

## ANALYSIS OF WILLINGNESS TO PAY FOR COASTAL TOURISM SERVICES OF LASIANA BEACH AND BATUNONA BEACH WITH TRAVEL COST METHOD APPROACH

Caroline Mayadewi Chaniago Wairo, Marthen R. Pellokila, Ricky Gimin  
Environmental Studies, Nusa Cendana University  
Kupang, Nusa Tenggara Timur,  
Email: [wairocaroline@ymail.com](mailto:wairocaroline@ymail.com)

### ABSTRACT

Lasiana and Batunona Beach are coastal attractions, but the environmental conditions of the attractions began to experience a decline in environmental quality. The environmental sustainability of the tourism object is the responsibility of the tourists and the managers of tourism object, the form of tourist responsibility economically in the form of incoming retribution value which includes the cost of maintaining the environmental services, but in fact the current retribution has not included the environmental services in it. The purpose of this study is to investigate and analyze the value of willingness to pay from tourists who visit Lasiana and Batunona Beach, and the influence of the independent variables to request visitors to the beach such as travel cost, distance, security, income, age and education of tourists using travel cost method. The results showed that the value of willingness to Pay (WTP) Lasiana is IDR. 37,034 greater than the retribution that has been applied NTT Tourism Provincial Office is IDR. 2000, but less than the value of willingness to Pay (WTP) Batunona IDR. 39.512 while from the six independent variables tested in Lasiana Beach only Distance and in Batunona Beach shows only the travel cost variable that significantly affects positively to the dependent variable. Beach Manager need to increase retribution to be used to maintain the environment.

*Keywords: willingness to pay, travel cost method, coastal tourism*

### INTRODUCTION

Since the enactment of Komodo as one of the seven natural wonders of the world by the New7Wonders Foundation on 11 November 2011, the marine tourism sector in the province of East Nusa Tenggara is becoming increasingly popular. Komodo Island is not only a tourist destination, but also other coastal attractions in East Nusa Tenggara province, such as Lasiana Beach and Batunona Beach in Kota Kupang, capital of East Nusa Tenggara Province.

Coastal tourism is one type of tourism activity that has an appeal marine with a concept that is based on the view, uniqueness of nature, the characteristics of the ecosystem, the distinctiveness of art and culture as well as the characteristics of society as the basic power possessed by each tourist area (Marjuka 2007), Lasiana Beach and Batunona Beach based on the above definition is one of the coastal tourist who is known to have the beauty and uniqueness of nature, but not managed professionally by the manager of travel services so

that tourists visit is still dominated by domestic tourists who come from the city of Kupang, as the BPS data in the "NTT in Figures 2014 "is known that the number of domestic tourists visiting Kota Kupang is the highest compared to other districts in East Nusa Tenggara province.

On the other hand, an increase in the number of tourist visits to a tourist attraction, having both positive and negative impacts on the environment of the tourist attraction (Hall, 2001), the negative impact caused by the construction of tourism facilities in and around coastal tourism objects whose intensity tends to increase and less considering that each ecosystems are interdependent with other ecosystems. At present the environmental conditions of Lasiana Beach and Batunona Beach attractions have begun to decline in environmental quality marked by increased beach abrasion, the amount of garbage left by tourists who come to visit, as well as increased crocodile and human conflicts that are suspected due to the destruction of native habitats in Nunkurus Kupang District, so crocodiles are attracted to find food in the direction where humans throw away their food waste.

If this situation is not quickly controlled it will cause damage to coastal ecosystems for the natural environment is very fragile physical environment so that when the damage will be difficult to return to its original state (Supriana, 1997 in Marjuka, 2007). As anticipatory measures in Lasiana Beach been built revetment and breakwater which serves as a protective beach from high waves, but the presence of this revetment actually changing the face of the beach so tourists who want to enjoy the beach must jump high enough revetment. While on the beach Batunona is still managed by the private sector that has not appeared anticipatory measures to overcome the problem of a decrease in the quality of the environment.

Indeed environmental sustainability tourist attraction is the joint responsibility of tourists and tourism managers, responsibility from travelers are economically can be a value entry fees are in it already includes the cost of maintenance of environmental services, but in

fact the levy imposed is not currently incorporate environmental services therein, the determination of levies Lasiana Beach still based on the Kupang City Regional Regulation No. 20 of 1998, which is 2% of the total levy charged for various types of tourism businesses Rp. 2000, - per person.

Characteristics of Environmental Services of the cultures that exist in Lasiana Beach and Batunona Beach is the beauty of the white sand beaches and unique panorama where the occasional palm tree decorated climber climbing action and a population of approximately ejection plate made of palm sugar. While in Batunona beach there are rocks as high as 15 meters as well as some of the mangrove ecosystem.

Of the problems mentioned above, it takes an economic assessment Coast Lasiana and Batunona Beach, in particular environmental service benefits travel using the cost method of travel (Travel Cost Method), this method is a method of economic valuation of a given rating to the enjoyment invaluable on costs issued during a visit to a tourist attraction in the form of opportunity cost and expenses incurred directly traveler such as transportation costs, consumption and the hotel (Ward et al 200 in Samsudin, 2012).

Environmental damage tourism will greatly affect the willingness of tourists to visit and pay, then to calculate the economic value of tourism activities Lasiana Beach and Batunona Beach approximated by knowing the level of willingness to pay rating (willingness to pay) who visited Lasiana Beach and Batunona Beach and factors Factors affecting the level of tourist traffic that is the cost of travel, distance, security, income, age and education of tourists.

