

Economic Valuation of Natural and Cultural Tourism Destinations

Sri Walyoto^a, ^aLecturer in the Faculty of Economics and Islamic Business, IAIN Surakarta. 082137228091(WA), Email: Walyoto_colamadu@yahoo.co.id, sri.walyoto@iain-surakarta.ac.id

This research was conducted in Surakarta and supporting areas for tourism destinations to reveal the economic value of tourism destinations in these areas. The Survey Model was applied for the data collection. Travel Cost Method and Contingent Ranking were utilised to analyse the collected data. The results indicated that there was an economic value object of Surakarta tourist destinations and supporting areas. Tourists who visited these objects benefited from their visits. For objects that can provide immense benefits, the object needs to be preserved, while objects that offer limited benefits require increased creativity.

Key words: *Travel Destinations, ZTCM, Consumer Surplus, Economic Value, CR.*

Introduction

The demand for goods or services is an essential part of the distribution of sources. It is where costs act as a measure of distribution efficiency. The value determination of goods or services based solely on costs in the market for environmental and cultural values will be forgotten (not taken into account). Therefore, it needs attention in the economic valuation of its economic value. The conventional method of providing approval for a place or object tends to be a project whose costs and benefits can be assessed. Costs and benefits of development that damage the environment and culture are essential if these sources receive thoughtful attention.

An economic valuation can assist in providing quantitative values of environmental goods and services, whether the market price is real or not (Barbier, 1997). With an economic valuation, the financial value can provide social costs and benefits for the use of the source. The calculated economic value can impart the basis for making project implementation decisions. Lipton et al. (1995) explain that economic value is the maximum amount a person is willing to sacrifice for goods or services to obtain certain goods or services. Fauzi (2010)

states that economic value does not only concern the value of direct and indirect benefits. The choice of using natural resources is often disputed with direct and indirect benefits.

Tourism is a leading sector in Indonesia, which is rich in natural and cultural resources. Surakarta and its surroundings are places or objects that are viewed as attractive tourism objects for domestic and foreign tourists. Those areas should recognise its economic value, to uncover the conditions of the demand, and a tourist economic assessment needs to be conducted (Kaimusia, 2017): The community's willingness to preserve those areas, the benefits derived from enjoying them, and the virtue choice of visiting them. The development of the tourism sector in a country will attract other sectors to develop (Salma and Indah, 2004), and tourism becomes the primary source of foreign exchange (Devy 2017).

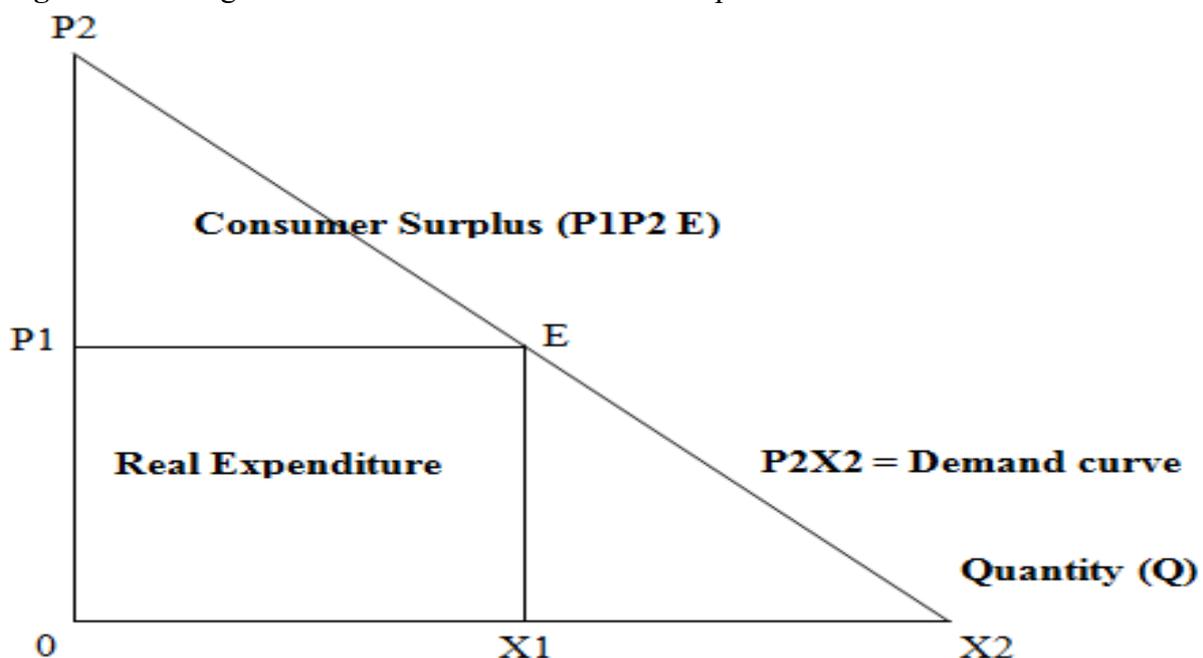
Surakarta, as one of the cities that has a palace and cultural heritage, can be represented as a city of a cultural tourism destination. Tawangmangu that is in the mountainous area of Lawu can serve natural tourist destinations. It has the characteristics of historical and natural cultural tourism destinations. The application of the travel cost method needs to be done to determine the economic value of the destination and the acquisition of the benefits of visiting tourists (Saptutyningasih and Cahya, 2017). Natural and cultural evaluations in the city of Surakarta and GunungLawu are discovered in various ancient historical relics and beautiful natural scenery. The place needs conservation efforts because it is fulfilled as a natural and cultural heritage.

