Economic Valuation of Tourism Attraction of Jatijajar Cave in Kebumen Regency

by Jaka Aminata

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Abstract

The research aims at estimating the level of Willingness to Pay of the tourists for the Tourism Attraction of Jatijajar Cave in Kebumen Regency. The primary data is obtained from 105 respondents by using the Multistage Sampling and five key persons by using the Purposive Sampling. The characteristics of respondents show that some of the tourists are male, around 21 to 30 years old. The result of Contingent Valuation Methods shows that the WTP of the tourists of Jatijajar Cave has the average about Rp 17,000.00 and the total value of WTP is about Rp 5,231,410,000.00. The novelty in this research is using Contingent Valuation Methods approach to educate the visitors through the hypothetical-market that has been built by two scenarios of willingness to pay for the visitors at Jatijajar Cave tourism attraction as a compensation for the development of tourism attraction.

Key words : Willingness to pay, Contingent valuation method, tourism, Indonesia.

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INTRODUCTION

The coastal areas in Indonesia are popular with various kinds of natural resource riches and have such great potential, both renewable and non-renewable (Suharno et al, 2017a). Besides producing goods and services that can be consumed either directly or indirectly, the natural resources also produce environmental services that provide the benefits in other forms, such as in the form of amenities of beauty, tranquility and many others. These benefits are often more pronounced in the long period (Choi et al. 2010, Baskara et al. 2017; Suharno et al., 2017b).

Utilizing the natural resources and the environment as a tourist area or more famous as the nature tourism is one effort to explore and increase the added value for the natural resources and the environment itself. However, generally it has less attention in the management and maintenance of tourist areas so that it brings impact on the decrease in the income from the concerned object of the tourism.

As a sub-tourist destination in southern Central Java, Kebumen Regency is on the international tourism strategic route between Jakarta and Yogyakarta, in which Jakarta is the state capital while Yogyakarta is the second largest national tourist destination after Bali. One of the tourist attractions in Kebumen Regency is Jatijajar Cave. The number of data of the tourist visit in nine tourist attractions in Kebumen Regency can be seen in table 1.

Table 1 indicates that Jatijajar Cave Tourism Object is a tourism attraction that has the second largest number of tourists from year to year. This is inversely proportional to the condition of facilities and infrastructure existing in the area of Jatijajar Cave. The result of In-depth Interview to the management of Jatijajar Cave Tourism Object and some visitors there shows that the condition of facilities and infrastructure in Jatijajar Cave gets less attention. This can be measured from the following things: the number of toilets available, the condition of children's playground, the merchant activity, the park area that can negatively impact the existence of Jatijajar Cave among the tourists. Considering the condition of facilities and infrastructure of Jatijajar Cave Tourism Object described by the number of toilets, the playground condition, and the park area, it is necessary to develop the research to assess the willingness of visitors who deliberately come to contribute more (by paying bigger than the usual ticket price) to reduce the use of the budget from the government as the only source of funds in the development of Jatijajar Cave Tourism Attraction. The economic valuation can be defined as an effort to provide quantitative value to the goods and services produced by the natural resources and the environment, both on the market value and non-market value. The economic assessment of resources is an economic tool that uses certain valuation techniques to estimate the value of money from the goods and services provided by the natural resource. One of the objectives of the economic assessment is to show the linkages between the natural resource conservation and the economic development, so that the economic valuation can be an important tool in increasing the public appreciation and awareness of the environment itself (Choi et al., 2010). In general, the non-market resources of the economic valuation techniques can be classified into two groups.

Table 1. Number of Tourists on Nine Tourism Objects in Kebumen Regency

No	Tourism Objects	Number of Visitors				
		2012	2013	2014	2015	2016
1	Jatijajar Cave	208,926	281,239	297,682	322,936	355,865
2	Logending Beach	121,521	113,090	123,115	125,310	144,532
3	Petruk Cave	10,570	9,723	9,830	9,876	7,834
4	Karangbolong Beach	20,967	21,164	24,104	26,884	27,290
5	Petanahan Beach	85,677	86,935	81,996	90,668	106,825
6	Sempor Reservoir	28,415	25,220	35,168	34,951	39,865
7	Krakal Beach	19,309	20,064	22,506	24,822	25,497
8	Wadaslintang Reservoir	30,898	20,834	22,381	27,056	26,754
9	Suwuk Beach	209,671	227,350	340,67	454,633	362,190
	Amount	807,954	805,619	957,49	1,117,16	1,096,62

