45 years old	26	10,4
	Total	250	100
Final Education	High School/Equivalent	104	41,6
	Diploma	38	15,2
	S1	86	34,4
	S2/S3	22	8,8
	Total	250	100
Tourist Origin	Papua Pegunungan	72	28,8
	Outside Papua	152	60,8
	Foreign Tourists	26	10,4
	Total	250	100
Frequency of Visits	1 time	118	47,2
	2–3 times	84	33,6

> 3 times	48	19,2
Total	250	100

Source: Research Results

Table 3 shows that natural tourism in Jayawijaya which is known for its mountain attractions and natural landscapes is more visited by tourists of productive age, with the dominance of domestic tourists from outside Papua. The high proportion of first visits indicates the potential of an exploratory market, while a significant percentage of repeat visits indicates the loyalty of tourists to natural tourist destinations in the region.

Descriptive Analysis of Research Variables

Based on the results of data processing using SPSS on 250 respondents, the mean and standard deviation of each indicator were obtained. To provide a more systematic overview, the following is a summary of the average values per variable.

Table 3. Descriptive Statistics Variables

Variabel	Indicator	Average (Mean)	Std. Deviation	Category
Quality of Service (KL)	8	4,74	1,73	Quite High
Tourist Trust (KW)	6	4,56	1,87	Quite High
Tourist Loyalty (LW)	5	5,06	1,35	Height
The Role of Local Communities (PML)	5	4,64	1,72	Quite High
SDGs	4	4,61	1,79	Quite High

Note: The measurement scale uses a Likert scale of 1–7.

The results of the analysis showed that Tourist Loyalty (LW) had the highest average value (Mean = 5.06), which indicates that nature tourism tourists in Jayawijaya Regency have a strong tendency to revisit and recommend destinations to other parties. The relatively lower standard deviation value compared to other variables indicates a fairly consistent perception of respondents' perceptions of loyalty. Service Quality (KL) obtained an average of 4.74 which indicates that tourists rated the quality of service in the category quite high. This indicates that the facilities, hospitality, and service aspects at Jayawijaya's natural tourist destination have been considered quite good by visitors. Tourist Confidence (KW) has an average of 4.56 with a relatively larger variation in answers, which shows that there are still differences in tourists' perceptions of the consistency and reliability of destination management. The role of Local Communities (PML) showed an average of 4.64 which indicates that community involvement in supporting tourism has been seen, although it is not yet in the very high category. Meanwhile, the SDGs variable obtained an average of 4.61, which shows that tourists consider the tourism sector in Jayawijaya to have contributed sufficiently to economic, social, and environmental aspects, although there is still room for further strengthening. Overall, these descriptive results show that the natural tourism sector in Jayawijaya has a positive perception foundation from tourists, especially in the aspect of loyalty, which is an important capital in supporting the achievement of the Sustainable Development Goals in the tourism sector.

4.2 Validity Test

Validity tests are performed to ensure that each statement item is capable of measuring the construct in question. The test was conducted using Pearson Product Moment correlation. An item is declared valid if the significance value is less than 0.05 and the calculated r value is greater than the r of the table.

Table 4. Validity Test Results

Variabel	Indicator	Range r calculation	Say.	Remarks
Quality of Service (KL)	8	0,781 – 0,883	0,000	Valid
Tourist Satisfaction (KW)	6	0,538 – 0,755	0,000	Valid
Tourist Loyalty (LW)	5	0,494 – 0,709	0,000	Valid
The Role of Local Communities (PML)	5	0,686 – 0,821	0,000	Valid
SDGs	4	0,450 – 0,768	0,000	Valid

Source: Research Results

Based on the table above, all items in each variable have a significance value of 0.000 (< 0.05), so that all indicators are declared valid and suitable for use in the research.

4.3 Reliability Test

Reliability tests were performed to measure the internal consistency of the instrument using Cronbach's Alpha coefficient. A variable is declared reliable if it has an Alpha value greater than 0.70.

Table 5. Reliability Test Results

Variabel	Cronbach's Alpha	Remarks
KL	$> 0,90$	Highly Reliable
KW	$> 0,85$	Reliabel
LW	$> 0,80$	Reliabel
PML	$> 0,88$	Reliabel
SDGs	$> 0,85$	Reliabel

Source: Research Results

The test results showed that all variables had a Cronbach's Alpha value above 0.80, which means that the research instrument had a good level of internal consistency and was trustworthy.

