Ecotourism model with travel cost approach: A case study on Air Manis Beach

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INFO ARTIKEL	ABSTRAK
	Indonesia memiliki potensi wisata alam pesisir (ekowisata). Namun, potensi wisata bahari di Indonesia masih belum dimanfaatkan secara optimal. Untuk itu diperlukan suatu kajian untuk melakukan valuasi ekonomi terhadap ekowisata Pantai Air Manis sebagai dasar pengembangan kawasan ini di masa mendatang. Dengan menggunakan survei, penelitian ini bertujuan untuk mendapatkan persepsi dan pendapat tentang utilitas atau kepuasan wisatawan terhadap berbagai aspek pelayanan, seperti sarana dan prasarana, kebersihan, keamanan, dan atraksi. Penelitian ini juga mencari kemampuan membayar pantai air manis dengan menggunakan Contingent Valuation Method (CVM). Hasil analisis induktif dengan metode biaya perjalanan diketahui bahwa biaya perjalanan, pendapatan, jenis kelamin, dan usia berpengaruh signifikan terhadap penentuan jumlah kunjungan wisatawan. Dari sisi kesediaan membayar, lebih banyak responden yang menyatakan harga tiket masuk saat survei (Rp 5.000) tergolong sedang. Berdasarkan hipotesis pasar, responden yang setuju dengan penambahan harga tiket masuk untuk meningkatkan pelayanan dan infrastruktur di kawasan objek wisata Pantai Air Manis sebanyak 58,3 persen responden, sedangkan yang tidak setuju sebanyak 41,7 persen. Total tambahan kenaikan yang bersedia dibayarkan adalah Rp. 498.000 atau rata-rata Rp. 2.767 per responden.
	ABSTRACT
	Indonesia has coastal nature tourism potential (ecotourism). However, the potential of marine tourism in Indonesia is still not optimally utilized. For this reason, a study is needed to conduct an economic valuation of Air Manis Beach ecotourism as a basis for the development of this area in the future. By using a survey, this study aims to get perceptions and opinions of the utility or tourist satisfaction of various aspects of service, such as facilities and infrastructure, cleanliness, security, and attractions. This study also seeks the ability to pay for air manis beach by using the Contingent Valuation Method (CVM). The results of the inductive analysis using the travel cost method found that travel costs, income, gender, and age have a significant effect on determining the number of tourist visits. In terms of willingness to pay, more respondents stated that the price of admission during the survey (IDR. 5,000) was moderate. Based on the market hypothesis, respondents who agree to the additional price of admission to improve services and infrastructure in the Air Manis Beach tourist attraction area are 58.3 percent of respondents, while those who disagree are 41.7 percent. The total additional increase that is willing to be paid is IDR. 498,000 or an average of IDR. 2,767 per respondent.

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INTRODUCTION

Indonesia has coastal nature tourism potential (ecotourism). This coastal ecotourism potential, as stated by Dahuri (2009), is reflected in the predicate of Indonesia as the largest maritime and archipelagic country in the world. The potential of marine tourism in Indonesia is still not optimally utilized. The national development paradigm is too land-based development. Meanwhile, marine, and coastal areas are only treated as places for extractive natural resource exploitation, waste disposal, and various illegal activities take place. The potential of marine tourism as part of ecotourism is a type of tourism that is based on a commitment to conservation and an environmentally friendly environment. Ecotourism has also become part of basic human needs as people's income levels grow, especially for people who are increasingly urbanized (Dewi & Tolo, 2022). The ecotourism potential of Air Manis Beach, which is located in Padang, West Sumatra is quite large. Air Manis Beach ecotourism which is located about ± 15 km from the government center of Padang is the mainstay of marine ecotourism objects along with Padang Beach ecotourism, besides Pasie Jambak Beach. The legend of Malin Kundang, which is widely known in Indonesia and even neighboring countries, is the main attraction of Air Manis Beach. In this area, the reliefs of the Legend of Malin Kundang have been built. In addition, views of the beach, fishing villages and Banana Island are the main attraction in this area.

The potential of Air Manis Beach needs to be optimized. The number of tourist visits to Air Manis Beach is higher than Pasir Jambak Beach. Tourist visits to Air Manis Beach are recorded to fluctuate. The attractiveness of Air Manis Beach is still not comparable to the number of tourists visiting Padang. Of the 1,870,403 people who visited the Padang (in 2010), only 5,439 (0.29%) visited Air Manis Beach. For this reason, a study is needed to conduct an economic valuation of Air Manis Beach ecotourism as a basis for the development of this area in the future. The Padang City Government has carried out various programs and activities to develop the Air Manis Beach ecotourism area. Air Manis Beach has been equipped with various facilities and infrastructure. A number of tourist attractions have also been developed. But the potential still needs to be optimized.

