Assessment of visitor perceptions and economic valuation of Tengket Beach attractions

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INTRODUCTION

Indonesia is a rich archipelagic country with various natural resources recognized worldwide. The natural attractions comprise islands containing diverse flora and fauna. Moreover, this country has a wealth of history, socio-culture, and customs, making it a tourist attraction. This motivates the government to develop the tourism industry to increase local revenue and community welfare (Bashit et al., 2019).

Tourism has the potential to increase foreign exchange earnings (Kominfo, 2017). In 2019, this sector's foreign exchange reached US$16.9 billion and contributed 4.3% of Gross Domestic Product (GDP) in 2021. Nowadays, nature and environment-based tourism contribute to foreign exchange and positively impact conservation.

The tourism sector is one of the efforts to develop local industries and an alternative in promoting economic growth in developing areas (Ayuditya & Khoirudin, 2022). The beach ecosystem provides various human benefits as a source of life for coastal communities and a tourist attraction. Bangkalan is a regency on Madura Island with religious, historical, culinary, and nature tourism potentials. It is strategically located, easy to reach, and has beautiful landscapes and nature, giving it the potential to become a tourist center on Madura Island. One of the areas with the potential for natural beach tourism is

Tengket Beach has an unspoiled beauty, with stretches of fine white sand as the main visitor attraction. However, the village government and surrounding communities have not been interested in managing this potential. Therefore, this study aimed to determine visitor perceptions, the factors influencing the number of visits, and Tengket Beach tourism’s economic value. Samples were determined using the linear time function formula. The data collected were further analyzed by descriptive qualitative, multiple linear regression, and travel cost methods. The results showed that Tengket Beach is perceived as unattractive based on its accessibility and facilities. Based on accessibility indicators, 96.7% of visitors stated that Tengket Beach was not feasible. Meanwhile, based on facility criteria, only 20% of visitors stated that the place had good facilities. Other findings show that most visitors explained that the beach is quite interesting regarding its attractiveness. The results also showed that travel costs negatively affect visits, while accessibility and facilities have a positive effect. Additionally, the economic value of the beach is IDR5,890,560,000 per year. This is an indicator that Tengket Beach has the potential to be used as an economic resource for the surrounding community.

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Sepulu Sub-district. In 2020, this sub-district recorded 17,403 tourist visits, the fourth-highest number of visits in Bangkalan Regency (Culture and Tourism Office of Bangkalan Regency, 2022). The tourist attraction in Sepulu Sub-district is Tengket Beach, known for its natural beauty. It has a stretch of fine white sand, clear sea water, and a long coastline lined with trees that complement its natural charm. However, this potential has not been managed properly by the local community. Access to the location and the facilities provided are still inadequate. The surrounding community is also not interested in managing this tourism because they do not know its potential economic value. Subsequently, the absence of good management has decreased the number of visits to Tengket Beach, as shown in Table 1.

Table 1. Number of Visits to Tengket Beach in 2019-2021

<table>
<thead>
<tr>
<th>Year</th>
<th>Number of Visits</th>
<th>people</th>
</tr>
</thead>
<tbody>
<tr>
<td>2019</td>
<td>20160</td>
<td></td>
</tr>
<tr>
<td>2020</td>
<td>18240</td>
<td></td>
</tr>
<tr>
<td>2021</td>
<td>15600</td>
<td></td>
</tr>
</tbody>
</table>
Source: Culture and Tourism Office of Bangkalan Regency (2022)

Tourism development requires knowledge of visitor perceptions, influencing factors, and the economic value generated. Visitor perceptions toward tourist attractions have been widely examined by studies such as Panjaitan et al. (2019) at Wediombo Beach, Gunung Kidul. The study found that the indicators include attractiveness, facilities, and beach managers. Furthermore, tourist managers need knowledge of the factors influencing the number of visits. Warningsih et al. (2021), Zulpiarak et al. (2017), and Lestari et al. (2020) found that the factors influencing visits to the beach include travel costs, income, age, education, duration of visit, distance, and visitor perceptions.