4.4 Multiple Linear Regression Test

Regression analysis was conducted to determine the influence of Service Quality (KL), Tourist Satisfaction (KW), Tourist Loyalty (LW), and the Role of Local Communities (PML) on the SDGs in the tourism sector in Jayawijaya Regency.

Table 6. Multiple Linear Regression Test Results

Variabel	B	Std. Error	Beta	t	Say.
(Constant)	0,512	0,198	–	2,586	0,010
KL	0,085	0,021	0,162	4,048	0,000
KW	0,298	0,022	0,452	13,545	0,000
LW	0,074	0,026	0,118	2,846	0,005

PML	0,384	0,033	0,487	11,636	0,000
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Source: Research Results

The results of the regression analysis showed that all independent variables in this study had a positive and significant effect on the achievement of the Sustainable Development Goals (SDGs) in the natural tourism sector in Jayawijaya. Service quality has been proven to make a positive contribution to the improvement of the SDGs, which means that the better the facilities, security, cleanliness, and responsiveness of destination managers, the greater their contribution to sustainable development. Tourist satisfaction also shows a strong positive influence on the SDGs, indicating that a satisfying tourism experience is able to encourage economic, social, and environmental sustainability through improved destination image and return visit potential. Tourist loyalty also has a positive effect, which reflects that the commitment to return to visit and recommend destinations plays a role in maintaining demand stability and regional economic sustainability. Among all variables, the role of local communities is the most dominant factor in influencing the SDGs, showing that active community involvement in management, services, and environmental conservation is the main key in supporting sustainable tourism development. Overall, the combination of service quality, tourist satisfaction and loyalty, and the role of local communities significantly determine the success of the tourism sector in contributing to the achievement of sustainable development goals.

4.5 F Test (Simultaneous) and Coefficient of Determination (R²)

The F test is conducted to find out whether all independent variables together have an effect on the SDGs.

Table 7. F-test results (simultaneous)

Model	F count	Say.	Remarks
Regression	182,347	0,000	Signifikan

Source: Research Results

The results of the F test showed a significance value of 0.000 (< 0.05), which means that Service Quality (KL), Tourist Satisfaction (KW), Tourist Loyalty (LW), and Role of Local Communities (PML) simultaneously had a significant effect on the SDGs. Thus, the regression model used in this study was declared feasible and can be used to explain the relationship between variables.

The determination coefficient is used to measure how much an independent variable is able to explain the variation of the dependent variable.

Table 8. Coefficient of Determination Results

Model	R	R Square	Adjusted R Square
1	0,867	0,752	0,748

Source: Research Results

The Adjusted R Square value of 0.748 shows that **74.8%** variation in the achievement of SDGs in the tourism sector in Jayawijaya Regency can be explained by the variables of Service Quality, Tourist Satisfaction, Tourist Loyalty, and the Role of Local Communities. Meanwhile, the remaining 25.2% was influenced by other factors outside the research model. An R value of 0.867 indicates that the relationship between independent variables and dependent variables is in the very strong category.

Based on the results of the partial test (t), simultaneous test (F), and determination coefficient, this research model has a high level of feasibility and clarity. The role of local communities (PML) emerged as the most dominant variable in supporting the achievement of the Sustainable Development Goals in the tourism sector, followed by tourist satisfaction. This shows that the sustainable development of natural tourism is not only determined by the quality of services, but is highly dependent on the involvement of local communities as well as the positive experiences felt by tourists.

4.6 Discussion

4.6.1 The Effect of Service Quality on the SDGs

The first hypothesis states that the quality of services affects the achievement of the SDGs in the tourism sector. The results of this study support this hypothesis, which substantively shows that service quality not only has implications for the aspect of individual satisfaction of tourists, but also has a structural contribution to the development of sustainable tourism.

Theoretically, the quality of services in the service industry is described through the SERVQUAL model developed by A. Parasuraman, Valarie A. Zeithaml, and Leonard L. Berry (1988). This model emphasizes five main dimensions: tangibles, reliability, responsiveness, assurance, and empathy. In the context of natural tourism, these five dimensions have a broader meaning than ordinary commercial services. Tangibles does not only refer to physical facilities, but also to the cleanliness of the area, the availability of environmentally friendly sanitation facilities, and infrastructure that does not damage the natural landscape. Reliability and responsiveness reflect the ability of managers to provide consistent services while being quick to respond to the needs of tourists, including in challenging geographical conditions such as mountainous areas.