Studies to optimize ecotourism potential through the development of ecotourism at Air Manis Beach will increase when Air Manis Beach is managed and developed responsive to consumer needs. However, economically, Air Manis Beach is a public good then; the demand for ecotourism is reflected by the number of visits, while the price or market value of ecotourism can be estimated using the travel cost method as a survey method (Fauzi, 2004; Nagarajan *et al.*, 2022; Suparmoko, 2000). This method can analyze the demand for tourist objects and calculate the benefits and costs of changing various tourism object development policies (Platania, *et al.*, 2022; Tasnim, *et al.*, 2022).

This study was also able to get perceptions and opinions of the utility or tourist satisfaction of various aspects of service, such as facilities and infrastructure, cleanliness, security, and attractions. This survey was also conducted to determine tourist preferences and determine the value of Air Manis beach eco-tourism services such as the imposition of a ticket levy by expressing the ability to pay additional ticket prices if management is made better. In this case, the Contingent Valuation Method (CVM) is used (Idris *et al.*, 2022).

This research has used some methods. First, the use of the five methods, in the form of quantitative methods by conducting an economic assessment of ecotourism potential and qualitative methods by assessing perceptions, opinions, and preferences for the development of research objects. Second, this research aims to meet the demand and supply (local governments, local communities, and the business world and universities) at equilibrium. Third, this research seeks to develop a participatory Air Manis Beach ecotourism development policy to build mutual agreement, so that its development policy is widely supported and accepted rather than only being top-down.

This study was conducted to determine: (1) socio-economic factors that influence the demand for Air Manis Beach ecotourism; (2) the factors that influence the willingness to pay at the Air Manis Beach ecotourism object; (3) economic value which includes a willingness to pay, consumer surplus and the total benefits obtained by tourists at the Air Manis Beach ecotourism object; and tourists' assessment of the Air Manis Beach ecotourism object.

The results of this study are useful for developing the ecotourism potential of Air Manis Beach. It will increase the local government's income. The development of Air Manis beach attractions is also beneficial for the community around Air Manis Beach through the expansion of job opportunities including trade, hospitality services, transportation, and the growth of the creative economy. This study also develops cultural local wisdom through strengthening the icon of the Legend of Malin Kundang.

LITERATURE REVIEW

Tourism and ecotourism

Natural resources and the environment are providers of goods and services that provide economic benefits, both markets based (can be measured in monetary units) such as wood and fish or non-market-based in the form of natural beauty, freshness, clean air, or tourism (Fauzi, 2004). Tourism is generated by natural resources and environmental services. According to UNESCO in Hakim (2010) tourism can be defined as travel activities carried out temporarily from the original place of residence to the destination area for reasons not to settle or earn a living but only to have fun, fulfill curiosity, spend free time, or vacation time and other purposes.

The definition of tourism has a broad scope and activities. The position of ecotourism is quite unique because it is based on three of the five types of activities, namely rural tourism, nature tourism, and cultural tourism. However, according to The International Ecotourism Society (TIES), ecotourism is a tourist travel activity that is professionally packaged, trained, and contains elements of education, as an economic business sector that considers cultural heritage, participation, and welfare of residents as well as efforts to conserve natural resources and the environment. TIES, 2006 in Nugroho and Dahuri, 2012). Ecotourism is also characterized by a low number of visitor groups, quality services, and high added value.

Air Manis Beach attractions as a public good

Goods, services, and traveling are human needs. Air Manis Beach provides environmental services in the form of ecotourism. The need for ecotourism services is different from other goods and services. Ecotourism is classified as a public good that is different from private goods such as clothing and shoes. In the public economy, public goods can be defined because of their non-competitive characteristics so that two or more consumers can consume them simultaneously (non-rivalry). The second characteristic is that it is non-excludable for consumers because it causes costs that are far greater than the benefits (Mangkoesobroto, 2008). In the economic context, natural resources and the environment are free goods which consumers tend to use freely. Natural resources and the environment as public goods in the form of beautiful scenery, fresh air, and recreation areas become common goods.