Source : Department of Youth, Sport, and Tourism Kebumen Regency, 2016

The first group is a valuation technique that relies on an implicit price in which Willingness to Pay is revealed through a developed model. Some techniques included in this first group are Travel Cost Method, Hedonic Pricing, and Random Utility Model. The second group is a valuation technique based on a survey in which the willingness to pay or the WTP is obtained directly from the respondent, which is directly expressed both orally and in writing. The valuation techniques included in this group are the Contingent Valuation Method and Discrete Choice Method (Choi et al 2010, Rewitzer et al, 2017) Contingent Valuation Method (CVM) is the survey technical method to question to the people about the value of price they give to the non-market commodity like environmental goods (Choi et. Al 2010). CVM uses the direct approach that basically asks the people how much the maximum of Willingness to Pay (WTP) is as a compensation of the environmental good damage. According to Halkos and Matsiori (2017), there are five stages of activities or processes in the operational phase of the implementation of the CVM approach, which can be categorized as follo Making a market hypothesis. In the initial process of CVM, a researcher usually must previously make a market hypothesis on the resources going to be evaluat, getting the auction value. It is conducted by a survey. The purpose of this survey is to obtain the maximum value of the respondents' willingness to pay (WTP) for a project, such as the environmental improvemen, calculating the average of WTP or WTA. After the survey has been conducted, the next stage is calculating the mean value of each individual WTP. The value is calculated based on the auction value (bid) that is obtained in the second stage. The calculation is usually based on the mean value

and the median valu, estimating the Auction Curve (Bid Curve). The auction curve is obtained by, for example, regressing WTP / WTA as the dependent variable with some independent variable, data aggregating. This process involves the conversion of the average data of the population averagesample as a whole. One way to convert this is by multiplying the sample average with the number of populations (N).

According to a research of Amirnejad, et.al (2013) entitled "The Application of the Contingent Valuation Method to Estimate the Recreational Value of Sari Forest Park", from the findings and differences obtained in this research, it is found that the value of WTP of the forest area conservation is 17.820 Real / month.

The respondent's income and education level affects the WTP positively and significantly, while the origin of the respondents has a significant negative effect on the WTP of the preservation of Sari Forest. The similarity of research is they equally examine about the economic valuation.

According to research of Karnowahadi (2016) entitled "Cultural Valuation of Cultural Heritage Preservation in Surakarta", it has the findings and differences in the following. Based on the results of research, this research finds three strategic findings those are (i) income variable, which is a variable affecting utility indirectly, (ii) attribute of cultural heritage, which has a positive influence on utility, (iii) average of WTP for preservation of cultural heritage of Surakarta, which ranges from Rp 10,988.89 to Rp 25,972.61 with an aggregate / total WTP of Rp 21,851,133,043 to Rp 51,645,885,670 per year. The similarity of research is they equally study about the economic valuation.

The findings of this research are also in line with Sekar et. al (2014) who supported the development of cultural tourism in Tanzania.

RESEARCH METHODS

The research used seven variables, those are: (1) Willingness to pay, (2) Bid, (3) Sex, (4) Age, (5) Marital status, (6) Income, (7) Education. *Willingness to Pay* (WTP) is a willingness to pay in an effort to develop Jatijajar Cave. This variable is measured. Dummy that is 1 for the decision to be willing to pay in the development effort of Jatijajar Cave, and 0 for the decision not to pay in the development of Jatijajar Cave Tourism Attraction. The *Bid* variable is the amount of bid value proposed to pay in the development effort of Jatijajar Cave Tourism Attraction those are: (1) Rp 13,500.00, (2) Rp 23,500.00. The *Age* variable is the life mass of the respondents from birth to the time of research. The *Marital status* variable is the marital status of the respondents in the form of married or unmarried. The *Income* variable is the respondents' income derived from the main job and the side job. The *Education* variable is the last level of education from the elementary school level to the university level.

This research uses the primary data and the secondary data. Primary data is the data obtained directly from the source. Primary data in this research is obtained from the survey of respondents through multistage sampling technique that is the technique of taking large sample by using three stages: (1) Stratified Sampling, in which the population is divided into three sub samples. The three sub-samples

are: (i) Low Season, (ii) Medium Season, (ii) Peak Season; (..) Quoted Sampling, which determines the number of samples in each sub sample. The number of samples in each sub-sample is: (i) 30 samples for Low Season, (ii) 35 samples for Medium Season, (iii) 40 samples for Peak Season, so that the number of samples used is 105; (3) Accidental Sampling, which is a random sampling technique that can be found at the research location. The primary data is also obtained by using the purposive sampling method to seven key person respondents. There are four stakeholders those are Academic, Business, Government, and Communities (A-B-G-C).