## **RESEARCH METHODS**

This research was conducted in Attractions Lasiana Beach and Batunona Beach Kupang, East Nusa Tenggara province. The observations made in the coastal ecotourism

object is a visitor who enters Attractions Lasiana Beach. The timing of the study in December 2016 every Saturday, Sunday and public holidays where tourist traffic higher than weekdays.

Estimation of the total population is derived from the number of tourists Lasiana Beach and Batunona Beach, the number of visitors Lasiana Beach obtained by the method of adaptive expectation is of the number of admission tickets sold in 2015, which is assuming the number of tourists visiting in 2016 as the number of tourists at the time of the study have not been known. The same technique is done to get the number of tourists on the Batunona Beach, each of the number of admission tickets sold by the business Batunona beach in 2015. Implementation of sampling was preceded by a determination of the number of samples or the respondent who visit tourist attractions Lasiana Beach and Batunona Beach, determination of the number of samples using the formula Slovin namely:

$$n = \frac{N}{1 + N(e)^2}$$

Information :

n = number of samples required members

N = members of the population

e = margin of error (estimation error 10%)

Having in mind the number of members of the next sample sampling using accidental sampling method is sampling imposed on individuals who by chance found or which can be found under study (Zaenal 2006 in Mateka, et al, 2016).

The initial step of determining the number of samples was conducted using adaptive expectation assuming the number of tourists visiting in 2016 equal to the number of tourists in 2015, namely N = 39,000 / year (Provincial Tourism Office NTT, 2015), so using the error estimation by 10% then the minimum number of samples (n) taken are:

$$n = \frac{39,000}{1 + 39,000 (10\%)^2} = 99.744 \approx 100$$

The number of tourists in Batunona Beach at the time of the research is not yet known because in the previous year no data charges from the City Tourism Office Kupang or manager of Batunona Beach charged to tourists who visit the Batunona beach, the implementation of admission Batunona Beach by coastal managers Batunona namely by community about newly enacted in October 2016, with the data the number of visits per month on average 200 people, based on these data the assumption of the number of tourists Batunona Beach year to  $200 \times 12 \text{ months} = 2400$  people, using error estimation by 10% the minimal number of samples (n ) taken are:

$$n = \frac{2400}{1 + 2400 (10\%)^2} = 96$$

To obtain the source of data in this study, used the method sample survey, the data do include primary data and secondary data, primary data obtained by way of a questionnaire on tourists to get the data visitor came from, the cost to the tourist attraction, the distance from home to tourism, security gained from tourism, tourist income, age and education of tourists.

Secondary data was collected from Kupang City BPS population demographics to find the data of population of each zone visitors and NTT Provincial Tourism Office to find data Attraction management Lasiana Beach, documentation in the form of articles and scientific journals on economic valuation Travel Cost method.

The variables used in this study consisted of the dependent variable and the independent variable, the dependent variable is the rate of visits per 1000 population per year, and the independent variable is the cost of travel, distance, security, education, income and age. The definitions of these variables are:

1. Level visits per 1000 population per year, the visit rate per 1000 population per year is a description of a visit by the 1000 population level through the purchase amount from each zone admission to Lasiana Beach and Batunona Beach.
2. Travel costs, travel expenses is an amount of money / expenses incurred by a visitor to make a visit to Lasiana Beach and Batunona Beach. The travel expenses include the cost of admission, round-trip transportation costs, consumption, and other costs. The cost of transportation in this study was calculated on the assumption of the use of fuel, of each type of vehicle used. Variable essential travel costs included in the analysis, because theoretically supposed to influence the visit rate per 1000 population per year in each zone. The greater the travel expenses incurred the smaller the rate of visits per 1000 population per year in the zone.
3. Security, security is one of the facilities provided by tourism managers, security may be the availability of watchtowers and lifeguard, ensuring the vehicles parked in the tourism, the availability of the security post to the availability of building peindung beaches protect tourists from big waves and the threat of crocodiles, security becomes very important variable for allegedly theoretically affect the level of visits per 1000 population per year in each zone. The higher the security level, the higher the rate of visits per 1000 population per year.
4. Education, formal education level of education is taken by the respondent, during the interview, measured in units of time of education (elementary, junior high, high school, diploma, undergraduate or above). Education level variables included in the analysis for allegedly theoretically affect the level of visits per 1000 population per year in each zone. The higher the level of education in each zone, the higher the level of demand for getaways so that the greater the level of visits per 1000 population per year in each zone.

5. Income, respondents not only from one type of work, then the individual income approach is used for wage / salary received each month, for the student and the student's own income is a monthly pocket money, and for housewives income is the total monthly consumption expenditure. Variable income included in the analysis for allegedly theoretically affect the level of visits per 1000 population per year. The higher the income level of each zone of the higher level of need for a vacation with demikian higher the level of visits per 1000 population per year for each zone.
6. Distance, approach of economic value used is the distance from the living quarters of visitors to tourist destinations Lasiana Beach and Batunona Beach in units of kilometers. The important variable is included because theoretically supposed to influence the visit rate per 1000 population per year in each zone. The closer the population of suata residence zone, the smaller the rate of visits per 1000 population per year from the zone to the Lasiana Beach and Batunona Beach.
7. Age, the age variable used was based on date of birth visitors rounding down are expressed in terms of years. Age variable is used to view the interest of visitors based on age levels. The higher the age of the visitor has the greater the level of visits per 1000 population per year in each zone area.