Economic valuation is related to demand theory. The demand theory explains the relationship between cost and quantity demanded, in which the costs can be described through demand curves. Sukirno (2001) argued that the components that influence the amount requested are including the price of the goods and services concerned, the prices of other goods and services, community income, community taste, and so forth. The demand function can be obtained from the utility function or budget function. The demand function derived from the utility function is the Marshallian request function, whereas the function derived from the budget function is the request function.

Based on the Hicksian demand function, the consumer surplus can be calculated. With the number of tourist visits known, the value of the destination can be calculated. Consumer surplus measures the effect of individual welfare as a result of changes in consumption due to changes in costs. Rifki (2018) believes that added value can be reflected in consumer surpluses. The difference between market prices and prices that can be paid is a measure of consumer surplus. Consumer surplus is a measure of real profits or losses experienced by individuals due to changing economic events. It is a measure of the net benefits of community welfare for economic change.

The consumer surplus can also be measured through a Marshallian demand curve. The area below the demand curve and above the market price line is a consumer surplus. This concept of consumer surplus based on consumer surplus is the difference between the maximum price that consumers can pay and the market price that should be paid (Fanita, 2012). The relationship between the real budget and the consumer surplus on a demand curve can be observed in the following figure. The consumer surplus is the excess value that an individual receives from consuming goods or services compared to the price paid (Nicholson and Sayder, 2010).

Figure 1. The Figure of the Marshallian Consumer Surplus Curve



Source: Bigger and Hoffman (1998)

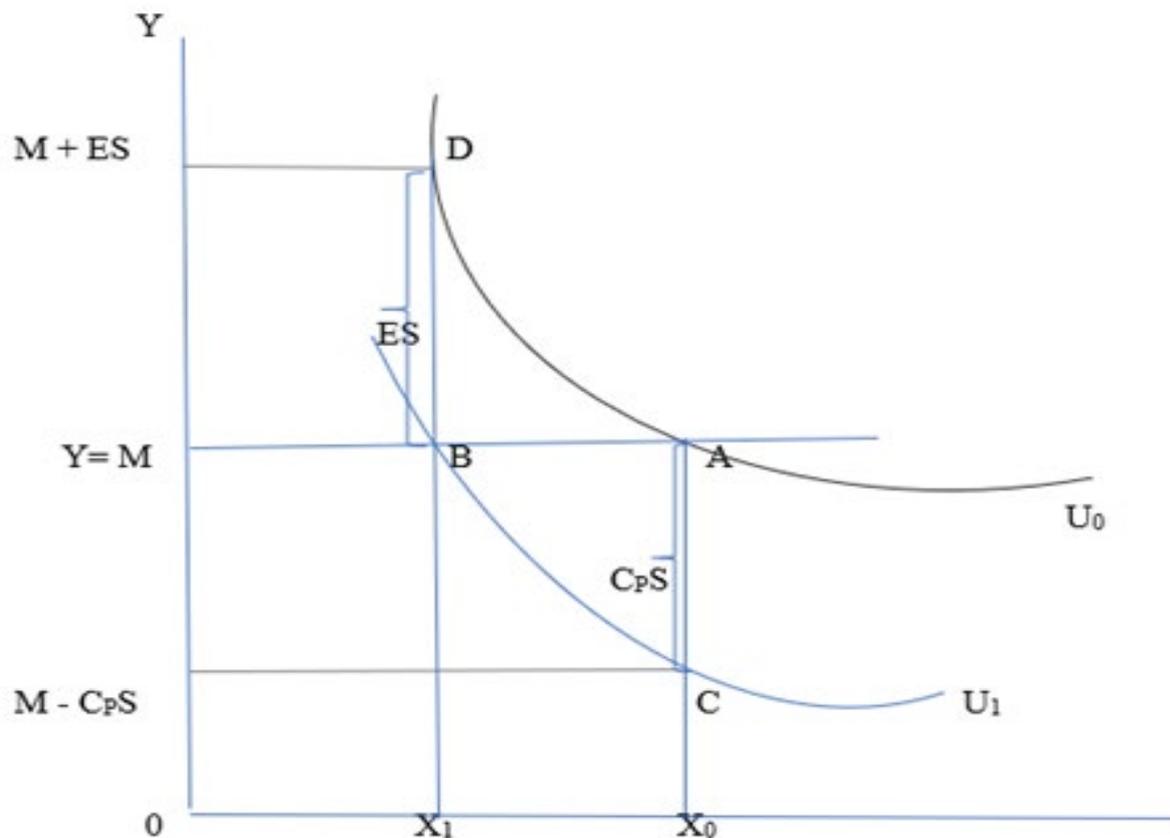
From the figure above, the Marshallian consumer surplus for goods X is the triangle of the P1P2 E region that is the area under the Marshallian demand curve and above the P2 market price line. The rectangular area of OP1EX1 is a real expenditure. The Marshallian demand curve measures the consumer surplus as a result of a full-price change (P1 to P2). Mathematically, the consumer's inventory can be calculated integrally from the original cost to the cost after a change in the amount demanded. Consumer surpluses can be measured in the fields that lie between the demand curve and the price lines (Samuelson and Nordhaus, 2002).