Tourism site management should be encouraged to evaluate the potential economic value. Insight into an economic value is important for developing and wiser use of natural resources. Economic valuation interprets public goods, such as natural resources, which cannot be calculated quantitatively using the willingness to pay (Hasiani et al., 2013).

Valuation theory is widely used to calculate the economic value of tourism. This theory considers the resources utilized and predicted for the future. According to Dhewanthi et al. (2007), economic valuation refers to assigning a monetary value to all potential resources following the purpose of their utilization. Turmudi et al. (2005) stated that valuation determines the total economic contribution of a particular ecosystem or resource to society. Furthermore, economic valuation provides quantitative market and non-market value to goods and services produced from natural and environmental resources.

The potential of the tourism economy depends on the frequency of visits. This implies that a decrease in visits to Tengket Beach affects the economic value generated. The number of visits could be increased by developing tourism according to the surrounding community's desires. This could influence visitors to return to Tengket Beach. Moreover, an economic assessment is needed to represent the reciprocal relationship between the economy and the environment. The assessment is related to policies and programs for managing natural resources in the future. Therefore, this study aimed to examine visitor perceptions of the factors influencing the number of visits and the economic value of Tengket Beach tourism.

RESEARCH METHOD

This study was conducted at Tengket Beach, Maneron Hamlet, Senangguh Village, Sepulu Sub-district, Bangkalan Regency, East Java. The location was determined purposively because the tourism potential of this beach is still not managed properly. This study used primary data on perception regarding attraction, facilities, accessibility, respondent characteristics, travel costs, distance traveled, number of visits, and income. The data were collected through observation, interviews, questionnaires, and documentation.

The population comprised tourists visiting Tengket Beach. In this study, the population size was unknown because the number of visitors was uncertain. Therefore, the number of samples was determined using the linear time function formula. The formula used is as follows (Endang, 1993):

\[
n = \frac{T - t_0}{t_1} = \frac{4 \text{ days} \times (5 \text{ hours} \times 60 \text{ minute}) - 5 \text{ hours} \times 60 \text{ minute}}{30 \text{ minute}}
\]
Where \( T \) is the study time in minutes, \( t_0 \) is the sampling time, \( t_1 \) is the time for filling out the questionnaire, and \( n \) is the number of respondents. The study time was every weekend on Saturday and Sunday from noon to evening when the beach was crowded with visitors. The linear time function formula obtained 30 respondents as samples. The study used a non-probability sampling method with an accidental approach. According to (Syahrum & Sali, 2014), accidental sampling is based on coincidence. In this case, the tourists met accidentally were suitable to be used as samples. They comprised tourists that visited Tengket Beach at least twice and are aged 17 and over.

The data collected were analyzed to solve the problem formulation. The study performed quantitative descriptive analysis to determine visitor perceptions of Tengket Beach. The analysis used a 5-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree). Perceptual assessment indicators include the attractiveness of seawater, sand, and beach cleanliness (iSetiawan & Suryasih, 2016); accessibility based on directions and road conditions, facilities, including tourism equipment rental, parking, bathrooms, places to eat and worship, and trash cans, and the comfort level (Panjaitan et al., 2019). Comfort is a human assessment towards the sense of security and serenity in carrying out tourism activities (Kaihatu & Hiariey, 2021). The perception assessment results were categorized using the following formula:

\[
NN = \frac{Rb}{Sr} \times 100%
\]

Where \( NN \) is the percentage comfort value, \( Rb \) is the number of respondents strongly agree and agree, and \( Sr \) is the total number of respondents. The comfort scores are \( > 80\% \) included in the very good category, 60-79\% considered good, 40-59\% for less good, 20-39\% perceived as not good and \( < 20\% \) implying very bad.