In this study the data necessary to calculate the level of tourist traffic is the number of tourists and the population of the area of origin of tourists, tourists who visit the Lasiana beach and Batunona Beach mostly domestic tourists who come from Kupang so for the zoning is based on the number of districts in Kota Kupang. Total population of the six districts into 6 zones research comes from BPS data Kupang City in 2015, and thus 6 zones such research is Zone District of Alak, Zone District of Kota Raja, Zone District of Kelapa Lima, Zone District of Oebobo, Zone District of the Old City and District of Maulafa zone, while the average distance travelers from each zone be searched by using the Google maps.

This study used the method of travel Zonal Cost Method (ZTCM) where the economic valuation conducted by collecting data on the number of visitors from different zones (Bateman in Yohann Trouve, 2013). The values obtained may be higher than the cost of admission previously sold, so expect this value is sufficient to protect the attraction of environmental degradation. To get the value of willingness to pay (willingnes to pay) method approach, the cost of travel (Travel Cost Method) made the following stages:

1. Calculating the average traffic by creating a table that contains data on the distance of origin of tourists to tourism, the number of tourists from each zone and the number of population in each zone, the average traffic obtained from the number of tourists per zone divided by the population in the zone
2. Calculating the costs incurred by tourists by way of adding up all the costs such as transportation costs, admission, parking, food, swimming equipment rental
3. Creating a demand curve by entering average visit as the X value and cost as the value of Y, using Microsoft Excel simple equation regression results  $Y = a + bx$ , from simple regression equation analysis results sought value of X and Y.

$$Y = a + bx, \text{ if } X = 0, Y = \text{found}$$

$$\text{if } Y = 0, \text{ then } X = \text{found}$$

after the value of X and Y is found then to get the average value of this function be integrated

WTP:

$$Y = \int_0^x (a-bx) dx$$

Then the value of total WTP or economic value of environmental services per month (EV) is obtained from WTP value multiplied by (N) populations benefited Lasiana Beach and Batunona Beach

$$EV = WTP \times N$$

Furthermore, to determine the value of the consumer surplus is done by calculating the total cost of (N) multiplied by the population of the city of Kupang travel visit rate multiplied by the average cost of travel, Consumer surplus thus obtained from the total WTP / EV reduced total Cost, Total Cost = N x tk.visits x average cost perjln, Consumer Surplus = Total WTP / EV - Total Cost Analyze the influence of independent variables on the number of visits made by entering the entire independent variables in the formula-demand model using multiple regression operation, so the equation:

$$Y = a + b1 \text{ travel expenses} + b2 \text{ distance} + b3 \text{ security} + b4 \text{ education} + b5 \text{ Revenue} + b6 \text{ age}$$

determined that data retrieval is extended to the Moon in January 2017.

Characteristics of respondents in this study visits of several things: age, gender, past education, employment and income, the classification of the characteristics of the respondents described the socio-economic conditions of the city of Kupang.

a. Characteristics of respondents by age

- Travelers Lasiana Beach according to age mostly aged between 16-25 years were 43 respondents, aged 26-35 years as many as 31 respondents, aged 36-45 years were 12 respondents, the rest aged 46-55 years by 8 respondents and aged less than 15 years as many as six respondents. This shows that the respondents did most of the tourist activity in Lasiana Beach mostly young or productive age
- Travelers Batunona Beach according to age mostly aged between 16-25 years as many as 61 respondents, aged 26-35 years as many as 23 respondents, the rest is aged less than 15 years as many as five respondents, aged 36-45 years as many as 4 respondents and aged 46-55 years as many as three respondents. This shows that the respondents did most of the tourist activity in Batunona Beach mostly young or productive age

b. Characteristics of respondents by sex

- Travelers of Lasiana the sexes mostly sex Woman

- Travelers Batunona the sexes mostly sex Woman

c. Characteristics of respondents by education

- By educational level, most tourists Lasiana educated high school level as many as 51 respondents, education level S1 and S2 or more of 30 respondents, the rest is educated at the primary that is 5 respondents, educated junior high school as many as 8 respondents, education level diploma as much as 6 respondents
- By educational level, most tourists Batunona educated high school level as many as 43 respondents, education level S1 and S2 or more as much as 35 respondents, the rest educated junior high school as many as 9 respondents, education level diploma as many as 8 respondents, educated at the primary as one respondent

d. Characteristics of respondents by job

- Based on the type of work most of the respondents rating Lasiana is the mother households, pensioners and students as many as 38 respondents (38%), government employee as many as 32 respondents (32%), working as a self-employed as many as 29 respondents (29%), working as a TNI / Polri as many as 1 respondent (1%).
- Based on the type of job rating Batunona most respondents are students and students a total of 36 respondents, working as a self-employed as many as 34 respondents, worked as a civil servant as many as 20 respondents (29%), working as a military / police as many as six respondents.

e. Characteristics of respondents by income

- According to the average income level of each month, the majority of respondents rating Lasiana income of less than Rp. 1.000.000, - as many as 54 respondents, the remaining income Rp1.000.001.- s / d Rp. 2,000,000, - 15 respondents, income Rp.2.000.001 s / d Rp.3.000.000, - 14 respondents, income Rp.3.000.001.- s / d Rp.

4,000,000, - 12 respondents, income Rp.4.000.001.- s / d Rp. 5.000.000, - 5 respondents.