This research uses CVM analysis (Contingent Valuation Method) / Valuation Contingency through five stages: (1) making the market hypothesis, (2) obtaining the auction value, (3) calculating the average of WTP, (4) aggregating the data, (5) determining the Respondents' Behavioral pattern.

RESULTS AND DISCUSSION

Jatijajar Cave Tourism Object is located in Ayah Village, Ayah District, Kebumen Regency, Central Java Province. In a discussion on the model for directly assessing/valuating the economic value of the existence of the environmental goods, there are two famous approaches those are Contingent Valuation Method and Choice Experiment (Schläpfer, 2017). There are some research with related models that have been assembled by the previous researchers included in some models as follows: Schläpfer (2017) discusses some preferences to pay for the public services through the survey classifications and approaches, while Gómez-Zapata, et. al. (2017) discusses the economic valuations through the choice experiment for the museum tours.

A discussion on the efforts to identify the local people's opinions on the development of Jatijajar Cave Tourism Object as a natural tourist area and potential owned by Kebumen is one component in its development. The potential is limited by its notion as a capability owned by a project that can be developed / utilized to make a certain effort. The notion is based on the word potential as ability, strength, and capability.

Tourism is any activities related to tourism and multidimensional and multidisciplinary that emerges as a manifestation of everyone's needs and the state's need and the interaction between the tourists and the local community, among the tourists, the government, the local government, and the entrepreneurs (the Act No. 10 of 2009 on Tourism). The scope of tourism is quite wide, in which there are five types of activities that include: maritime tourism (beach and sun tourism), rural and agro tourism, nature tourism, cultural tourism, or business travel. In its position as encouraging the economy, tourism plays the role as an ecotourism, which is an effort to explore the economic benefits of tourism activities.

Based on the understanding, the potential of tourism, especially the nature tourism can be interpreted as something that is in the tourist destination that becomes an attraction for people to come visiting, while Yoeti (2008) said that tourism potential is in the capital (source of tourism) and is everything that can be developed into a tourist attraction. The development of an area as a natural tourist area needs to consider the various potentials so that in the end the results to be achieved in the development can be in accordance with the expected goals.

The influential factors in the development of tourism development areas consist of (Yoeti, 2008):

Uniqueness, as the basis for the development of potential attractions of each region. Unique means something that is independent or specific than others, has aesthetic, and has value. Accessibility, to support the development of tourism that has had the uniqueness. Marketing, related to the image development of each region. In addition, the elements in tourism development also include several things (Yoeti, 2008) as follows: Cultural attractions; location or place of ancient relics, historical buildings / monuments, and places of historical value. Traditional attractions; festivals, arts, and handicrafts, fairy tales, and folklore.

Beauty; interesting scenery, national parks, wildlife, flora fauna, beaches and mountains. Entertainment: sports, amusement parks, zoo. Other attractions that can be offered to the tourists: climate, water sources, and others.

Transportation, accomodation and Facilities supporting infrastructure, tourism area will be developed if it has a tourist attraction that can be classified into four main categories (Yoeti, 2008) as follows natural resources: is a major valuation factor for a location as the tourist attraction, infrastructure: consists of all types of development either above or within the ground, transportation and its equipment, facilities: in the form of facilities, hospitality: includes the hospitality of the local communities to the tourists.
In line with the above opinion, Yoeti (2008) suggested that there are six main elements that

form the tourist attraction in a region as follows weather, which is a special feature of tourism because it causes a location to be a potential for the tourism, scenery, which is the attraction of interesting sights.

Many places have interesting scenery that is the basis for a tourist industry, facilities, which consist of two types those are natural and artificial ones, history and culture, in which the historical relics or cultural arts are a powerful attraction for many tourists. Various countries use art and historical relics for their main attractions, especially those developing their tourism, accessibility, in which the easier the tourist location is achieved, the higher the possibility to be visited by tourists will be. Many locations have attraction factors but are rarely visited because they are difficult to reach, accommodation, which concerns places to tay and eat. Accommodation is also a tourist attraction, because the tourists often visit a tourist site just because of the inn / hotel which types of food, rooms and service are excellent.