The factors influencing the number of visits to Tengket Beach tourism were determined using multiple linear regression analysis. This statistical analysis is used to examine the relationship between the dependent and independent variables (Syahrum & Sali, 2014). Moreover, TCM was used to estimate the number of visits per year. Demand was formed from a multiple linear regression model with the following equation:

\[
Y = \beta_0 + \beta_1X_1 + \beta_2D_{low} + \beta_3X_3 + \beta_4X_4 + \beta_5X_5 + \beta_6X_6 + e
\]

Where \( Y \) is the number of visits, \( \beta_0 \) is a regression constant, \( \beta_1-4 \) is a variable regression coefficient, and \( X_1 \) is travel costs (IDR), including transportation, parking, tickets, consumption, and souvenirs. \( D_{low} \) is a monthly income based on the minimum wage of Bangkalan Regency, which is IDR1,956,773.43. Dummy 0 is \( < \) minimum wage, and Dummy 1 is \( \geq \) minimum wage, \( X_3 \) is the length of time in hours at the tourist location, \( X_4 \) is the travel time to reach the tourist location, and \( X_5 \) is accessibility regarding directions and road conditions. \( X_6 \) is a facility comprising tourist equipment rental, parking, bathrooms, places to eat and worship, and trash cans. Additionally, variables \( X_3 \) and \( X_6 \) were measured using a Likert scale.

The economic value of Tengket Beach tourism was calculated using TCM, which required a consumer surplus value. The value is known when the relationship between cost and visit frequency is established (Batubara et al., 2020). TCM is an initial approach used by environmental economists to estimate the demand for environmental benefits, by utilizing the time and travel expenditure paid by each tourist when visiting tourist destinations (Bashit et al., 2019). In this method, the first assumption states that travel costs to a natural tourist attraction influence visits to that tourist destination, which are made in a single trip. Meanwhile, the second assumption states that all individuals will respond in the same way to increases or decreases in travel costs and entrance fees to visit the tourist attraction (Bashit et al., 2019). TCM in economic calculations is determined by the amount of expenses incurred by each tourist when visiting a tourist attraction, including transportation costs, consumption during recreation, entrance fees, parking fees, souvenirs, documentation, and equipment rentals (Mandela & Harini, 2021). Consumer surplus per individual per year was calculated using the following formula (Harahap, 2015).

\[
\text{Consumer Surplus} = \int_{p_0}^{p_1} f(p)x\,dp
\]

Where \( p_0 \) and \( p_1 \) are the lowest and highest travel costs, and \( f(p)x \) is the demand function of travel costs. The economic value of Tengket Beach was calculated...
using the formula Economic Value = Consumer Surplus x \( \frac{1}{2} \) Visits per year (Sukwika & Kasih, 2020).

RESULT AND DISCUSSION

Characteristic of Respondent

Before analyzing visitor perceptions, the factors influencing the number of visits and the economic value of Tengket Beach Tourism need to be understood, starting with the characteristics of visitors to the tourism site. Visitor characteristics can be observed based on age, gender, level of education, occupation, place of origin, and income.

There are nine age categories based on the criteria of the Ministry of Health. In this study, only three criteria were taken, namely late adolescence, early adulthood, and late adulthood. Group determination based on survey results. The age of respondents influences their physical condition and level of productivity when visiting a tourist destination. The needs of each consumer will vary depending on their age (Siga & Siswantara, 2021). Based on the survey results as shown in Table 1, the age group that dominates is the 17-25 age range, accounting for 73.33%. The age group with the fewest respondents falls within the 36-45 age range, which is 3%. This finding is in line with the results of research on Sigandu Beach (Hanifah et al., 2019).

The distribution of male and female respondents visiting Tengket Beach Tourism is equal, with each accounting for 50%. Respondent characteristics based on the highest level of education in Table 1, show that 50% of the respondents visiting Tengket Beach Tourism have completed high school. The majority of respondents, 27%, are students. The remaining respondents have various occupations such as private employees, entrepreneurs, drivers, traders, domestic helpers, and mechanics.