- According to the average income level of each month, the majority of respondents rating Batunona income of less than Rp. 1.000.000, - as many as 59 respondents, the remaining income Rp1.000.001.- s / d Rp. 2,000,000, - 15 respondents, income Rp.2.000.001 s / d Rp.3.000.000, - 10 respondents, income Rp.3.000.001.- s / d Rp. 4,000,000, - 9 respondents, income Rp.4.000.001.- s / d Rp. 5.000.000, - 3 respondents.

#### 1. Calculation method of willingness to pay travel expenses

Value benefit from Lasiana Beach and Batunona Beach determined using the cost of travel (Travel Cost Method) based on the expenditures of travelers during the travel activity.

In this study yielded two benefits value benefits Lasiana Beach and value benefits Batunona Beach, while the operational steps that must be addressed:

a. Creating Tables The mean cost of the trip by the local tourist subdistrict zone of origin, the details of the data required is as follows:

- transportation costs are the costs necessary tourist to get to the Lasiana beach from home to back home in Rupiah, when using public transportation costs are calculated in rupiah transport costs, when using vehicles pribadi then the cost is calculated on the number of liters of fuel used to reach and return from tourism site.
- The parking fee is the cost of parking the vehicle in the sights both two-wheelers and four-wheel vehicles
- Consumption costs are those costs incurred to buy snacks in sights
- Other costs are swimming equipment rental fees, entry fees restrooms, multipurpose hall rental fees and other costs.

- Then make a model of a request by guessing the number of visits per 1000 population of each zone, the population is obtained from a population of 2015 in the zone

Table 1. Average of Travel Cost to Lasiana Beach

No	Zona	Average Travel Cost				Average toatal cost(Rp)
		Trans (Rp.)	Parking (Rp)	Konsumsi (Rp)	others (Rp)	
1	Alak	7.938	1.813	34.063	2.813	46.625
2	Maulafa	8.092	2.342	7.974	4.737	23.145
3	Oebobo	32.474	1.947	54.474	8.684	97.579
4	Kotaraja	30.000	3.286	50.714	24.286	108.286
5	Kelapa lima	50.000	1.167	48.750	833	100.750
6	Kota lama	17.938	1.125	45.125	2.500	66.688

Source: results of analysis, 2017

Table 2. Average of Travel Cost to Batunona Beach

No	Zona	Average Travel Cost				Average toatal cost(Rp)
		Trans (Rp.)	Parking (Rp)	Konsumsi (Rp)	others (Rp)	
1	Alak	8.556	2.000	34.444	37.222	82.222
2	Maulafa	10.952	1.667	28.571	11.905	53.095
3	Oebobo	21.571	2.643	41.429	22.857	88.500
4	Kotaraja	14.375	2.375	43.125	25.625	85.500
5	Kelapa lima	11.500	1.722	31.806	2.583	47.611
6	Kota lama	21.625	1.250	45.625	5.625	74.125

Source: results of analysis, 2017

Table 3. Level of Lasiana Beach Tourist Visit

No	Zona	Number of tourists (people)	Total population (person)	The level of tourist visits (org / year / 1000 residents)	average travel costs (Rp.)
1	Maulafa	38	74.899	0,507	23.145
2	Alak	16	59.948	0,267	46.625
3	Kota lama	8	34.075	0,235	66.688
4	Oebobo	19	94.694	0,201	97.579
5	Kelapa lima	12	73.523	0,163	100.750
6	Kotaraja	7	53.738	0,130	108.286
Jumlah		100	390.877	1,50315	443.072

Source: results of analysis, 2017

Table 4. Level of Batunona Beach Tourist Visit

No	Zona	Number of tourists (people)	Total population (person)	The level of tourist visits (org / year / 1000 residents)	average travel costs (Rp.)
1	Alak	9	59.948	0,150	82.222
2	Maulafa	21	74.899	0,280	53.095
3	Oebobo	14	94.694	0,148	88.500
4	Kotaraja	8	53.738	0,149	85.500
5	Kelapa lima	36	73.523	0,490	47.611
6	Kota lama	8	34.075	0,235	74.125
	Jumlah	96	390.877	1,45164	431.054

Source: results of analysis, 2017

- b. Forming the demand function using simple regression model analysis between the level of tourist traffic (X) with an average cost of travel (Y) using Microsoft Excel, Lasiana Beach demand model is obtained as follows:

$$Y = 0.5166 - 0.0000036 X$$

From simple regression analysis over Y and X values obtained as follows:

$$\text{if } X = 0, Y = 0.5166$$

$$\text{if } Y = 0, \text{ then } 0 = 0.5166 - 0.0000036 X$$

$$0.0000036 X = 0.5166$$

$$X = 0.5166$$

$$0.0000036$$

$$X = 143.369$$

To get the average value of WTP then this function be integrated:

$$143.369$$

$$Y = \int (0,5166 - 0,0000036X) dx$$

$$0$$

$$Y = (0,5166X - \frac{1}{2} \cdot 0,0000036X^2)$$

$$Y = 37.034$$

So the value of WTP (willingnes to pay) per tourist who visit the Lasiana beach is Rp. 37 034, Economic Value of Environmental Services (Total WTP) obtained from Kupang city population multiplied by the average WTP = 390 877 x 37 034 = Rp.14.475.625.528.