Of the six elements mentioned above, attractions and facilities are the main basis of tourism activities. The description of potential factors a region has to develop as a tourist area can also be seen through several aspects, such as: physical and spatial aspects, socio-cultural, and historical areas.

The physical potential of a tourist area consists of (Yoeti, 2008), natural Amenities (Nature Attraction. The rural panorama, mountain scenery, and beautiful sea scenery are potential to attract the tourists to come visiting, Man-made products/supply. It consists of historical, cultural, and religious objects, such as historical monuments, museums, traditional events and houses of

worship, the society's way of life. It is one of the most important sources to offer to the tourists.

According to Yoeti (2008), the spatial physical potential can be divided into accessibility, relation to service center, and relation to the extracting of basic resources.

Environmental and spatial physical aspects can also be seen from the natural physical characteristics and other physical supporting aspects of the region, as explained in the following description (Sukmana, 2010), natural Physical, which covers the conditions of climate, topography, flora and fauna, and the environmental processes that consider the potential and physical impact of the environment on the region, whether positive or negative, and use, in which in the service and the provision of facilities it will basically require a large enough land and qualified land in supporting the structures and opportunities to conduct activities to be developed.

Another significant influence in supporting the development of activities in a land use are the availability of supporting facilities, the quality of the surrounding environment and its infrastructure, the cost for tax and its terminal, transportation, which in this case relates to transport facilities, such as airports, trains, buses, and terminals, facilities, which tend to be oriented to the attractions of an area because this facility must be located close to the existing market.

Facilities also tend to support (not encourage) the growth and tend to develop at the same time or after an attraction develops, where the attraction itself can be a facility. People living within the tourist destination will determine the boundaries of the theme, design, and height of the building and its density, so that the area can still have the attractions and

facilities in line with its development expectations.

According to Spillane (in Yoeti, 2008), in developing an object or tourist area, there are five elements that must exist and are important, including, attractions, which are things that attract the attention of tourists, facilities, which are the facilities needed, infrastructure, which are the infrastructure, transportation, which is the freight services, hospitality, which is the hospitality or willingness to receive guests.

Attraction attracts the tourists to an area. *Facilities* meet the needs of tourists during their stay in a place far from home. *Infrastructure* and *transportation* are required so that the tourists can visit places as their destinations. *Hospitality* shows the way or quality of tourism services received by the tourists.

Besides some potential or elements exist above, there are several criteria that can reflect the entire tourism potential (Sukmana, 2010) such as cultural tourism attraction, which is a potential that encourages the presence of tourists to a tourist destination. The purpose of the tour activities conducted among others is to recognize and enjoy the various attractions offered. This attraction can be a natural beauty, historical relics, the uniqueness of cultural attractions or souvenirs, facilities / supporting activities, which are the tourist facilities that can complement the needs of tourists, so they will feel more comfortable and feel at home to stay longer in a tourist destination, such as swimming pools, tennis courts, campsites, and many others. To carry out tourism activities, an object or a tourist area should be supported by a number of facilities and various supporting activities. Accommodation facilities and other public facilities must be adequately available to

serve the various needs of tourists as well as supporting activities such as tourist information services, the level of accessibility, in which to make a tourism develop, the destination must be accessible (can be visited).

The comfortable travel arrangements and the economical comparative value from the tourist market to the destinations must exist or must be held. From the existing description, it can be directed to a conclusion that a potential area can be developed into a natural tourist area if there is attraction, where the attraction is not only physically, but more than that, it also has a cultural identity that is having good cultural values in the form of inanimate and living things (the living habits of the local people) and there is infrastructure support such as an ease of achievement to the location.

Tourism is an important tool in regional development in the current regional autonomy. This tourism sector has a role in making an important contribution as one of the sources of regional income. Nevertheless, the local government is required to pay attention to the environmental carrying capacity and also the sustainability of the natural resources so as to minimize the occurrence of excessive exploitation that impact on the environmental damage.

As one component of the regional development, tourism development is a coordinated activity and effort to attract the tourists, to provide the necessary infrastructure, and to serve the needs of tourists who come to visit. Tourism development is a development that widely covers many aspects, both into the society and the whole economy. The development of tourism in the region is directed to the improvement of the tourism sector to become a reliable sector that is capable of encouraging the regional economic activities, especially the local economy of the society. The tourism sector is also an open sector for the employment creation, the rising incomes, and the local revenues (Yusmiadi and Witjaksono, 2012).