In terms of the place of origin, the majority of respondents (83%) are from Bangkalan or areas near the tourism site. The areas within Bangkalan include Sepulu, Galis, Kokop, Tanjung Bumi, Klampis, and Bancaran. Meanwhile, 17% of respondents are from outside Bangkalan, originating from Sidoarjo, Surabaya, and Lamongan.

Regarding income, this study refers to the minimum wage in Bangkalan, which is Rp 1,956,773.48. According to Table 2, the majority of respondents earn less than Regional Minimum Wage (UMR) in Bangkalan, accounting for 73%. Meanwhile, 23% of respondents have income equal to UMR in Bangkalan, and 4% earn above UMR Bangkalan.

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Total</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age 17-25 year</td>
<td>22</td>
<td>73.33%</td>
</tr>
<tr>
<td>26-35 year</td>
<td>5</td>
<td>16.67%</td>
</tr>
<tr>
<td>36-45 year</td>
<td>3</td>
<td>10.00%</td>
</tr>
<tr>
<td>Gender Female</td>
<td>15</td>
<td>50.00%</td>
</tr>
<tr>
<td>Male</td>
<td>15</td>
<td>50.00%</td>
</tr>
<tr>
<td>Education Elementary School</td>
<td>6</td>
<td>20.00%</td>
</tr>
<tr>
<td>Junior High School</td>
<td>9</td>
<td>30.00%</td>
</tr>
<tr>
<td>Senior High School</td>
<td>15</td>
<td>50.00%</td>
</tr>
<tr>
<td>Work Student</td>
<td>8</td>
<td>26.67%</td>
</tr>
<tr>
<td>Employee</td>
<td>4</td>
<td>13.33%</td>
</tr>
<tr>
<td>Shopkeeper</td>
<td>7</td>
<td>23.33%</td>
</tr>
<tr>
<td>Entrepreneur</td>
<td>3</td>
<td>10.00%</td>
</tr>
<tr>
<td>Domestic Worker</td>
<td>2</td>
<td>6.67%</td>
</tr>
<tr>
<td>Driver</td>
<td>3</td>
<td>10.00%</td>
</tr>
<tr>
<td>Trader</td>
<td>2</td>
<td>6.67%</td>
</tr>
<tr>
<td>Mechanic</td>
<td>1</td>
<td>3.33%</td>
</tr>
<tr>
<td>Origin Areas Outside</td>
<td>5</td>
<td>16.67%</td>
</tr>
<tr>
<td>Bangkalan</td>
<td>25</td>
<td>83.33%</td>
</tr>
<tr>
<td>Income &lt;UMR Bangkalan</td>
<td>22</td>
<td>73.33%</td>
</tr>
<tr>
<td>UMR Bangkalan</td>
<td>7</td>
<td>23.33%</td>
</tr>
<tr>
<td>&gt;UMR Bangkalan</td>
<td>1</td>
<td>3.33%</td>
</tr>
</tbody>
</table>

Visitor Perceptions of Tourist Attractions

Tengket Beach is a natural tourist attraction in Maneron Hamlet, Senangguh Village, Sepuluh Sub-district. This sloping beach has unspoiled natural beauty, a stretch of fine white sand, and a long coastline lined with trees that complement the natural charm. Also, it is equipped with facilities and infrastructure that could support tourism activities. For instance, photo spots and food stalls provide regional specialties such as rujak ontal, which are often sought after by visitors.

A tourist destination is located in one or more administrative areas with attractions, facilities, accessibility, and community. These elements interrelate and complement each other to create tourism activities (Decxyvano & Akiriningsih, 2022). Assessing visitor perceptions of the Tengket Beach tourist attraction is important for the management. The assessment could be used as a consideration for making development decisions. This study was conducted on 30 respondents to describe tourism perceptions of Tengket Beach, as shown in Table 3. The three components to assess visitor perceptions include attractiveness, accessibility, and facilities.