The total cost is obtained from Kupang city population multiplied visit rate multiplied by the average tourist travel costs Rp.5.98 billion Consumer surplus thus obtained from the total WTP reduced total Cost = 14475625528-5980000000 = Rp. 8495625528.

From the results of a simple regression between the level of tourist visits to the average travel costs Batunona Beach demand model is obtained as follows:

$$Y = .7411 + 0.00000695 X$$

From simple regression analysis over Y and X values obtained as follows:

$$\text{if } X = 0, Y = 0.7411$$

$$\text{if } Y = 0, \text{ then } 0 = 0.7411 + 0.00000695 X$$

$$0.00000695 X = 0.7411$$

$$X = 0.7411$$

$$0.00000695$$

$$X = 106.619$$

To get the average value of WTP then this function dintegralkan:

$$106.619$$

$$Y = \int (0.7411 - 0.00000695X) dx$$

$$0$$

$$Y = (0.7411X - \frac{1}{2} \cdot 0.00000695X^2)$$

$$Y = 39.512$$

So the value of WTP (willingnes to pay) per tourist who visit the Lasiana beach is Rp. 39 512.

Economic Value of Environmental Services (total WTP) were obtained from Kupang city population multiplied by the average WTP = 390 877 x 39 512 = Rp. 15,444,346,771

The total cost is obtained from Kupang city population multiplied by the level of tourist visits multiplied by the average cost of the trip = Rp. 7.059 billion

Consumer surplus thus obtained from the total WTP reduced total Cost = 15.444.346.771- 7.059 billion = USD. 8385346771.

Based on the estimates above the obtained results that the value of willingness to pay (WTP) Lasiana Beach is Rp. 37 034, - more than the fees that have been imposed NTT Provincial Tourism Office is Rp. 2000 -, but smaller than the value of willingness to pay (WTP) Batunona Beach Rp. 39 512.

When compared to the results of research conducted by Queen Kadja (2014), which calculates the value of WTP Lasiana beach using contingency coefficient method (CVM) there WTP value increase from Rp. 28 490, - / tourists to Rp. 37 034, - / tourists. The results of this analysis show that although Lasiana beach have a more complete facilities of Batunona Beach but the value of WTP Batunona Beach higher for services social environment that action climbing palm, the economy is the availability of the pool and ecology are the panoramic beach and mangrove still unspoiled give comfort and better security than Lasiana Beach neighborhood services.

Travelers have the willingness to pay more attention to the benefits received, are appropriately managing Beach attractions Lasiana and Batunona Beach raise entry fees in which it has been incorporated environmental services, by applying the value of the levy according to the value of WTP then nature conservation will be more secure and result in increased security and comfort.

## 2. Analysis of Effect of variable independent of the level of visits

Multiple linear regression analysis is used to determine the effect of the cost of travel, distance, security, income, age and education of tourists to the number of tourist visits in Lasiana Beach and Batunona Beach obtained multiple regression equation as follows:

- Lasiana beach

$$Y = 2.768 - 0.000000371 X1 - X2 + 0,893 X3 0.0849 - 0.0712 X4 - X5 + 0.00354 0.000000070 X6$$

Information :

Y = The number of tourist visits

X1 = travel expenses (Rp.)

X2 = distance (km)

X3 = security

X4 = education (years)

X5 = Revenue (Rp.)

X6 = age (years)

From the results of the regression equation above can be seen that there are several independent variables in this study were not significantly influence the dependent variable is the variable cost of travel, distance, education and income, this variable has no significant effect for respondents who visited the Lasiana Beach more concerned with obtaining the benefits of natural beauty to offer.

- 1) Variable Cost of travel to Lasiana Beach attractions with regression coefficient of - 0.000000371 produce a negative value, it means a change of travel cost increases by one percent would result in a decrease in the number of requests for 0.000000371 assuming that the distance, security, income, age and education are fixed. This is consistent with previous studies conducted Mateka et al (2013), where the variable cost of a trip to the beach Balekambang they studied also have a negative impact, this is because the travel costs are costs incurred tourists from home for at tourist spots to return home, so that tourists would react if there is a change in travel costs, the higher the cost of travel then travel demand would be lower.
- 2) Variable Distance to Beach attractions Lasiana with regression coefficient of - 0.0849 produce a negative value, it means a change of one per cent increase in distance will result in a decrease in the number of requests for .0849, Assuming that the cost of travel, safety, income, age and education are fixed. This is consistent with previous studies conducted Mateka et al (2013), in which the distance variables they examined also had a negative effect, this is because travelers have easier access to sites that were located closer than a place to stay than those far from their homes. The more distant sites, the lower the amount of travel demand.
- 3) Security variable Beach attractions Lasiana with regression coefficient of 0,893 produces a positive value, this means changes in safety factor rise by one percent would result in an increase in the number of requests for 0,893 assuming that the cost

of travel, distance, income, age and education are fixed. The positive influence of the factor of safety against the demand for Lasiana Beach This is because since last year are often threatened by the presence of crocodiles from Nunkurus, so travelers feel afraid and threatened by the presence of crocodiles, as anticipatory measures Provincial Tourism Office NTT has built a breakwater to prevent the entry crocodile to Lasiana Beach tourist area.