Pattern of tourism needs to carry out the community-based activities, which are the ecotourism development pattern that supports and enables the full involvement of the local communities in the planning, implementation, management of tourism enterprises, and any benefits achieved. Community-based tourism is a tourism business that emphasizes the active role of the community.

It is based on the fact that the community has knowledge about nature and culture that become the potential and selling value as a tourist attraction, so that their involvement becomes absolute. Community-based travel patterns recognize the local people's rights to manage the tourism activities in the areas that they own customarily or as the manager.

The benefit of community-based tourism is to create the employment opportunities for the local communities and to reduce the poverty, in which the tourism income is from the tourism services for the tourists such as the fee for the guide, the transportation cost, the homestay, the handicrafts, and many others. The tour has a positive impact on the preservation of the local environment and indigenous cultures, which in the end is expected to be able to grow the identity and pride of the local people growing as a result of the increase in tourism activities.

Tourism is valued and developed as one of the business programs that can also be a conservation strategy and can open an economic alternative for the community. With the tourism pattern, people can take advantage of the natural beauty that is still intact, culture, and local history without destroying or selling its contents.

The level of tourist visits to Jatijajar Cave Tourism Object is in the category that tends to moderate, so it still requires to be improved again. The majority of visitors are the domestic tourists who come from various regions, especially in the ex-residencies of Kedu and Banyumas, while the number of foreign tourists is still minimal. Most visitors are dominated by the students from outside Kebumen Regency. On the common days (weekdays), the number of visitors is not more than 200 people. On the weekends, the visitors increase to 700 to 800 people per day. In recent years, the number of visitors during the Lebaran season is on average 3,000 visitors. In Christmas vacation the number of visitors in one day is about 1,000 visitors.

The management of the tourism object has not been used to organizing the special packages for holidays. The idea of this special package can be applied to the tourists who come in groups such as by giving a discount of 10 percent entrance ticket of the ticket prices in 2017 of   Rp 7.000,00 per ticket.

The conditions of Lawa Cave in Purbalingga can be compared with Jatijajar Cave tour. From the management of the tourism object, some can be compared in the following. There is relatively no difference for the entrance fee, but to attract the public interest to visit Lawa Cave, the manager gives special discounts for the entrance fee.

The infrastructure to the location of Lawa Cave is also arranged well enough. The local government is intensively involved in developing this tourist area. The handling of infrastructure in Lawa Cave tourism object is also always improved to increase the interest of tourists visit.

According to the concept of environmentally friendly tourism, the high number of tourists will be positively correlated with the rate of damage to the nature of the tour. However, with the good management, such natural destructive efforts can to be kept as low as possible. The high income of tourism will be more effective to finance the recovery and sustainability of the ecosystem in the tourist area. The socio-economic characteristics of visitors in the research are presented in Table 2 . Table 2 indicates 54 male respondents and the rest of 51 male respondents. In this research, the respondents are 17 to 52 years old. The most respondents are 21 to 30 years old of 46.67%, 53.3% or 56 respondents have unmarried status, while the rest of 46.7% or 49 respondents have married status. Viewed from the educational variables, 19 respondents are graduated from undergraduate, 44 respondents are the Diploma graduates, 37 respondents are Senior High School graduates, and 4 respondents are Junior High School graduates. The level of income of respondents mostly is in the range of Rp 1,100,000.00 to Rp 3,000,000.00 that is equal to 43.86. The CVM method in this research is used to analyze the value of WTP tourists to Jatijajar Cave development through five stages as follows making a market hypothesis. In this research the market hypothesis is obtained through in-depth interviews of seven key persons.

The bid value that will be offered to the respondents is obtained from the results of in-depth interview. The first bid value is derived from the calculation of the permanent maintenance fund (per year) plus the short-term development cost divided by the average population of Rp 13,500.00, while the calculation of scenario 2 is obtained from the calculation of the permanent maintenance fund (per year) plus the short-term and the long-term development costs divided by the average population of Rp 23,500.00