Visitor perception of Tengket beach was assessed using the criteria of seawater clarity, beach
cleanliness, and white sand. Based on the analysis, 24 respondents perceived that Tengket Beach has clear sea water, while 21 stated that the beach has white sand with fine grains. Furthermore, 20 respondents had a neutral perception of the beach's cleanliness. Based on the comfort score assessment, 60% of visitors perceived that Tengket Beach has good attractiveness, different from surrounding beaches. Two beaches have been developed in the nearest location. First, Tlangoh Beach has white sand, big waves, and a not-too-long coastline. Second, Biru Beach has a rocky beach and big waves, making visitors unable to walk along the coast. The waves are not too big at Tengket Beach, which is long, sloping, and with fine white sand, hence it is more attractive than the two surrounding beaches. This is in line with Keliwar & Nurcahyo (2015), stating that 44.6% of visitors came to the Pampang Cultural Village because of its unique appeal.

Table 3. Visitor Perceptions of Tengket Beach

<table>
<thead>
<tr>
<th>Tourism Potential</th>
<th>Score</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Beach water</td>
<td>0 0 6 12 12</td>
<td>30</td>
</tr>
<tr>
<td>White sand</td>
<td>0 0 9 15 6</td>
<td>30</td>
</tr>
<tr>
<td>Beach cleanliness</td>
<td>0 1 10 4 5</td>
<td>30</td>
</tr>
<tr>
<td>Percentage comfort</td>
<td>60</td>
<td></td>
</tr>
</tbody>
</table>

Based on facility indicators, Tengket Beach has limited facilities. The assessment showed that 29 of 30 respondents stated the beach lacks trash bin facilities and is scattered with litter. This is in line with the findings that visitors perceived the beach as dirty. Furthermore, all respondents stated there are no rental tourism facilities such as boats, vessels, buoys, and lodging. The beach has toilets and places of worship, but the conditions are still very simple. Only 20% of respondents stated that the facilities on the beach are good. An overview of the beach conditions is depicted in Figure 1. In contrast, Purwanto, Emy Sadjati (2019) stated that visitors perceived the tourist facilities as good because they were well-equipped.

Influencing Factors of the Number of Visits

The factors influencing tourist visits to Tengket Beach are shown in Table 2. The analysis has fulfilled the classic BLUE assumptions of best linear unbiased estimation required to use multiple linear regression. Table 4 shows the adjusted R2 value of 59.2%. This indicates that 59.2% of the total tourist visits are influenced by all the variables in the model. The remaining 40.8% is influenced by other factors outside the regression model. The Anova test showed that the calculated F value exceeds the F table at a 1% error degree. This shows that the variables of travel costs, income, length of time at the location, travel time, accessibility, and facilities have a simultaneous influence (Jannah & Fauziyah, 2023).

The variables’ influence was also partially analyzed to determine each variable’s effect on the number of tourist visits to Tengket Beach. The influence is partially seen based on the t-test significance. The multiple linear regression analysis showed that travel costs, accessibility, and facilities influence the number of visits. Meanwhile, travel time, income, and length of time at the location have no influence.

Based on the accessibility indicators, 28 visitors considered the road to Tengket Beach not feasible, 11 perceived it as narrow, and only 2 stated clear directions. Based on the comfort score, only 3.3% of visitors perceive the beach accessibility as good. It is located along the road to the village, which is only enough for one car to pass. When there is an intersection between two cars, one should reverse first. Furthermore, the road is sandy soil, not paved, and becomes muddy during the rainy season. This makes many vehicles get stuck in the muddy sand when entering the beach. The results support of Riskawati (2015) that the accessibility in the locations examined is very low, as evidenced by the many damaged asphalt roads with holes and no traffic signs, reducing the number of visits.
Travel costs are important because visitors must pay a certain amount for tourism activities. The results showed that the travel cost variable has a regression coefficient of 0.0000232. A negative coefficient implies an inverse relationship between the travel cost and the number of tourist visits. The negative relationship indicates that higher travel costs incurred by a visitor reduce the number of visits. This is seen by visitors incurring travel expenses of less than IDR45,000 within 15-45 minutes, with a frequency of 3-5 visits per year. Meanwhile, visitors spending more than IDR75,000 with a travel time of 1.5-3 hours only have a frequency of 2 visits per year. Additionally, it was found that lower travel costs reduce the time to reach tourist sites, attracting more visitors. In line with this, Sukwika & Kasih (2020) and Warningsih et al. (2021) stated that travel costs negatively influence the number of visits.