- 4) Variable Education Lasiana Beach attractions with regression coefficient of - 0.0712 produce a negative value, this means changes in education levels rise by one percent would result in a decrease in demand by 0.0712 with the assumption that the cost of travel, distance, security, age and income is fixed. Visitors Lasiana beach is dominated by visitors with a high school graduate category, aligned with Aryanto research and Mardjuka (2005) in which the educational variables they examined also had a negative effect, this means that the level of education does not give significant effect.
- 5) Variable Income Lasiana Beach attractions with regression coefficient of - 0.000000070 produce a negative value, it means a change of one per cent increase in revenue will result in a decrease in the number of requests for 0.000000070, Assuming that the cost of travel, distance, security, age and education are fixed. The coefficient is negative means the population with an income of both large and small do not give a significant influence on a person's desire to be doing excursions, this was due to the distance from Kupang to Lasiana Beach not too far away and levied is still very affordable, in line with results Samsudin study (2012) that the variable income is also negative.
- 6) The age variable Beach attractions Lasiana with regression coefficient of 0.00354 produces a positive value, it means a change of one year increase in age would lead to

increased demand by 0.00354 assuming that the cost of travel, distance, security, income and education are fixed. In harmony with the results Effendi, Ahmad (2015) the age variable is also positive, meaning that the higher the rating the age the greater the desire to tour.

- Batunona Beach

$$Y = 1.322 + 0.00001376 X1 - X2 + 0.374 0.00474 0.0218 X3 + X4 - X5 0.00000013 - 0.0133 X6$$

**Information :**

- Y = The number of tourist visits
- X1 = travel expenses (Rp.)
- X2 = distance (km)
- X3 = security
- X4 = education (years)
- X5 = Revenue (Rp.)
- X6 = age (years)

From the results of the regression equation above can be seen that there are several independent variables in this study were not significantly influence the dependent variable is the variable distance, age and income, this variable has no significant effect for respondents who visited the Batunona Beach more concerned to benefit from the facilities which is offered.

- 1) Variable Cost of travel to Batunona Beach attractions with regression coefficient of 0.00001376 produces a positive value, it means a change of travel cost increases by one percent would result in an increase in the number of requests for 0.00001376 assuming that the distance, security, income, age and education are fixed. This is consistent with previous studies conducted Mateka et al (2013), where the variable cost of travel to Sempu they studied also have a positive effect, this is because visitors prefer sites that cheaper means higher travel costs so desire traveled lower.
- 2) Variable Distance to Beach attractions Batunona with regression coefficient of - 0.00474 produce a negative value, it means a change of one per cent increase in

distance will result in a decrease in the number of requests for 0.00474, Assuming that the cost of travel, safety, income, age and education are fixed. This is consistent with previous studies conducted Mateka et al (2013), in which the distance variables they examined also had a negative effect, this is because travelers have easier access to sites that were located closer than a place to stay than those far from their homes. The more distant sites, the lower the amount of travel demand. The coefficient of distance for Lasiana Beach and Batunona is equally negative but Batunona Beach is smaller because the distance between Batunona Beach and Kupang City is closer

- 3) Security variable Beach attractions Lasiana with regression coefficient of 0.374 produces a positive value, this means changes in safety factor rise by one percent would result in an increase in the number of requests for 0.374 assuming that the cost of travel, distance, income, age and education are fixed. The positive influence of the factor of safety against the demand for Batunona Beach together with Lasiana Beach because of the threat of the presence of crocodiles from Nunkurus, so travelers feel afraid and threatened by the presence of crocodiles, but because the Batunona Beach not managed by the Government that there is no anticipatory measures undertaken local landowners to banish the presence of crocodiles.
- 4) Variable Education Batunona Beach attractions with regression coefficient of .0218 produces a positive value, this means changes in education levels rise by one percent would result in an increase in the number of requests for .0218 assuming that the cost of travel, distance, security, age and income is fixed. In tune with the research Effendi, et al (2015) in which the educational variables they examined also had a positive effect, this means that the level of education has significant impact on the number of visits to the Batunona Beach, the higher the level of education a person then they will look for a tourist attraction that offers better.

- 5) Variable Income Batunona Beach attractions with regression coefficient of - 0.00000013 produce a negative value, it means a change of one per cent increase in revenue will result in a decrease in the number of requests for 0.00000013 assuming that the cost of travel, distance, security, age and education are fixed. The coefficient is negative means the population with an income of both large and small do not give a significant influence on a person's desire to be doing excursions, this was due to the distance from Kupang to Batunona Beach not too far away and levied is still very affordable, in line with results Samsudin study (2012) that the variable income is also negative.
- 6) The age variable Beach attractions Batunona with regression coefficient of - 0.0133 produce a negative value, it means a change of one year increase in age would result in a decrease in the number of requests for - 0.0133 with the assumption that the cost of travel, distance, security, income and education are fixed. In harmony with the results Mateka, et al (2013) the age variable is also negative, this is due to Batunona Beach not managed properly so that the garbage seemed be spread everywhere and the facilities to enjoy the beach as Lopo and places selling local snacks still very minimal.
- F test (simultaneous) is performed to determine whether there is influence of the independent variable on the dependent variables simultaneously (together), with a degree of freedom for the denominator (nk) and the degree of freedom for the nominee (k-1) obtained F table, if signifikanansi figure > 0.05 then Ho is rejected and H1 accepted, if the figure of significance < 0.05 then Ho is rejected and H1 accepted. From the estimation by using Microsoft Excel to calculate the F value amounted to 3.153 Lasiana Beach F table with DF1 and DF2 = 6 = 100-6-1 = 93 is equal to 2,20 thus obtained F count (3.153) > F table ( 2.20) so that Ho refused, based on the

probability table Anova significance 0.00735 and the significant level  $\alpha = 0.05$ ,  $0.00735 < 0.05$   $H_0$  rejected.