Table 2. Socio-Economic Characteristics of Respondents

No	Variables	Description	Frequency	Percentage	Explanation
1	Sex	Female	51	48.6	
		Male	54	51.4	–
2	Age (year)	≤ 20	14	13.33	Mean=29.48
		21-30	49	46.67	Min=17
		31-40	26	24.76	Max=52
		41-50	14	13.33	
		> 50	2	1.90	
3	Marital Status	Unmarried	56	53.3	
		Married	49	46.7	–
4	Education	Junior High School graduates	4	3.8	Mean=14.04
		Senior High School graduates	37	35.3	Min=9
		Diploma graduates	45	42.9	Max=17
		Undergraduates	19	18.1	
5	Income	≤ Rp 1,000,000	26	24.76	Mean=2888380.95
		Rp 1,100,000 - Rp. 3,000,000	45	42.86	Min=80000
		Rp 3,100,000 - Rp. 5,000,000	20	19.05	Max=9500000
		Rp 5,100,000 - Rp. 7,000,000	8	7.62	
		Rp 7,100,000 - Rp. 9,000,000	5	4.76	
		> Rp 9,000,000	1	0.95	
6	Distribution of Respondents	Unwilling to pay WTP	9	8.6	–
		Willing to pay WTP	96	91.4	–

Source: Data processed

Obtaining the auction value. At this research, the technique used to find out the WTP value is through the "Bidding Game" approach. The game is applied by giving the bid to the respondent from the small value to the big one. The amount of auction value can be shown in Table 3:

Table 3. Auction Value of WTP

No	WTP (a)	Respondents (person) (b)	Percentage % (c)	WTP x Respondents Willing to Pay (a x b)
1	Rp 13,500.00	66	68.75	Rp 891,000.00
2	Rp 23,500.00	30	31.25	Rp 705,000.00
Total		96	100.0	Rp 1,596,000.00

Source: Data processed

Calculating the average of WTP. The values are calculated based on what is obtained in the equation using the following formula :

$$EWTP = \frac{\sum_{i=1}^{n} W_i}{n}$$

Where :

WTP   : Alleged mean value of WTP
Wi   : the i WTP value
N   : the number of respondents / samples
I   : the i respondent willing to pay (i = 1,2,3, ... n)

$$EWTP = \frac{1.596.000}{96}$$
$$EWTP = Rp\ 16,625.00$$

[21] Based on the above EWTP calculation, the mean value of the respondents is Rp 16,625.00 rounded to Rp 17,000.00.

Making a market hypothesis. In this research the market hypothesis is obtained through in-depth interviews of seven key persons. The bid value that will be offered to the respondents is obtained from the results of in-depth interview. The first bid value is derived from the calculation of the permanent maintenance fund (per year) plus the short-term development cost divided by the average

population of Rp 13,500.00, while the calculation of scenario 2 is obtained from the calculation of the permanent maintenance fund (per year) plus the short-term and the long-term development costs divided by the average population of Rp 23,500.00.

Aggregating the data. The total value of WTP can be obtained from the multiplication of the average of WTP with the population in this research. The mean value of WTP in accordance with the EWTP calculation is Rp 17,000.00, while the population in this research is equal to 307,730 so that the total value calculation of WTP of the development of Jatijajar Cave in Kebumen Regency can be seen in Table 4.

Calculating the average of WTP. The values are calculated based on what is obtained in the equation using the following formula:

$$EWTP= (\sum_{(i=1)}^{n} W_i)/n$$

Where :

WTP   : Alleged mean value of WTP
Wi   : the i WTP value
N   : the number of respondents / samples
I   : the i respondent willing to pay (i = 1,2,3, ... n)

$$EWTP = 1.596.000/96$$
$$EWTP = Rp\ 16,625.00$$

Based on the above EWTP calculation, the mean value of the respondents is Rp 16,625.00 rounded to Rp 17,000.00.

Table 4 indicates that the total value of the tourists' WTP in the framework of the development of Jatijajar Cave in Kebumen Regency is Rp 5,231,410,000.00 per year. This value is the economic value in the development of Jatijajar Cave in Kebumen Regency.

Determining the Respondents' Behavioral Patterns. The respondents' socio-economic behavioral pattern is obtained by analyzing the relationship between the socio-economic variable of the respondent and the bid value offered to the respondent. The socio-economic variables used include gender variables, age variables, marital status variables, education variables, income variables, and WTP variables from 96 respondents that are willing to pay.

In choosing the bid value, the male respondents have the same tendency as the female respondents. The bid value that is likely to be selected is the lowest one of Rp 13,500.00. Of 51 male respondents, 64.71% choose the bid value of Rp 13.500.00 and of 45 female respondents, 73.33% choose the bid value of Rp 13,500.00. This is in line with the findings of Lalika et. al, (2017) and of Choi et. al. (2010). The 66.67% respondents with ages below or equal to 20 years old choose the bid value of Rp 13,500.00.