Accessibility significantly and positively influences the number of visits, as indicated by a regression coefficient of 1.151. This shows that improved access for convenience to tourist sites increases the number of visits. In the field, 10% of visitors are very dissatisfied, while 53.3% are dissatisfied with the accessibility of Tengket Beach. This signifies that accessibility should be considered by the Village Government and the surrounding community that wish to develop tourism potential on the beach. Furthermore, the unconducive road should be a concern of the village and regional governments for tourism development. These results support that accessibility positively influences the number of visits (Ayuditya & Khoirudin, 2022).
Facilities significantly and negatively influence the number of tourist visits, as shown by a regression coefficient of -1.279. This result denotes that repairs or additions to facilities reduce the number of visits. This is due to 73% of visitors are under 25 years old, 73% have income below the minimum wage of Bangkalan Regency, 70% are unmarried, and 83% come from around Bangkalan Regency. This illustrates that visitors comprise people that want to travel to inexpensive places because there is no entry ticket at Tengket Beach. Moreover, basic facilities such as bathrooms, prayer rooms, food stalls, photo spots, and swing toys are still lacking. Improving the quality and quantity of these facilities would increase the entry fees or costs for using them. This could limit visits to people with the aforementioned characteristics. This condition contradicts with statement Ayuditya & Khoirudin (2022). They stated that when the facilities for tourist attractions are improved, consumers would desire to return to these places.

Economic Value

The economic value of Tengket Beach was calculated using the travel cost method approach. Travel cost analysis was conducted to determine the amount of consumer surplus value obtained by visitors. The consumer surplus value was generated through an integral calculation, with the upper and lower bounds being the highest and lowest travel costs paid by visitors. The highest and lowest travel costs are IDR125,000 and IDR25,000, respectively. Therefore, calculations using the integral formula obtained a consumer surplus value of 772,000 per tourist per year. This shows that the surplus visitors enjoy due to their ability to pay more than the actual demand. Additionally, the consumer surplus shows the profit received by visitors for the costs incurred when traveling to Tengket Beach.

\[
\text{Consumer Surplus} = \int_{p_0}^{p_1} f(p) \, dp
\]

\[
\text{Consumer Surplus} = \int_{25,000}^{125,000} (3.950 - 0.00000232x1) \, dx
\]

From the consumer surplus, an estimate of the economic value obtained by tourism managers in one year is IDR5,890,560,000

\[
\text{Economic Value} = \text{Consumer Surplus} \times \text{Visit (in 1 year)}
\]

\[
= 337,600 \times 15,600
\]

\[
= 5,890,560,000/\text{year}
\]

Tengket Beach has the potential to improve the economy of the surrounding community. People could earn income from the tourism sector, such as using land for parking, collecting entrance fees, managing parking funds, and opening stalls selling food or regional specialities. Furthermore, income could be obtained from the cost of selfie photo spots or equipment rental for tourism activities.