Goods or services that do not have a mark of consumer surplus costs are done based on changes in the quantity and quality of the goods or services. The welfare measure takes the

value of compensation or equality based on the Hicksian concept. The function of the budget can estimate the value of Willingness to Pay (WTP with a budget function), that is the ability to pay from individuals to achieve higher welfare under duality adjustment. The approach asserts that rational consumers will minimise the budget to obtain the maximum level of welfare and consumption quality.

The measurement of welfare effects for non-market commodities can be explained through the following figure.

Figure 2. Measuring Changes in Welfare Surplus Equivalent Surplus Compensation



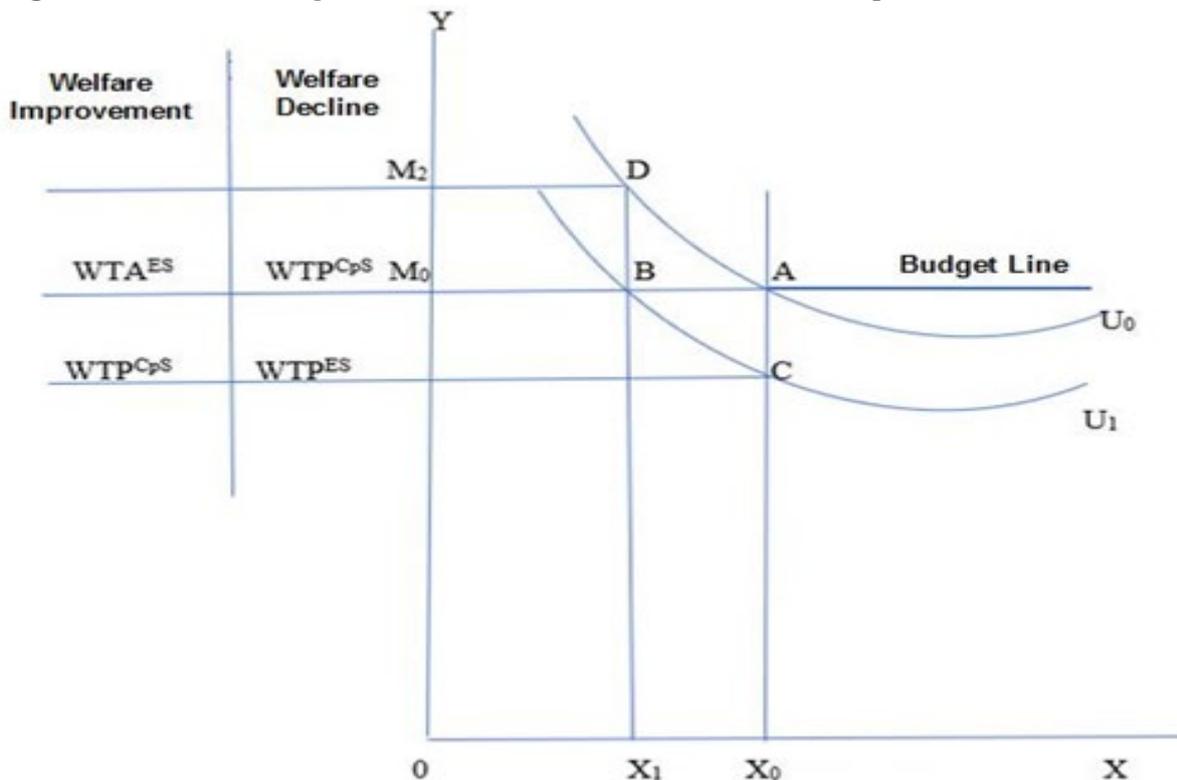
Source: Freeman (1993)

The figure above shows how the size of the compensatory surplus and equivalent surplus is depicted in a change in welfare, where X is a public good for having no market price. Y is another public good; U_0 is the initial utility, and U_1 is a utility after changes occur.