This is because the respondents with ages below or equal to 20 years old are still the students/university students who have not yet earned income, so they tend to choose the lowest bid value. The respondents with ages of 21-30 years old (79.17%) and 31-40 years old (61.90%) also tend to choose the lowest bid value of Rp 13,500.00, while those with ages of 41-50 years old(53.85%) tend to choose the highest bid value of Rp 23,500.00.

This is in line with findings of Giannakopoulou et. al (2017). Based on the marital status, the unmarried respondents (73.58%) tend to choose the bid value of Rp 13,500.00, while those having the married status (37.21%) choose the highest bid value of Rp 23,500.00. This in line with the findings of Lalika et. al (2017). Based on the level of education, the respondents of the Junior High School category of two respondents choose the lowest bid value of Rp 13,500.00, of the Senior High School category (87.10%) of 22 respondents choose the lowest one of Rp 13,500.00.

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Table 4. Total Value of WTP

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Mean Value of WTP (a)	Number of Population of Research (b)	Total of WTP per year (a x b)
Rp 17,000.00	307,730	Rp 5,231,410,000.00

Source: Data processed

The respondents of the Diploma degree category of 68.18% also tend to choose the lowest one of Rp 13,500.00, while those of the first degree category of 63.16% tend to choose the highest bid of Rp 23,500.00. This is in line

with the findings of Lalika, et. al, (2017) and also supported by Halkos and Matsiori (2017).

The respondents with the income level category that are less than or equal to Rp 1,000,000.00 of 78.26% tend to choose the lowest bid value of Rp 13,500.00. The 79.49% respondents with the income level of Rp 1,100,000.00 – Rp 3,000,000.00 tend to choose the bid value of Rp 13,500.00, while 70% with the income level of Rp 3,100,000.00 – Rp 5,000,000.00 tend to choose the lowest bid of Rp 13,500.00. The 87,5% respondents with the income level of Rp 5,100,000.00 – Rp 7,000,000.00, 60% with the income level of Rp 7,100,000.00 - Rp. 9,000,000.00 and 100% respondents with the income above Rp 9,000,000.00 tend to choose the highest bid value of Rp 23,500.00. This is in line with findings of Lalika, et. al, (2017) and also supported by Halkos and Matsiori, (2017).

Based on the analysis study, several things can be found in the development of Jatijajar Cave tourism attraction as a natural tourism area, and several things required to note can be seen as follows cultural heritage as a tourism attraction, the potentials that encourage the presence of tourists to a tourism destination can be whether the natural beauty, historical relics, the uniqueness of cultural attractions, or the people's daily life activities, and some others described as intangible, tangible, and abstract heritage.

Facilities and infrastructure and supporting facilities / activities, tourist facilities that may complement the needs of tourists may include lodging, restaurants, pedestrian ways, souvenir kiosks, etc. including basic facilities and infrastructure / infrastructure that include: telecommunications, electricity, clean water, health posts, and security posts.

Area accessibility level, it is related to the ease of achievement of the location including relating to the existing transportation system.

Furthemore, the important things in the development of nature tourism in Jatijajar Cave tourist attraction are as follows, control of Changes that include conservation control, which also functions as the area guideline criteria, control of land use changes.

Concept of Tourism Development, among others, the concept of area magnet, which includes: the main, supporting, and intermediate magnets, the concept of activity spatial arrangement, the concept of tourist alignment, which includes the integration with the surrounding development areas and city tours, the development of supporting facilities of tourism activities is a tool that makes tourism worth selling.

The tourism facilities are summarized in 3A (Attractions, Accessibility, Amenities), which can be seen as follows attractions, those are natural environment, multiethnic environment, daily activities, and cultural activities, accessibility, it is an access to and within the area, and the interconnectedness with other objects, amenities. Those are accommodation stay; what to eat and where to eat; what to buy and where to buy; what to do.

CONCLUSION

Based on the series and discussion of the analysis results in this research, it can be concluded that the respondents in this research mostly are the male, aged between 21-30 years old, and have unmarried status. In general, the respondents have the high education level (D3), and the income level in the range of Rp 1,100,000.00- Rp 3,000,000.00. The average value of the tourists.

Willingness to Pay (WTP) for the development effort of Jatijajar Cave Tourism Attraction obtained through the calculation of EWTP is Rp 17,000.00, while the total value of the tourists' Willingness to Pay (WTP) for the development efforts of Jatijajar Cave is Rp 5,231,410,000.00 per year.