From the test results F above is known that multiple linear regression model can be used to predict the level of tourist traffic is influenced by six independent variables are variables the cost of travel, distance, security, income, age and education.

As for the Batunona Beach obtained by using Microsoft Excel calculated F value of 2.574 F table with DF1 and DF2 = 6 = 96-6-1 = 89 is equal to 2,20 thus obtained F count (2.574) > F table (2, 20) so that  $H_0$  refused, based on the probability table Anova significance 0.0239 and the significant level  $\alpha = 0.05$ ,  $0.0239 < 0.05$   $H_0$  rejected. From the results above, the F test multiple linear regression model can be used to predict the level of tourist visits dipengaruhi 6 independent variables are variables the cost of travel, distance, security, income, age and education.

- Test T (Partial) is performed to determine whether there is influence of each independent variable individually, significant numbers of 5% ( $\alpha = 0.05$ ) and the degree of freedom (nk) obtained T table, if the figure signifikansi > 0.05 then  $H_0$  is rejected and  $H_1$  accepted, if the figure of significance < 0.05 then  $H_0$  is rejected and  $H_1$  accepted, by comparing the value of t arithmetic with t table value obtained as follows:

- 1) Travel expenses, based on the results of testing Microsoft Excel to the variable cost of travel to beach Lasiana obtained t value of -0.212, t table for df = 100-6 = 94 with 5% significance figure is 1,660 means that  $t (0.212) < t \text{ table } (1,660)$ .  $H_0$  rejected  $H_1$  accepted so that it can be concluded that the variable cost of a trip to the beach Lasiana partially no effect on the number of tourist demand, it is due to reach the Lasiana beach tourists not only pay attention to the cost to the attractions but also affected the

security and the age at which Lasiana Beach have equipped with a breakwater to protect the crocodile attacks and the facilities offered are also more complete.

For Batunona Beach, based on the results of testing of Microsoft Excel to the variable cost of a trip to the beach Batunona obtained t value of 3.501, t value table for  $df = 96 - 6 = 90$  to figures 5% significance is 1.661 means that  $t (3.501) > t \text{ table } (1,661)$ .  $H_0$  accepted and  $H_1$  rejected so that it can be concluded that the variable cost of a trip to the beach Batunona partial effect on the number of tourist demand, it is because on most tourists chose sights that is closer and costs less so that Batunona Beach be a better choice better than Lasiana Beach.

- 2) Distance, based on the results of testing Microsoft Excel to a variable distance to the beach Lasiana obtained t value of - 3.593 t table for  $df = 100 - 6 = 94$  with figures of significance of 5% is 1.660 means that  $t (3.593) > t \text{ table } (1.660)$ ,  $H_0$  accepted and  $H_1$  rejected so that it can be concluded that the variable distance to the beach Lasiana partial effect on the number of tourist demand, it is due to reach the beach Lasiana travelers have to travel a considerable distance compared to Batunona Beach so that when the distance is farther then the cost of the trip as well will be higher. For Batunona Coast, test results from Microsoft Excel to a variable distance to the beach Batunona obtained t value of -0.160 t table for  $df = 96 - 6 = 90$  with 5% significance figure is 1,661 means that  $t (0.160) < t \text{ table } ( 1.661)$ .  $H_0$  rejected  $H_1$  accepted so that it can be concluded that the variable distance to Batunona beach partially no effect on the amount of travel demand, this is because in most tourists chose travel halfway point near Batunona be a better choice than Lasiana Beach.
- 3) Security, based on the results of testing Microsoft Excel for security variable in Lasiana Beach obtained t value of 1.526 t table for  $df = 100 - 6 = 94$  with figures of significance of 5% is 1.660 means that  $t (1.526) < t \text{ table } (1.660)$ .  $H_0$  rejected  $H_1$

accepted so that it can be concluded that the variable distance to the beach Lasiana partially no effect on the number of tourist demand, it is because Lasiana Beach has now been completed dike to protect it from the threat of crocodiles and parking areas provided sufficiently representative to provide security for tourists.

For Batunona Beach, based on the results of testing Microsoft Excel for security variable in Batunona Beach obtained t value of 0.879 t table for  $df = 96 - 6 = 90$  to figures 5% significance is 1.661 means that  $t (0.879) < t \text{ table } (1,661)$ .  $H_0$  rejected  $H_1$  accepted so that it can be concluded that the variable Security in Batunona Beach partially no effect on the number of tourist demand, it is because in general traveler to the beach Batunona choose to swim in the pool is owned by local residents so it does not need to be wary of the threat crocodile.

- 4) Education, based on the results of testing Microsoft Excel for the variables of education in Lasiana Beach obtained t value of - 1.495 t table for  $df = 100 - 6 = 94$  with figures of significance of 5% is 1.660 means that  $t (1.495) < t \text{ table } (1.660)$ ,  $H_0$  rejected  $H_1$  accepted so that it can be concluded that the variables of education in Lasiana Beach partially no effect on the number of tourist demand, and this is because of tourists visiting Lasiana Beach generally give priority to its natural beauty alone, cannot be motivated to preserve the environment.

