ECONOMIC VALUATION WITH TRAVEL COST METHOD (TCM) SLANIK WATERPARK SOUTH LAMPUNG DISTRICT

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Abstract

This study aims to analyze: (1) the factors that affecting the number of tourist visits, (2) the economic value of the Slanik Waterpark in South Lampung District, (3) the visitor satisfaction with tourism cost attribute. This study uses survey method involving 70 respondents who came during the COVID 19 outbreak. The first objective uses multiple linear regression analysis, the second objective uses consumer surplus analysis, and the third uses the Customer Satisfaction Index (CSI) analysis. Data was collected in June until July 2020. The research shows that the factors that influence the number of tourist visits Slanik Waterpark are travel costs and days of visits, the economic value of the Slanik Waterpark tourist attraction is IDR 13,060,150,376 every year, the visitors are satisfied with the cost attributes incurred when traveled to Slanik Waterpark.

Keywords: *tourism, economic value, visitor satisfaction*

Introduction

Tourism developement is a scope of a broad developement, starting from society to the whole economic aspects in that society (Dwiatmojo, 2015). Through support and specific concern, tourism development process is focused on the progress tourism aspect in order to enable to run economic sector. According to tourism law about tourism 1990, tourism is support including facility and service provided by the government, entrepreneurs, and community for any kind of tourism activities (Nugroho, 2010).

Lampung province is one of provinces with a large number of tourism potentials. One of regencies in Lampung which has a good tourism potential is South Lampung.

South Lampung has the biggest waterpark as a tourism place in Lampung which is classified as a new tourism place named Slanik Waterpark. Slanik Waterpark is launched on 6th of February 2016 and it was well welcomed by Lampungnese people. A wide land is managed by the manager in order to provide supporting facilities which make visitors comfortable during their visit.

Slanik Waterpark contributes well to the economic aspect of people and traders nearby. One of the examples is the number of stores increasing around Slanik Waterpark. Now there are two souvenir shops opened, more than three stalls and repair shops. Another contribution can be seen from the good employment, the improvement of access road to Slanik Waterpark in order to enable visitors to visit Slanik Waterpark easily. This thing encourages the manager of Slanik Waterpark to develop the target number of visitors.

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The need of community towards water tourism place motivates the manager to provide attractive water park facilities switch enable to attract the visitors. This is important to increase the number of visitors so that Slanik Waterpark becomes more popular among the community.

Research Methodology

Factors affecting the number of visitors

Factors affecting the number of visitors can be seen through variable model of travel cost, distance, safety, accessibility, income, facility. Visiting days which are analyzed with multiple linear regression.With the indicator if significance probability > 0,1, H0 is accepted and H1 rejected. If significance probability < 0,1, H0 rejected and H1 accepted (Ghozali, 2011).

$$Y = a + b_1X_1 + b_2X_2 + b_3X_3 + b_4X_4 + b_5X_5 + b_6X_6 + b_6D_1 + b_7D_2 + e \quad (1)$$

Note :
a = constant
b = regression coefficient
Y = The number of visit
X1 = Travel cost (Rp/Knj)
X2 = Distance (Km)
X3 = hygiene (Very clean/ Clean/ Clean enough/ Dirty/ Very dirty)
X4 = Safety (Very safe/Safe/ Safe enough/ Unsafe / Very unsafe)
X5 = Accessibility (Hour/Knj)
X6 = Revenue (Rp/Month)
D1 = Facility
1 = Good
0 = Insufficient
D2 = Visiting days
1 = *weekdays*
0 = *weekend*
e. = *Error*

Economic Value

After that, analyzing economic value travel cost method was by counting consumer surplus value per individual per year, according to Fauzi (2014).

$$SK = \frac{V^2}{2\beta 1} \quad (2)$$

Note:
SK = Consumer surplus (Rp/person)
V = The number of respondents' visit (times/year)
β_1 =Travel cost coefficient (TC)

The formulation of the total economic value is based on Marsinko *et al* (2002).

$$EV = SK \times TP \quad (3)$$

Note :
EV = Economic value of the tourism place area in a year (Rp/year)
SK = Surplus consumer visitor per person/visit (Rp/person)
TP = The average total of visit per year (person)

Visitors' satisfaction

Visitors' satisfaction was analyzed by using *costumer satisfaction index* (CSI) with likert scale on transportation cost attribute, consumption cost, entrance ticket cost, gazebo rent cost, swimming tire rent cost, cable car cost, parking fee etc. By seeing the level of importance and visitors reality. Scale and interpretation which are used to see consumers' satisfaction can be seen in the table 1 and 2.

Table 1. Determination of the level of satisfaction and Customer analysis interpretation Satisfaction Index (CSI) (Supranto, 2006)

Scale range	Interpretation
0.00 – 0.21	Very unsatisfied
0.21 – 0.40	Unsatisfied
0.41 – 0.60	Quite satisfied
0.61 – 0.80	Satisfied
0.81 – 100	Very satisfied

Table 2. The score of the level of importance and the level of reality (Supranto, 2006).