The average value of the tourists' Willingness to Pay (WTP) amounted to Rp 17,000.00 can become the entrance ticket fee of Jatijajar Cave that can be used for the development of Jatijajar Cave in Kebumen Regency. It requires an awareness of the development of Jatijajar Cave to stay awake and also the visitors' awareness to be willing to contribute in the development efforts of Jatijajar Cave.

Jatijajar Cave needs to be intensively developed to encourage the emergence of multiplier benefits for the local communities. If the interest of tourists in visiting the location is high, it will contribute to improve the welfare of the surrounding community by expanding and creating the new jobs, both in formal and informal sectors. Besides, the local economic development of intensive tourism conducted by the local government can be connected through the local market development that have been created around the southern coast of Kebumen especially for agricultural commodities and fisheries, (Suharno, et al., 2018). Until today the area around Jatijajar Cave is an important producer for the supply of agricultural products and fisheries to Kebumen Regency and its surrounding area. The potential development of agriculture and fishery and tourism village concept around Jatijajar Cave can be started as pilot project through integrated development program around that tourism object.

The important findings in this research is the CVM approach used to educate the visitor through the questions in the hypothetical market of the model built that is two scenarios of willingness to pay for the visitors at Jajijajar Cave as a compensation for the development of tourist.

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APPENDIX

Hypothetic Market Calculation Table (Scenario 1)

Description	Total
Scenario 1	
Fixed maintenance costs	
Honorarium Organizing Committee	24,915,000.00
Shopping for consumables	1,763,000.00
Goa Jatijajar Cave Building Tax	20,000,000.00
Motor vehicle maintenance	4,350,000.00
Print and procurement	3,217,000.00
Shop shopping trip	7,140,000.00
Shopping maintenance	136,735,000.00
Labor wage payments are poorly trained	3,300,000.00
The cost of attributing official travel within the region	1,620,000.00
etc	76,462,500.00
Inflation (5 years)	70,137,322.94
Amount	Rp.349,639,822.94
Short-term development costs	
Toilet Construction / KM WC	242,821,071.86
The entertainment stage	209,211,815.86
Gazebo Rest	612,606,980.00
Description	Total
Garden Penghias Area	1,024,444,433.42
Main Gate / Entrance Entrance	785,244,847.26
Inflation (5 years)	721,273,518.86
Amount	Rp. 3,595,602,667.26
Bid Value Scenario 1 = Maintenance Fixed Cost of Object +	
Short Term Development Costs : Population	
= Rp.349,639,822.94+Rp. 3,595,602,667.26 : 307,729.6	
= Rp. 3,945,242,490.20 : 307,729.6	
= Rp.12,820.00	
= Rp. 13,500.00	

Source : Data Prcessed

Hypothetic Market Calculation Table (Scenario 2)

Description	Total
Scenario 2	
Fixed maintenance costs	
Honorarium Organizing Committee	24,915,000.00
Shopping for consumables	1,763,000.00
Goa Jatijajar Cave Building Tax	20,000,000.00
Motor vehicle maintenance	4,350,000.00
Print and procurement	3,217,000.00
Shop shopping trip	7,140,000.00
Shopping maintenance	136,735,000.00
Labor wage payments are poorly trained	3,300,000.00
The cost of attributing official travel within the region	1,620,000.00
Etc	76,462,500.00
Inflation (15 years)	265,930,270.67
Amount	Rp. 545,432,770.67
Short-term development costs	
Toilet Construction	242,821,071.86
The entertainment stage	209,211,815.86
Gazebo Rest	612,606,980.00
Garden Penghias Area	1,024,444,433.42
Main Gate / Entrance Entrance	785,244,847.26
Inflation (5 years)	721,273,518.86
Amount	Rp.3,595,602,667.26
Long Term Development Costs	
Construction Pendopo Gathering	774,857,121.22
Open Plaza	589,190,920.57
Development of Waste Vehicle Circulation Line	93,583,219.25
Construction of Trash	159,051,739.16
Inflation (15 years)	1,538,179,257.18
Amount	Rp.3,154,862,257.38
Bid Value Scenario 2 = Maintenance Fixed Cost of Object + Short Term Development Costs + Long Term Development Costs: Population	
= Rp.545,432,770.67+Rp. 3,595,602,667.26 + 3,154,862,257.38 : 307,729.6	
= Rp. 3,945,242,490.20 : 307,729.6	
= Rp.22,573.00	
= Rp. 23,500.00	

Source : Data Processed

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