The starting point for equilibrium is at point A in the U_0 satisfaction curve and X_0 public goods. If there is a change in the welfare of the quality of public goods, for example from X_0 to X_1 , so the balance point shifts from A to B . If the consumer wants to maintain his/her

initial satisfaction at U_0 , he/she needs to spend a certain amount of ES to keep the initial quality public goods; if it does not, he/she will decrease the amount of consumption of public goods that are in point D. Meanwhile, if the consumer can still consume several items as before, he/she must be able to pay a certain amount of funds so that the balance at point C with utilities at U_1 , as shown below.

Figure 3. Welfare Change Measures for Goods do not have market prices



Source: Pearce (1990).

The assumption that there is a development policy or project causes the consumption of goods X to decrease from some X_0 to X_1 . The reduction in welfare will also reduce utility from U_0 to U_1 . The welfare effect of this decline is measured by the size of the equivalent surplus (US). The equivalent surplus is illustrated by the number of funds that can be paid or received by individuals who are in new utilities at the same consumption as before the changes. To set the original consumption to a new utility, the individual will be able to pay as much as WTP^{ES} . This payment will cause an income decrease from M_0 to M^1 .

The reduction in consumption can also be measured by the ability to receive compensation (WTA^{CpS}). If consumption is reduced from X_0 to X_1 , a number of compensation funds that should have been received as WTA^{CpS} or $M_2 - M_0$ reflecting the surplus compensation, should be received to release X_0 consumption at a new lower utility level but remain at its original

utility. Total Marginal Value is equal to WTP minus market price (ticket) and is a consumer surplus. This theory can be used to make a priority.

Access to Surakarta tourist destinations and its surroundings supporting places that can be reached by land and air. Air travel can be done by plane and landed at Adisumarmo Airport (SOC) in Boyolali. The road trip (land) can be reached by train and stop at Solo Balapan Station, or if using a bus, you can stop at the Tirtanadi terminal. It depends on the means of transportation choice.

Surakarta City was founded in 1745 AD, along with the Surakarta Hadiningrat palace which was established as the successor to the Mataram dynasty. Surakarta Hadiningrat Palace, according to historical records, is the successor of the Majapahit Kingdom. Because of the collapse of Majapahit, the centres of government were successively moved to Demak, Pajang, Kotagede, Pleret, Kartasura, and Surakarta. Based on the belief of the Fifth Brawijaya; the last Majapahit King was believed to have died on the peak of Mount Lawu. and the existence of the Surakarta Hadiningrat Palace's heritage encouraged the development of the area into a natural and cultural tourist destination. Tawangmangu, as a tourist destination, has tourist attractions, such as Grojogan Sewu, Cetho Temple, Suku Temple, and Kemuning Tea Plantation.

Surakarta has the potential of a tourist destination, namely Surakarta Hadiningrat Palace, as a Javanese palace with a touch of European style. It is adjacent to Slompretan, the Great Mosque as a symbol of the Islamic Mataram, Gapuro Gladag, and Pasar Gede that is also known for its Chinatown complex. To the west, there is Puro Mangkunegaran as the palace of King Mangkunegoro. In front of which, there is a Triwindu market (Ngarsopuro) as the center of antiques. To the southwest, there is the Danar Hadi Ancient Batik Museum, the most complete batik museum in the world, the Laweyan batik village, and the Pajang Palace site. In the east, the Bengawan Solo river, which is famous for its song in the world, completes Surakarta as a cultural city destination.

However, this potential was also followed by the transfer of the utility function of places and buildings. Residential and business dwellings become a burden on historic building structures, which are one of the factors causing site damage. From the development of this physical and environmental condition, it needs a concern from the community and the government to stick to the legislation regarding cultural heritage, so that ancient buildings are preserved as historical and cultural heritage.

Strategic development efforts to improve and develop tourist destinations are needed while maintaining historical value, and on the other hand, business is also growing. Related to this,

cultural heritage buildings are not only viewed from historical artifacts but also other supporting components. Other supporting components are people who live and trade, which are inseparable. It is necessary to have a humane arrangement so that the condition of the city becomes clean and neat, which makes it comfortable for tourists and residential communities and traders.

In dealing with housing, trading activities in tourist attractions need to be carried out with considerations that do not originate from just one party. However, it involves the whole party, including the people who live there or are active as traders in the area. People here still need to get attention because of their position as subjects and objects in a place that allows conservation.

As a subject, society is a community that interacts directly with the area, where conservation interests are needed to support the program. This participation is realised with a clear understanding of what is conserved and why it is conserved. Thus, people understand the meaning of conservation of cultural heritage objects and feel they have something to be proud of, as stated by Grimwade and Carter in Nuryati (1993).

It will encourage the community to be responsible for their role in supporting development and conservation activities, especially post-development and conservation activities because development and conservation is an ongoing process. As research objectives have been set, namely, to find out the exact destination value of a tourist destination, this research is expected to know the priority order of a tourist attraction visit in Surakarta and surrounding areas.

Research Methods

This study used observation and interview techniques to gather information, which was all utilised. A total of 200 respondents were selected from among domestic tourists from all regions of Indonesia outside the cities of Surakarta and Karanganyar. Questionnaire instruments were used to obtain relevant information from respondents. Research data were secondary data and primary data, obtained by quoting and extracting directly.