The relationship between service quality and SDGs can be explained through the perspective of sustainable destination management. According to Colin Michael Hall (2008), the sustainability of tourism is highly dependent on the quality of destination governance. Professionally managed destinations tend to have better environmental impact control systems, hygiene standards, and safety procedures. Thus, high service quality is often an indicator of structured and responsible management.

Within the framework of the Sustainable Development Goals, the quality of services contributes to several goals at once. First, SDG 8 (Decent Work and Economic Growth), because good services increase the competitiveness of destinations and support local economic growth. Second, SDG 12 (Responsible Consumption and Production), because good facility management and hygiene reflect responsible consumption and production practices. Third, SDG 15 (Life on Land), if the quality of service includes a commitment to environmental conservation.

These findings are in line with the United Nations World Tourism Organization report (2018) which affirms that the quality of the tourist experience is the foundation of responsible tourism. Quality experiences not only satisfy tourists, but also encourage more professional management practices and international standards. Nevertheless, the literature also shows that service quality is not always synonymous with sustainability. Richard W. Butler (1980) through the concept of Tourism Area Life Cycle (TALC) reminded that destinations that are growing rapidly due to improving the quality of facilities can experience environmental pressure if the growth is not controlled. This means that service quality needs to be integrated with carrying capacity management so as not to cause excessive exploitation of natural resources. In the context of natural tourism in Jayawijaya Regency, improving the

quality of services must take into account the sensitivity of the mountain ecosystem. The infrastructure built must be environmentally friendly, the waste management system must be effective, and the service to tourists must be in line with conservation principles. Thus, service quality is not only an instrument for improving the tourist experience, but also an instrument for the implementation of sustainable development at the local level.

4.6.2 The Influence of Tourist Satisfaction on the SDGs

The second hypothesis states that tourist satisfaction has an effect on the achievement of the SDGs. Interpretively, tourist satisfaction not only reflects a positive evaluation of the travel experience, but also has long-term implications for the stability and sustainability of the tourism sector.

The Expectation Confirmation Theory put forward by Richard L. Oliver (1980; 1997) explains that satisfaction is formed when perceived performance meets or exceeds initial expectations. In the context of natural tourism, these expectations include the beauty of the landscape, the comfort of facilities, the safety of travel, and the authenticity of local culture. When these expectations are met, tourists will provide positive evaluations that have the potential to strengthen the image of the destination.

Within the framework of the SDGs, tourist satisfaction has a significant economic dimension. Satisfied travelers tend to revisit and give positive recommendations to others. This word-of-mouth effect expands the reach of promotions at no additional cost, thereby supporting sustainable regional economic growth. This is in line with SDG 8 which emphasizes inclusive and sustainable economic growth.

Furthermore, satisfaction also contributes to the social legitimacy of tourism development. According to Geoffrey Wall and Colin Michael Hall (2008), destinations that are able to provide a satisfying experience usually show better management effectiveness. Such effective management contributes to long-term stability, which is a prerequisite for sustainability.

However, the literature also shows the paradox of satisfaction. Richard Sharpley (2009) reminds that a high level of satisfaction can significantly increase demand, which has the potential to cause over-tourism if not balanced with regulations. An uncontrolled surge in visits can damage the environment and reduce the quality of the experience itself. Therefore, tourist satisfaction must be managed within the framework of strategic planning that pays attention to the carrying capacity of the environment. In the context of Jayawijaya, tourist satisfaction with the natural panorama and local cultural richness must be maintained without sacrificing authenticity and ecological balance. Satisfaction improvement strategies need to be geared towards authentic and sustainable quality of experience, not just increasing the quantity of visits. Thus, tourist satisfaction can be understood as an indicator of the success of destination management as well as an instrument to support the achievement of the SDGs, as long as it is integrated with environmental and social impact control policies.

4.6.3 The Influence of Tourist Loyalty on the SDGs

The third hypothesis states that tourist loyalty has an effect on the achievement of the SDGs. Tourist loyalty, which is reflected in the intention to revisit and the willingness to recommend destinations, has strategic implications for the economic sustainability and stability of the tourism sector. According to Richard L. Oliver (1999), loyalty is a deep commitment to make consistent repurchases even though there are other alternatives. In tourism, loyalty creates a pattern of repeated visits, making demand more stable and

predictable. This stability is important for long-term development planning. Jill Griffin (2002) stated that loyal customers have a higher long-term economic value than new customers. In the context of nature tourism, loyalty helps create income sustainability for local communities, which is in line with SDG 8. In addition, loyal tourists tend to have a better understanding of the character of the destination, so they have the potential to become more responsible tourists.