Budi Setyawan et al. (2020) showed that fishing tourism in Tanjung Kait generates an economic of IDR3,272,524,846 yearly. Similarly, Warningsih et al. (2021) provided an overview of the economic potential of IDR427,140.43 per individual per visit with the resulting economic value of IDR1,507,554,457.51. The economic value of the two tourist sites is much lower than Tengket Beach. This is because fishing tourism is smaller in scope than beach tourism. However, Zulpikar et al. (2017), Lestari et al. (2020), and Panjaitan et al. (2019) found that Batu Karas, Santolo, and Wediombo beaches have an annual economic value of over 50 billion, far higher than Tengket Beach. This is because the three beaches have been managed
massively and intensively. Moreover, they are widely known by tourists and attract most visitors from remote areas and outside Indonesia. This condition increases the consumer surplus value and impacts the economic value.

Research Implication

Most of the regions in Indonesia are blessed with very beautiful resources. If developed and managed properly, it will contribute to a very large economy (Hakim et al., 2011). One way of developing natural resources that can be done is to make natural resources into tourism destinations (Dwiputra et al., 2019; Titisari et al., 2022).

Tourism development based on local potential can have a significant impact on the regional economy. At this time, the trend of natural tourism visits continues to increase. This is an opportunity for many regions to take advantage of it, and develop nature-based tourism destinations which are located around them. Beach tourist destination is one of the objects of tourist visits that are much glimpsed by tourists. Some of the advantages offered by this beach tourism object are: (i) the tourist location is very wide, (ii) has a natural attraction, and (iii) affordable location entrance fees (Pratiwi et al., 2019).

The development of Tengket Beach tourism located in Bangkalan Regency requires serious planning from the tourism management or the local government. Development planning could be well prepared through visitor assessment. In addition, information on the economic opportunities derived from tourism development is also required (Hakim et al., 2011; Kaihatu & Hariey, 2021).

The visitor perception of Tengket Beach depicts that visitor only value natural beauty. They have a very bad perception of cleanliness, accessibility, and facilities. The results showed that travel costs and accessibility negatively and positively influenced visits, respectively. Other findings showed a large potential for economic value through serious management.

The village and local governments should collaborate to plan for Tengket Beach development. The local government could prioritize the development of proper road access to tourist sites. Moreover, the village government could strengthen accessibility by providing transportation facilities that empower local communities, directions, evacuation codes, assembly points, and warning boards. It is also necessary to clean the beach and improve public facilities such as toilets, prayer rooms, and tourist rental equipment (Decxyvano & Akiriningsh, 2022).

Policymakers could use the potential economic value to determine strategic management steps. However, most people are still reluctant to develop beach tourism because they believe visitors often misuse tourist spots to commit non-religious acts. In this case, the Madurese people who adhere to religious values could develop halal tourism in some places. Village and local governments could also conduct comparative studies on halal tourism management. Furthermore, the economic value of Tengket Beach could be increased when the consumer surplus is bigger. This could be accomplished when many visitors come from outside, which requires promotion through various social media. In this regard, the Bangkalan Regency Tourism Office should intensify its social media to attract tourist visits.

CONCLUSION AND SUGGESTION

Based on the results of this study, it can be concluded that most visitors (60 percent) perceive the attractiveness of Tengket Beach as good. However, accessibility and facilities are largely considered poor. More than 80% of visitors assess that accessibility and facilities at Tengket Beach are very poor. Travel costs and facilities have a negative influence on the number of visits, but on the contrary for accessibility and the annual economic value of Tengket Beach tourism which is worth IDR5,890,560,000. This economic value illustrates that the existence of Tengket Beach has great potential as as a booster of the community's economy.

The study provided the following suggestions or recommendations as follows: (i) improving road access to Tengket Beach, especially at its entrance, (ii) increasing the attractiveness by maintaining the cleanliness of the beach by providing many accessible places, especially where visitors gather, (iii) creating an appeal board for visitors to dispose of garbage in the space provided, (iv) encourage local and village governments to conduct comparative studies of tourism management in accordance with the values of Madurese society.

REFERENCES

Jawaban: 1. Panduan Valuasi Ekonomi Sumber Daya Alam dan Lingkungan