Travel Cost Method (TCM)

The destination value of Surakarta's tourist attractions and its supporting places were calculated based on the tourists' visit to the site. Consumer surplus was derived from one per coefficient of travel costs from the place of origin of tourists to tourist destinations ($1/\beta$). β is a coefficient of travel costs, in which this study used the ZTCM (Zonal Travel Cost Model)

that estimated the number of visits to tourist destinations. The assumptions used in forming the demand function were:

1. Surakarta and surrounding tourist destinations were the leading destinations by visitors
2. Every visitor was aware of any changes in costs associated with the travel cost to Surakarta and its surroundings.
3. No costs were sacrificed for the time spent traveling to Surakarta and its surroundings. Time has an intrinsic value that is reflected in the form of sacrifice (Fauzi, 2006).
4. There was no alternative destination for visitors
5. The time spent by each visitor in Surakarta and its surroundings was the same. It was done to be able to measure the number of visits on the same scale.

Travel Cost Method (TCM) can be used for recreation places in rural areas, stated by Khoirudin (2017). The model used in this study was ZTCM because the average respondent visit was only one time. The respondents' origin area was divided into zones, based on the city/region. The distance of the respondents' origin area to Surakarta and its surroundings were grouped in the range of 50 km. For example, 0-50 km from Surakarta and its surroundings were included in the 12th zone, such as Yogyakarta and Boyolali, and so on, so that it produced 22 zones.

This study used regression to estimate the demand function of Surakarta and surrounding tourist destinations. The independent variables were the travel cost (TC), income (INC), and the dummy for the Java Island region divided into three areas, namely Central Java (Jateng), East Java (Jatim) and West Java (Jabar). This was because many respondents came from those areas. It was to see differences in respondent behaviour for the three regions. The next step was to choose the demand function model.

The recreation demand function used was semi-log. Below is a semi-log regression equation for ZTCM. Model formed was:

$$\ln V_{zj}/POP_z = \beta_0 - \beta_1 TC_{zj} + \beta_2 INC_z/POP_z + \beta_3 Jabar_z + \beta_4 Jateng_z + \beta_5 Jatim_z$$

In which: V_{zj}/POP_z = Number of z zone visits to destination j per 1000 z zone populations,

TC_{zj} = Travel costs from z zone to destination j,

INC_z/POP_z = Total z zone income per 1000 z zone population,

$Jabar_z$ = Dummy variable for z zone West Java

$Jateng_z$ = Dummy variable for z zone Central Java

$Jatim_z$ = Dummy variable for z zone East Java

The demand function based on the above equation was in the form of semi-log, with the dependent variable being the average number of visits per 1000 population. This number was obtained from z zone respondents divided by z zone population and multiplied by 1,000. The interpolation of population data into data per 1000 population was done because the average population in each region in Indonesia was too large. The independent variables included the average travel costs, average total income per 1000 population, and dummy variables for West Java, Central Java, and East Java.

In contrast to ITCM, ZTCM included socio-economic and demographic variables, which were used on average to show data for each zone. Some studies in the United States have used demographic factors, such as per capita landings, gender differences, and education, which had a significant influence in determining patterns of external recitation, according to Ward and Beal (2000).

The variable of travel cost (TC) was calculated from the commuting cost and only took into account the cost of fuel (BBM). In this study, TC did not consider the sacrifice of travel time because respondents were assumed to enjoy the trip, so the sacrifice was replaced by enjoying during the trip. The distance cost used in this study was Rp. 150 per kilometer. After the demand function was successfully determined, then the consumer surplus was calculated by:

1. Using a formula made from the regression equation of the semi-log demand function, with the Hanley & Spash (1993) formula, which was $CS = 1/\beta$.
2. Using a graphical approach to consumer surplus, which was measured by calculating the ability to pay, the amount was a large area under the demand curve above the price line.
3. The model used to estimate the demand curve was semi-log; therefore, a straight-line approach was used to calculate the area of the triangle under the demand curve.
4. This calculation.

Contingent Ranking

Contingent Ranking was used to determine the order of tourist destination places, with the main ones in Surakarta and its surroundings, by arranging the order. This order arrangement, which could represent the attributes of tourism in Surakarta and its surroundings, was the attributes of historical and natural culture. Furthermore, the economic value of the main attributes possessed by Surakarta and its surroundings, namely culture, history, and nature, was estimated. Determining a reasonable entry ticket price was the next step.