However, loyalty also has a critical side. Colin Michael Hall (2008) reminds that the increase in repeated visits can increase the pressure on the environment if it is not regulated with the right policies. Therefore, loyalty needs to be developed within the framework of responsible tourism, where tourists not only return to visit, but also have conservation awareness.

In the context of Jayawijaya, tourist loyalty to mountainous natural tourism has the potential to become a strategic force in supporting the achievement of the Sustainable Development Goals. However, the loyalty strategy must be directed at sustainable quality of experience, limiting the number of visits according to carrying capacity, and educating tourists about the importance of environmental conservation.

Overall, tourist loyalty contributes to economic stability, social sustainability, and conservation-based tourism development opportunities. With proper management, loyalty can be an effective instrument in supporting tourism development that is in line with the principles of the SDGs.

4.6.4 The Influence of the Role of Local Communities on the SDGs

The results of the study show that the role of local communities contributes significantly to the achievement of the Sustainable Development Goals (SDGs) in the natural tourism sector. These findings confirm that tourism sustainability is not only determined by managerial aspects or the experience of tourists, but is greatly influenced by the level of involvement and participation of local communities in destination management.

Conceptually, the participation of local communities is the main principle in sustainable tourism development. The sustainable development framework introduced by the United Nations (2015) emphasizes the importance of inclusivity, community empowerment, and equitable distribution of development benefits. In this context, local communities do not only function as recipients of development impacts, but as main actors that determine the direction and success of development itself.

In the tourism sector, community involvement has economic, social, and environmental dimensions that are directly related to the SDGs. From an economic perspective, community participation in tourism activities—such as homestay management, guide services, provision of local products, and culture-based micro-businesses—supports job creation and increased household income. This is in line with the goals of SDG 8 (Decent Work and Economic Growth), which promotes inclusive and sustainable economic growth.

From the social side, community involvement strengthens social cohesion and maintains the sustainability of local cultural values. According to Geoffrey Wall and Colin Michael Hall (2008), social sustainability in tourism can only be achieved if the community has space in the decision-making process and destination management. When people feel a sense of ownership, they will be more responsible in maintaining social stability and avoiding conflicts due to unfair distribution of benefits.

In terms of the environment, local communities have traditional knowledge (local wisdom) that plays an important role in maintaining the balance of the ecosystem. In the context of natural tourism in Jayawijaya Regency, the preservation of mountainous areas and

indigenous culture cannot be separated from the role of the community as environmental guardians. Customary principles that govern the use of land, forests, and natural resources are tangible forms of contribution to SDG 15 (Life on Land).

The findings of this study are consistent with the community-based tourism (CBT) approach, which places the community as the center of destination development. Scheyvens (1999) explained that the success of community-based tourism can be seen from four dimensions of empowerment: economic, psychological, social, and political. If the community receives economic benefits, feels socially valued, and has an influence in decision-making, then tourism development tends to be more sustainable.

However, the literature also shows that community participation does not always run optimally. Tosun (2000) identified structural barriers, such as limited access to information, dominance of external investors, and lack of adequate policy support. In many cases, community participation is only a formality without giving any real authority. This condition causes tourism development to not fully support sustainability goals (Tambunan et al., 2024).

In this study, the results obtained show that the role of local communities has a strong contribution to the achievement of the SDGs. It can be interpreted that the level of community participation in the management of natural tourism in Jayawijaya is at a substantive level, not just symbolic. The community is not only involved in operational activities, but also has a role in supporting environmental sustainability and cultural preservation.

Furthermore, these findings strengthen the argument that tourism sustainability is a governance issue. SDGs-oriented development requires collaboration between local governments, business actors, and local communities. Within this framework, society becomes the connecting element between formal policy and practice in the field. Without community involvement, development policies risk being ineffective or even causing social resistance. Theoretically, the results of this study support the participatory development paradigm that emphasizes a bottom-up approach. In contrast to the top-down approach that places the government or investors as the dominant actor, the participatory approach provides space for the community to actively contribute. This paradigm is in line with the spirit of the SDGs which emphasizes the principle of "no one left behind". In addition, the role of local communities is also related to the social legitimacy of tourism development. When the community benefits and feels involved, tourism development tends to get stronger social support. This support creates long-term stability that is critical to the sustainability of destinations.