For Batunona Beach, based on the results of Microsoft Excel testing for Education variables in Batunona Beach, the value of t count is 0.330 t table for  $df = 96 - 6 = 90$  with a significance rate of 5% is 1.661 means t count  $(0.330) < t \text{ table } (1.661)$ .  $H_0$  refused  $H_1$  was accepted so it can be concluded that the education variable in Batunona Beach partially did not affect the number of tourist requests, just as tourists who visited Lasiana Beach, tourists who visited Batunona Beach only came to enjoy

nature and its facilities, not yet at the stage of traveling while protecting the environment.

- 5) Revenue, based on the results of Microsoft Excel testing for the Revenue variable at Lasiana Beach, the value of t arithmetic is - 0.596 value of t table for  $df = 100 - 6 = 94$  with a significance value of 5% is 1.660 means t arithmetic (0.596) < t table ( 1,660).  $H_0$  rejected  $H_1$  accepted so it can be concluded that the income variable at Lasiana Beach partially has no effect on the number of tourist requests, this is because the fees set to enter Lasiana Beach are still very affordable so that tourists who come generally only incur costs for transportation.

For Batunona Beach, based on the results of Microsoft Excel testing for income variables in Batunona Beach, the value of t arithmetic is -0.845 t table value for  $df = 96 - 6 = 90$  with a significance value of 5% is 1.661 means t arithmetic (0.845) < t table (t table (t 1,661).  $H_0$  refused  $H_1$  was accepted so it can be concluded that the income variable on Batunona Beach partially did not affect the number of tourist requests, just as tourists who visited Lasiana Beach, tourists who visited Batunona Beach were charged very affordable fees so that tourists who only wanted to enjoy the beauty of their beaches only need to spend money on transportation costs.

- 6) Age, based on the results of Microsoft Excel testing for the Age variable at Lasiana Beach, the t value was 0.168 for the t table for  $df = 100 - 6 = 94$  with a 5% significance rate of 1.660, which means t count (0.168) < t table (1.660 ).  $H_0$  rejected  $H_1$  accepted so it can be concluded that the age variable on Lasiana Beach partially has no effect on the number of tourist requests, this is because tourists who visit Lasiana Beach are generally teenagers to adults who come in groups.

For Batunona Beach, based on the results of Microsoft Excel testing for the Age variable in Batunona Beach, the calculated t value of -0.591 t table value for  $df = 96 -$

6 = 90 with a significance rate of 5% is 1.661 means  $t$  arithmetic (0.591) <  $t$  table (1,661).  $H_0$  refused  $H_1$  was accepted so it can be concluded that the Age variable in Batunona Beach partially did not affect the number of tourist requests, just as tourists visiting Lasiana Beach, tourists visiting Batunona Beach generally came in groups with family or friends so that they could be enjoyed by all ages.

- Determination Coefficient Test ( $R^2$ )

The  $R^2$  test was carried out to measure the ability of the model to explain the variation of the dependent variable. From the estimation results using Microsoft Excel, the value of R-square ( $R^2$ ) of Lasiana Beach was 0.169, which means that 16.9% of the number of tourist visits to Lasiana Beach can be explained by the six variables namely costs travel, distance, security, education, income and age, while the remaining 83.1% is explained by other variables not included in the study.

While the estimation results using Microsoft Excel, the R-square ( $R^2$ ) value of Batunona Beach is 0.147, which means that 14.7% of the number of tourists visiting Batunona Beach can be explained by the six variables, namely the cost of travel, distance, security, education, income and age, while the remaining 85.3% was explained by other variables not included in the study.

## CONCLUSION

Based on the results of the analysis and discussion, the conclusions of the results of this study are:

1. Value of willingness of tourists (willingnes to pay) at Lasiana Beach Rp. 37,034, - / tourist, greater than the official levy of Rp. 2,000, - / tourist, while the value of willingness to pay on Batunona Beach Rp. 39,512, - / tourist, greater than Rp.2,000 levy / tourist imposed by local landowners. The results of this analysis show that although

Lasiana Beach has more complete facilities than Batunona Beach, the WTP value of Batunona Beach is higher because of social environmental services namely lontar climbing action, economy, namely the availability of swimming pools and ecology, namely the panorama of beaches and mangroves that are still naturally providing comfort and better security from Lasiana Beach environmental services.

2. Of the six independent variables tested, at Lasiana Beach only the Distance variable has a significant positive effect on the dependent variable, this is because to be able to reach Lasiana Beach tourists must travel longer distances than Batunona Beach so that if the distance is further away travel costs will also be higher. While Batunona Beach shows only the variable cost of travel which has a significant positive effect on the dependent variable, this is because in general tourists choose better and safer tourist attractions, Batunona Beach has a swimming pool available so that tourists who want to swim don't worry about having crocodile attacks so that Batunona Beach is a better choice than Lasiana Beach.

## **SUGGESTIONS**

1. From the results of the analysis it is known that the WTP value of Lasiana Beach and Batunona Beach is greater than the official or unofficial levies imposed so far, this shows that tourists have the willingness to pay more for the benefits it receives, the management of Lasiana Beach tourism objects and Batunona Beach raises the entrance fee, which has included environmental services, by applying the retribution value according to the PAP value, nature conservation will be more secure and will have an impact on increasing the safety and comfort of tourists.
2. From the analysis it is known that the economic value (total WTP) of Lasiana Beach and Batunona Beach is quite high, but not accompanied by publications so that the level of

visits from outside the city of Kupang is still very small, tour managers are advised to make tourism events that contain interesting attractions such as dance- dances, ornamental boat races or other entertainment that can attract tourists to visit.

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