Recreational packages offered and compiled were based on various combinations of attributes of the recreation place with various price levels. The determination of the

recreational attributes' combination was done with the help of a matrix to avoid multicollinearity. The number of combinations determined could give respondents a choice to show their priority. The results of the FGDs regarding the priority combination choice of destination attributes and prices are as follows:

Table 1: Combination of Attribute Hypotheses

Package	Historical Attributes of the Cetho temple (At1)	Palace Cultural Attributes (At2)	Attributes of Grojogansewu Nature (At3)	Nature and animal attributes of Bengawan Solo/Jurug(At4)	PriceRp
1	1	1	1	0	184.000
2	0	1	1	0	149.000
3	1	1	1	1	263.000
4	0	1	0	1	42.500
5	1	1	0	1	164.000

Source: FGD results

To help respondents arrange the order of priority, pictures, or photo attributes in the recreation area was provided. The price of each package was determined based on the FGD with tourism agents in Surakarta and its surroundings. Packages, with more recreational site visits, had higher prices than packages that only visited a few recreational spots. However, it did not always apply due to the existence of other factors that determined the price of the package to be expensive, such as the popularity of a place.

Analysis and Discussion

The survey was randomly carried out by researchers themselves to visitors in four main places in the Surakarta Palace, Bengawan Solo (Juruk), Grojogansewu, and Cetho Temple, by employing a questionnaire. From 200 respondents, six questionnaires were damaged, and a total of 194 sample members were used in this study. Respondents who met in Grojogansewu were 26.8%, in Cetho Temple were 22.2%, in Surakarta Palace were 25.8%, and in JurukPark/Bengawan Solo were 25.3%. Respondents came from 49 cities/districts from 17 provinces in Indonesia.

55% of the respondents were men. The age of respondents between 17-25 years was the largest group as much as 33%, while respondents aged 26-40 years were the second group as much as 24%. As many as 66% were still single. From the aspect of education, as many as

27% had a higher education, 47% had a high school education, 18% had a junior high school education, and 7.7% had an elementary education. Regarding the work of the respondents, 60.3% were still in school (students), 17% were civil servants, 9.3% were entrepreneurs, 6.2% were housewives, 5.7% were private employees, and 1.5% were retired. The average monthly income was Rp1,300,000. Also, the average visit for one year and two years ago was one visit.

Most of those who came only once were respondents who came from outside Java. It was reasonable due to the travel cost. Whereas, respondents from Central Java and East Java visited more than once. The reasons were because Surakarta and its surroundings have unique and interesting places to visit. Besides, culinary tourism could not be left behind.

Empirical Results of the Travel Cost Method

The regression results from the equation are as follows:

$$\begin{aligned} \ln V_{zj}/POP_z = & 0.294 - 0.0000083657803TC_{zj} - 0.0000058995487INC_z/POP_z - \\ & (0.250) \quad (-2.117)^* \quad (-0.343)^* \\ & 2.755Jabar_z - 1.548Jateng_z - 0.036Jatim_z \\ & (3.155) \quad (-1.548) \quad (-0.036) \\ \text{Adjusted } R^2 = & 0.637 \\ F = & 8.026 \\ N = & 21 \text{ zone} \end{aligned}$$

Regression results indicated a significant change in the number of visitors, functioning on changes in travel costs (TC_{zj}), which had a negative coefficient. This means that the more the cost of travel, the more the number of visitors will increase. The statistical test showed that the travel cost and dummy variables of West Java were significant at the 95% confidence level, while the other variables were not significant.

The adjusted R^2 of 0.637 or 63.7% for studies with cross-section data models that had been arranged was good, showing above 20%. This means that the explanation by the independent variable of the dependent variable could be trusted and could convince that the possibility of the wrong belief was only about 5%. The calculation result of F was 8,026, which was higher than the F table of 2.85. Because F had already been higher than 4, it means that the model, which had been arranged with consideration of R^2 and F , was appropriate or good.

After the demand function was formed, the consumer surplus could be calculated by the Hanley & Spash (1993) formula, where $CS=1/\beta$. Then, the magnitude of the consumer

surplus (CS) was Rp 119,534.57. This number was the consumer surplus for all zones per visit per 1000 population. By using the demand function that had been formed, a simulation of travel costs from Rp. 0 to Rp. 1,185,000 would be obtained. The number of estimated visitors was obtained by changing the semi-log demand function to a rank function with the anti-log approach and multiplied by 1000.

An additional travel cost of Rp. 200,000 per zone would result in a reduction of 3,767.85 visitors. For additional travel costs of Rp. 600,000 for each zone, the visitor would decrease by 132.47, and so on. This additional travel cost would have an impact on the reduction of visitors to zero (0) visitors if the additional travel cost was a maximum of Rp 1,185.00.