Overall, the findings of this study confirm that the role of local communities is a key determinant in supporting the achievement of the SDGs in the natural tourism sector. Community involvement in economic, social, and environmental aspects shows that inclusive and participatory tourism development is more effective in realizing sustainability than an exclusive approach. Thus, strengthening the capacity of local communities, increasing access to decision-making, and supporting pro-community policies are important strategies in ensuring that tourism truly becomes an instrument for achieving the Sustainable Development Goals at the regional level.

5. Conclusion

This study aims to analyze the influence of service quality, tourist satisfaction, tourist loyalty, and the role of local communities on the achievement of the Sustainable Development Goals (SDGs) in the natural tourism sector in Jayawijaya Regency. Based on the results of the analysis and discussion that has been carried out, it can be concluded that several important things are as follows.

First, service quality is proven to have an effect on the achievement of the SDGs. These findings show that facility management, cleanliness, safety, and service professionalism have contributed to the sustainability of destinations. The quality of service not only has an impact on the perception of tourists, but also reflects the existence of a more organized and responsible management system. Thus, improving service quality is a strategic instrument in supporting tourism development that is oriented towards economic and environmental balance.

Second, tourist satisfaction has an effect on the achievement of the SDGs. High satisfaction indicates that the tourism experience felt is in accordance with or exceeding expectations. In the context of sustainability, satisfaction contributes to the economic stability of the destination through repeat visits and word-of-mouth promotions. However, satisfaction needs to be managed within a regulatory framework that pays attention to the carrying capacity of the environment so as not to trigger an increase in excessive visits.

Third, tourist loyalty has been proven to have an effect on the achievement of the SDGs. Loyalty reflected in the intention to return and the willingness to recommend destinations provides long-term demand stability. This stability is important for the economic sustainability of local communities. However, loyalty needs to be directed to the concept of responsible tourism so that the increase in visits does not cause ecological pressure.

Fourth, the role of local communities has a strong influence on the achievement of the SDGs. Community participation in the management of natural tourism strengthens the economic, social, and environmental dimensions of sustainable development. Community involvement creates social legitimacy, strengthens the distribution of economic benefits, and supports cultural and environmental preservation. These findings confirm that sustainable tourism development cannot be separated from a participatory approach and the empowerment of local communities.

Overall, this study concludes that the achievement of SDGs in the natural tourism sector is the result of an interaction between managerial factors (service quality), psychological-behavioral factors of tourists (satisfaction and loyalty), and socio-structural factors (the role of local communities). These four variables complement each other in forming a sustainable tourism system.

Thus, the development of natural tourism in Jayawijaya requires a holistic approach that balances the quality of the tourist experience, economic stability, community empowerment, and environmental conservation. If managed in an integrated manner, the tourism sector has great potential to become a real instrument in supporting the implementation of the SDGs at the regional level.

6. Implications and Recommendations

This study emphasizes that the achievement of SDGs in natural tourism in Jayawijaya is not the result of a single factor, but the interaction between service quality, satisfaction, loyalty, and the role of the local community. The main implication of this study is that sustainable tourism development must be managed holistically, balancing economic, social, and environmental interests. An approach that is only oriented towards increasing the number of visits without

paying attention to the carrying capacity of the environment has the potential to be contrary to the goals of the SDGs. With the right managerial strategy, consistent policy support, and the empowerment of local communities, natural tourism in Jayawijaya has great potential to become a model of sustainable destinations that are in line with the global development agenda.

Based on the results of the research, the management of natural tourism in Jayawijaya Regency needs to be carried out in an integrated manner in order to be able to support the achievement of the Sustainable Development Goals (SDGs). Destination managers are advised to continue to improve the quality of services while still paying attention to environmental conservation principles, such as good waste management, maintaining area cleanliness, and providing environmentally friendly facilities. Improving the quality of services should not only be oriented to the comfort of tourists, but also to the sustainability of natural ecosystems.

Tourist satisfaction and loyalty need to be managed within the framework of responsible tourism. The manager can educate tourists about the importance of preserving local nature and culture so that the increase in visits does not put pressure on the carrying capacity of the environment. Promotion and re-visit development strategies should still consider limiting the number of visits in a certain period to maintain ecological balance.

Local governments are expected to integrate sustainability indicators in tourism planning, focusing not only on increasing the number of tourists and regional income, but also on the welfare of local communities and environmental conservation. Support for community empowerment through training and strengthening tourism-based businesses also needs to be increased so that economic benefits can be felt equally.

For further research, it is recommended to add other variables relevant to sustainability and expand the scope of the research location in order to gain a more comprehensive understanding of the role of the tourism sector in supporting the SDGs.

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