	Answer criteria	Score
Score of the level of importance	Very unimportant	1
	Unimportant	2
	Quite important	3
	Important	4
	Very important	5
	Answer criteria	Score
Score of the level of reality	Very expensive	1
	Expensive	2
	Quite expensive	3
	Cheap	4
	Very cheap	5

Result and Discussion

Travel Cost

Travel cost is the addition of each expenditure which is spent by visitors individually when they visit a tourism place in one trip. Those costs include transportation, consumption, entrance ticket, swimming tire rent, gazebo rent, and so on showed in table 3.

Table 3. Travel cost of Slanik Waterpark's visitor.

Clasification	**Maximum (Rp)**	**Minimum (Rp)**	**Average (Rp)**	**Average percentage (%)**
Transportation	181,000	11,500	62,512.93	35.88
Consumption	80,000	20,000	46,005.38	26.40
Enterance fee	50,000	35,000	42,571.43	24.43
Gazebo rent	75,000	0	14,642.86	8.40
Swimming tyre rent	35,000	0	3,500.00	2.01
Etc.	35,000	0	5,000.00	2.87
The total cost	456,000	66,500	174,232.59	100

Table 3 shows that the accumulation of each cost spent by visitors which can be seen from each cost spent by respondent per individual so that maximum cost, minimum cost, average cost, and average percentage are gained. Minimum cost in the classification of gazebo rent and swimming tire rent value Rp 0.00 because some of visitors uncommonly rent gazebo and swimming tire in their visit. Classification of other costs is Rp 35,000 since some of visitors spend this cost to pay locker rent or additional hygiene cost for bringing food or snack bought outside of Slanik Waterpark. To count the amount average cost of travel per individual in total trip cost is gained from the addition of costs spent by visitors which cost Rp12,196,21.086. With the number of average cost of Slanik Waterpark visitor per individual per visit which cost Rp174,232.59.

Factor Affecting visitors.

The rapid spread of corona virus affects all aspects in life. This pandemic causes new health protocols implemented in social activities. One of them is tourism activity. That issue affects the number of visit in many tourism places. It

triggers researchers to test each factor taken into consideration to see the effect of the number of visit which is analyzed by using multiple linear regressions.

Table 4. The Result of Multiple Linear Regression Coefficient Output

Model	Coefficient	t-Statistic	Prob
(Constant)	1.2901	0.9441	0.3488
Travel cost	-9.6E-06 ***	-3.3979	0.0012
Distance	0.0112	1.6522	0.1036
Hygiene	0.1650	0.8331	0.4080
Safety	-0.0372	-0.2445	0.8076
Accessibility	-0.2385	-0.7704	0.4440
Income	-1.06E-07	-1.0697	0.2889
Facility	0.2202	0.5807	0.5636
Visiting days	-0.7052 ***	-2.8609	0.0058
Variable		Total	
R- square		0.2389	
Adjusted R-square		0.1391	
F-Statistic		2.3938	
Prob (F-statistic) **		0.0257	
Durbin Watson		1.9192	

* The level of confidence 90%
** The level of confidence 95%
*** The level of confidence 99%

From the result of regression in the table 4 is gained the multiple linear regression equation below:

$$Y = 1{,}2901 - 9{,}6E\text{-}06X_1 + 0{,}0112X_2 + 0{,}1650X_3 - 0{,}0372X_4 - 0{,}2385X_5 - 1{,}06E\text{-}07X_6 + 0{,}2202D_1 - 0{,}7052D_2 + e \quad (4)$$

Data test had been done before regression of research data was conducted. It is found that there is no multicollinearity and heteroskadesticity in research data. The result of data test in table 4 shows that the factors affecting the number of visit are travel cost and visiting days which are in the level of confidence 99%. This is caused by the fact that the higher travel cost, the lesser visitors will visit. This result is in line with previous research conducted by Arifa (2019) which explains that the higher travel cost, the lesser visitors will visit the tourism place.

On the variable of visiting days, the number of visitors on weekdays is more than the number of visitors on weekends because the situation is not too crowded on weekdays so that it can minimize the spread of Covid 19.

While the variables of distance, safety, hygine, accessibility, income and facilities do not affect tourist visits to the Slanik Waterpark. This is because the majority of visitors are new visitors who first time come to Slanik Waterpark. Then, the perception that Slanik Waterpark is the largest water tourism object in Lampung Province with a strategic location on the Karang Anyar crossing, South Lampung Regency which is connected to Bandar Lampung City, Metro City, South Lampung Regency and East Lampung Regency and good road access plus

the presence of toll roads attract people to visit Slanik Waterpark.

Economic Value Based On Travel Cost

The travel cost approach can be used as an estimation step to determine the economic value of tourist attraction recreational services. This method was chosen based on the advantages of obtaining real data from the cost of visits made by a person on a tour. The calculation of the economic value of the Slanik Waterpark tourist attraction uses data on the number of visitors in 2017 of 118,116 people in one year.

Travel cost coefficients that have been analyzed by using multiple linear regression tests can be used as a calculation of the economic value of the Slanik Waterpark. Travel costs that have been analyzed using multiple linear regression can be used. The calculation of the economic value of the Slanik Waterpark tourist attraction can be seen in table.