With the help of mathematical software, if the travel cost (TC) was Rp0, the number of visitors to all zones was 20,046.77, while at the maximum travel cost of Rp. 1,185,000, the number of visitors to all zones was 0.99 or zero (0). Simulation, which showed that with each travel cost increased, the number of visitors to all zones decreased, is described as below:

Table 2: Estimated Number of Visitors to All Zones

Travel Cost (TC)	Total Visitors to All Zones
0	20,046
100,000	8,686
200,000	3,761
300,000	1,629
400,000	705
500,000	305
600,000	132
700,000	57
800,000	24
900,000	10
1,000,000	4
1,100,000	2
1,150,000	1
1,175,000	1
1,185,000	0

Source: Data processed

The surplus for each zone and the surplus per visit per visitor is as the table below:

Table 3: Consumer Surplus (CS)

Zone	CS/Zone	CS/visit
1	4,179,729.54	71,559.95
2	8,804,590.80	80,241.29
3	30,401,776.36	87,018.92
4	221,244,138.09	89,682.73
5	552,091,415.22	89,945.59
6	372,124,089.54	89,860.41
7	193,856,147.30	89,620.99
8	224,758,322.27	89,689.57
9	167,212,493.98	89,541.64
10	178,767,606.39	89,577.09
11	175,767,899.65	89,569.72
12	177,604,547.52	89,575.40
13	222,764,659.59	89,685.50
14	132,764,659.02	89,392.22
15	26,536,785.05	86,584.68
16	78,669,574.26	88.897.07
17	223,124,735.79	89,686.42
18	18,534,992.70	85,141.87
19	135,515,925.52	86,615.98
20	10,864,705.27	81,944.86
21	5,548,343.56	75,390.25

Table 4: Consumer Surplus (CS)/visit based on Estimated Visits

Zone	Visit	CS/visit	CS estimated number of tourists
1	11,363	71,559.95	813,198,003.76
2	38,555	80,241.29	3,093,782,144.36
3	80,764	87,018.92	7,028,052,373.41
4	9,740	89,682.73	83,551,077.25
5	123,379	89,945.59	11,097,410,731.70
6	49,514	89,860.41	4,449,348,713.34
7	72,241	89,620.99	6,474,376,560.27
8	106,739	89,689.57	9,573,397,831.30
9	94,563	89,541.64	8,467,382,364.72
10	94,969	89,577.09	8,507,089,674.61
11	107,145	89,569.72	9,596,953,284.33
12	34,497	89,575.40	3,090,124,047.31
13	40,179	89,685.50	3,603,509,382.23
14	151,383	89,392.22	13,532,460,069.86
15	81,576	86,584.68	7,063,262,070.47
16	131,090	88,897.07	11,653,548,563.82
17	196,026	89,686.42	17,580,938,040.67
18	120,132	85,141.87	10,228,292,060.76
19	136,366	86,615.98	11,811,513,336.79
20	53,978	81,944.86	4,423,251,200.00
21	12,987	75,390.25	979,114,228.48

Source: Data processed

The estimated number of visits for each zone was calculated by the number of respondents (tourists), who visited Surakarta and supporting tourist attractions in the surroundings of each zone, multiplied by the total domestic tourist arrivals in 2014 (data obtained from Surakarta Tourism agents). The calculation results are as the table above.

Based on the table above, the destination value of tourist destinations in Surakarta and surrounding supporting areas is the total of all zones based on an estimated number of visitors of Rp154 billion.

From the results of the contingent ranking analysis, the following results are obtained:

Table 5: Estimated Consumer Surplus

Object	Attribute	MV	Activity Fees	CS	Ranking
Cetho Temple	History	141000	56000	85000	1
Surakarta Palace	Culture	27000	21000	6000	3
Bengawan Solo/Jurug Park	Nature	15000	10000	5000	4
Grojogan Sewu	Mountain	121000	14000	107000	2
	Nature				

Based on economic theory, the sum of the benefits of public goods to individuals is the sum of individual marginal values (MV) for all the attributes that make up the relevant public goods. The Uawang attribute used for the contingent ranking model in this study was the additional cost of the visit, which was assumed to be the same for all packages. Then, the Total Marginal Benefit (MV)=Total Marginal Attributes of Site, Maximum Entrance Fee=Consumer Surplus=WTP-Average Activity Fees (including Entrance Fee). As the situation above, consumer surplus is a net benefit of recreation that provides an indicator of the maximum entrance fee that can be used by a recreation area. This result is interesting because of the consumer surplus for Cetho Temple and Grojokansewuwashuge.

Conclusion

The value of consumer surplus from Surakarta and surrounding tourist destinations was obtained by the ZTCM method. The results of the calculation of the value of consumer surpluses per visit for all zones on average compared to average income were not much different. The order of the largest consumer surplus was Zone 5 (Jakarta), then Zone 6 (Bandung and Sukabumi), followed by Zone 8 (Brebes and Tegal). Whereas, the smallest consumer surplus was in Zone 1 (Padang and Pekanbaru) and Zone 21 (Makasar, Kendari, and Ambon). The results of the calculations showed that the value of Surakarta tourism destinations and surrounding supporters was Rp154 billion. Surakarta tourism and its surroundings had three main attributes, namely history, culture, and nature.

The consumer surplus of Cetho Temple and Grojokansewu was still above the admission fee. It means that the benefits obtained by each visitor were very numerous. If the admission fee is increased by 100%, visitors still get a lot of benefits. Whereas, for the destination of the Surakarta Hadiningrat Palace, Bengawan Solo/Jurug Park, the consumer surplus was only slightly different from the admission fee. If there is an increase in the admission fee of only 20%, the benefits of the visitor obtained are zero (0). This means that it is very difficult to increase its admission without any changes or enhancements to its attributes.