Table 5. The economic value of Slanik Waterpark

Explanation	Value
The number of respondent (person) (a)	70
The number of visit per year (Times peryear) (b)	118,116
Coefficient travel cost (c)	0.00000969
Consumer surplus (Rp) (d)	22,291,022
Consumer surplus / individual/ visit (Rp) (e)	110,571
The total of economic value (Rp) (b x e)	13,060,150,376

Table 5 shows the consumer surplus of each individual per visit at Slanik Waterpark is IDR 22,291,022 so that the results of the economic value at the Slanik Waterpark tourist attraction are IDR 13,060,150,376 in a year. This value is quite high compared to the Dayu Park water tourism park in Sragen, Central Java Province with an economic value of IDR 260,841,380 (Ermayanti, 2012). This shows the attractiveness of the Slanik Waterpark has a fairly high economic value for existing resources. Thus, the tourism services provided by Slanik Waterpak can provide benefits and need to be maintained.

Visitor Satisfaction Based on Level of Importance with Reality

Customer or visitor satisfaction is a feeling or a form of someone's disappointment caused by having a desire to judge by comparing a performance that handles a product (or result) towards consumer expectations (Kotler and Keller, 2008). The costs spent by visitors when they travel to Slanik Waterpark have different levels of importance for each visitor. To determine this importance, the customer satisfaction index (CSI) is used on the cost attributes spent by each visitor by first knowing average importance score (RSP), average reality score (SSR), weighting factor (WF) and weighting score (WS).The Likert scale is used to see the level of importance and the reality that exists which is used as a measuring tool to see the value of importance for the costs spent by visitors when they travel (very important, important, quite important, not important and very unimportant) then to see the level of reality which is seen as very expensive , expensive, quite expensive, cheap and very cheap. It is used as a reference in measuring the satisfaction of visitors to the Slanik Waterpark in traveling.

Table 6. Interest level index calculation and reality

No	Attribute	Percentage	Importance Level Index	Percentage	Reality Index
1	The total of travel cost	68.86	Important	67.14	Cheap
2	Transportation cost	56.57	Quite important	68.86	Cheap
3	Consumption cost	74.00	Important	72.57	Cheap
4	Enterance ticket fee	67.14	Important	64.29	Cheap
5	Gzebo rent cost	64.57	Important	55.43	Quite cheap
6	Swimming tyre rent cost	59.71	Quite important	61.43	Cheap
7	Cable car cost	69.71	Important	68.86	Cheap
8	Parking fee	67.14	Important	72.57	Cheap
9	Others.	87.71	Very important	69.43	Cheap

Table 6 shows the calculation of importance level index of each cost model which is used as an attribute in determining the level of visitor satisfaction in Slanik Waterpark. The lowest percentage value in the importance level is transportation cost, but in the reality, transportation cost is valued cheap with the percentage 68.86%. This shows the importance level will not be always the same as what the visitors feel towards the costs spent when the visitors visit Slanik Waterpark.

Table 7. Calculation and interpretation of satisfaction level with CSI analysis

No	Attribute	RSP	WF	RSK	WS
1	The total of travel cost	3.44	0.11	3.36	0,38
2	Transportation cost	2.83	0.09	3.44	0,32
3	Consumption cost	3.70	0.12	3.63	0,44
4	Enterance ticket fee	3.36	0.11	3.21	0,35
5	Gazebo rent cost	3.23	0.10	2.77	0,29
6	Swimming tyre rent cost	2.99	0.10	3.07	0,30
7	Cable car cost	3.49	0.11	3.44	0,39
8	Parking fee	3.36	0.11	3.63	0,40
9	Others	4.39	0.14	3.47	0,49
The total number		30.77	1.00	30.03	3.35
CSI					66.97

Table 7 shows that Slanik Waterpark Visitor Satisfaction in the importance level and the reality of costs spent in visiting Slanik Waterpark is satisfied, because according to the resulting scale of the calculation of the CSI analysis resulted in the number 66.97. This satisfaction occurs because every visitor who comes to the Slanik Waterpark is quite loyal to consider the costs spent in traveling because most visitors coming from some regions think that every nominal money spent in visiting and seeing the condition of the existing Slanik Waterpark tourist attraction is very worth it. This result is in line with Amaliawati's research in (2015) that in her research on the satisfaction level of visitors to the Umbul Penging tourist attraction, one of the cost factors which spend in traveling such as ticket have a positive effect on consumer satisfaction.

Conclusion

The average travel cost spent by visitors per individual per visit is IDR 174,232.59 with higher expenditure allocation spent is transportation cost worth IDR 62,512.93 per individual. Factors affecting the number of visit in Slanik Waterpark are travel cost and visiting days on weekdays there are more than 45 people compared to visitors on weekends as many as 25 people. Economic value in Slanik Waterpark which is resulted by using travel cost method is IDR 13,060,150,376 per year. Most of visitors are satisfied with each attribute cost they spend when they visit Slanik Waterpark.

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