The suggestion for the destination manager of the Cetho Temple and Grojokansewu is that due to the benefits received by tourists for their visit to the object are very large, maintaining the attributes needs more attention. It is expected that the attention will make these attributes to be maintained well, remain attractive, and the atmosphere is maintained. For the destination manager of the Surakarta Hadiningrat Palace and Juruk Park (Object Bangawan Solo), a lot of creativity is necessary to increase the benefits obtained by tourists, so that these efforts will increase admission fees. There is space to add attributes that are very needed here.



REFERENCES

- Barbier, E.B. (1993). Introduction: Economics and ecology-the next frontier, Dlm Barbier, E.B. (pnyt). Sustainable environmental ecology- the next frontier. Dlm. Barbier, E.B. (pnyt) Economics and Ecology: New Frontier and Sustainable Development, London: Shapman and Hall.
- Devy, Hellen. Angga. 2017. Pengembangan Obyek dan Daya Tarik Wisata Alam Sebagai Daerah Tujuan Wisata Di Kabupaten Karanganyar. Jurnal Sosiologi DEKMA. Vol 32. No. 1 tahun 2027
- Endah Saptutyningsih. Cahya Mumaningrum. 2017. Estimasi Nilai Ekonomi Obyek Wisata Pantai Goa Cemoro Kabupaten Bantul. Jurnal Balacen. Vol IX no, 2 Juli 2017.
- Fanita, Osha. Tazkia. Banatul.Hayati. 2012. Analisis Permintaan Obyek Wisata Pemandian Air Panas Kalianget, Kabupaten Wonosobo Dengan Pendekatan Travel Cost, Diponegoro Journal Of Economics. Volume 1, Nomor 1, Tahun 2012, Halaman 1-10
- Fauzi, A. (2006). Ekonomi sumber daya alam dan lingkungan: Teori dan aplikasi. Jakarta: PT. Gramedia Pustaka Utama.
- Fauzi. A. (2010). Ekonomi sumber daya alam dan lingkungan: Teori dan aplikasi. Jakarta: PT Gramedia Pustaka Utama.
- Feeman A.M., 1993. The Measurement of Environmental and Resource Value. Theory and Methods, Resource for the future, Washington, D.C.
- Irma Alfia Salma dan Indah Susilowati. 2004. Analisis Permintaan Obyek Wisata Alam Curuk Sewu Kabupaten Kendal Dengan Pendekatan Travel Cost. Jurnal Dinamika Pembangunan Vol 1 No 2. Desember 2004:153-165
- Khaimusia Tridoyokusumastanto. Ahmad Fahrudin. 2017. Penilaian Ekonomi Wisata Pesisir Kawasan Carocok Painan, Pesisir Selatan, Sumatra Barat. Jurnal Ekonomi dan Pembangunan Indonesia, Vol 18. 1 Juli 2017:1-21
- Lipton, D. W., Wellman, K., Sheifer, I., & Weiher, R. (1995). Economic valuation of natural resources: a handbook for coastal resource policymakers. NOAA Coastal Ocean Program Decision Analysis Series, 5. Silver Spring, MD: Coastal Ocean Office, National Oceanic and Atmospheric Administration, U.S. Department of Commerce. Diakses dari <http://aquaticcommons.org/14656/>. Tanggal Akses 17 Januari 2017.
- Nicholson, W., & Snyder, C. (2010). Intermediate microeconomics and its application, [11th Edition]. Mason: South-Western Cengage Learning.



- Pearce D.W., 1990. *Ekonomi Alamsekitar*, Terj, Mohd Saleh, UPM
- Raharjo Ahmat. 2002. Menaksir Nilai Ekonomi Taman Hutan Wisata Tawangmangu Aplikasi Individual Travel Cost Method. *Jurnal Manusia Dan Lingkungan*. Vol IX No2 Juli 2002:79-88
- Rifki, Khairudin. Uswatun.Khasanah. 2018. Valuasi Ekonomi Obyek Wisata Pantai Parang Tritis Bantul, Yogyakarta. *Jurnal Ekonomidan Pembangunan Indonesia*. Vol 18. 2Juni 2018:152-206
- Rifki Khoirudina, Uswatun Khasanah. 2017. Valuasi Ekonomi Objek Wisata Pantai Parangtritis, Bantul Yogyakarta Economic Valuation of Parangtritis Beach, Bantul Yogyakarta. *Jurnal Ekonomidan Pembangunan Indonesia* Vol. 18 No. 2 Januari 2018: 152–166
- Samuelson, P. A., & Nordhaus, W. D. (2002). *Economics*, [17th Edition]. Boston: McGraw-Hill Irwin.
- Sukirno, Sadono. 2011. *Makro Ekonomi Teori Pengantar*, Edisi Ketiga. Jakarta: Rajawali Pers.