The problem of common property tends to be overused by consumers to maximize satisfaction without any incentive to consider their long-term availability. This behavior is referred to as free-riders that cause externalities. Theoretically, according to Mangkoesobroebroto (2008) externalities are when a person's actions have an impact on other people without any compensation whatsoever, resulting in inefficiency in the allocation of production factors. Meanwhile, Hyman (1999) defines externalities as costs or benefits of market transactions that are not reflected in prices.

Public policy analysis for tourism object development

Policy analysis is an activity to create knowledge about the policy-making process (Lasswell 1971 in Dunn, 1994). To create knowledge about the policy-making process, policy analysis examines the causes, effects, and performance of public policies and programs. While Dunn (1994) himself stated that policy analysis is an intellectual and practical activity aimed at creating critically, assessing, and communicating knowledge about and within the policy process. Policy analysis can also be viewed as a science that uses multiple assessment methods in the context of political argumentation and debate

to create, evaluate, and communicate the relevant policy.

As an applied study to produce descriptive, evaluative, and normative information, the source of policy analysis comes from various knowledge such as sociology, psychology, public administration, law, economics, philosophy, ethics including applied mathematics. Policy analysis combines and transforms the substance and methods of several knowledge and produces policy-relevant information that is used to address certain public problems. The purpose of policy analysis is not just to produce information about "facts", but to produce information about values and a recommended set of actions to choose from.

In general, policies in the management and development of tourism objects and attractions have been regulated in Law No. 10 of 2009. In this law, it has been stated that tourism development is carried out based on the principles as referred to in article two which are realized through the implementation of tourism development plans by taking into account the diversity, uniqueness of culture and nature, as well as human needs for tourism.

As an economic enterprise, the operation of ecotourism services is very efficient. The management and development aspects of ecotourism are important to consider. These aspects include: (i) specific marketing towards ecotourism destinations, (ii) the ecotourism market is visitors all over the world who master information technology, (iii) skills and intensive services, and (iv) involvement of local residents (Nugroho and Dahuri, 2012). Tourism activities are closely related to our daily lives. For this reason, policies in the management and development of tourism objects are directed at meeting these needs and services. UNESCO (2009) in Hakim (2010) revealed that tourism development must be supported by various tourism components, namely: (i) tourist objects and attractions, (ii) transportation & infrastructure, (iii) accommodation, (iv) food and beverage businesses, and (v) support services.

Approaches to economic assessment of natural resources and the environment

The problem of natural resources and the environment as public goods is the non-functioning of the price system due to the issue of ownership rights which has led to environmental degradation. This degradation creates opportunity costs, mean costs that must be taken into account due to the loss of opportunities to utilize a particular resource or the emergence of additional costs to utilize it, because these resources have been decided to be used for other purposes.

The failure of the market for natural resources due to the reluctance to express preferences so that the market price system does not function, and the emergence of free riders' behavior has prompted efforts to conduct an economic valuation of natural resources. This economic valuation will determine whether an environmental policy is effective or not and become an important basis for developing environment, in addition to the accompanying socio-cultural, economic, and political factors.

According to Munasinghe (1992), conceptually the total economic value of a resource consists of; (1) use-value, and (2) non-use value. Use value includes direct use value, indirect use-value, and option value, potential use-value. Mathematically the total economic value can be written in the following equation;

$$NET = NG + NBG$$
$$NET = (NGL + NGTL + NP) + NBG$$

Where ;

NET = Total economic value
NG = Use value
NBG = Non Use value
NGL = Direct Use Value
$NGTL$ = Indirect Use Value
NP = Option Value

Direct value is determined by the contribution an environmental asset makes to current production and consumption. Indirect use-value is the benefit derived from the basic services provided by the environment to support current production and consumption. Furthermore, the

option value is basically the excess that consumers are willing to pay for an asset that is not used, to avoid the risk of its unavailability in the future. Finally, the existence value is the value given by the individual to the existence of certain environmental goods based on certain ethics and norms.

The basic concept of the nature of economic valuation of all existing techniques rests on the willingness to pay of individuals for an environmental service or natural resource. In using this valuation technique, it must first be seen whether the market value of a resource is available or not. If available, the market value should be used, but if it is not available then the market value for substitute goods can be used. If it is not possible to use the market value of substitute goods, then a survey technique will be used

The method of travel costs and contingent valuation is part of the survey technique. Survey-based valuation techniques rely on direct surveys of consumers' willingness to pay (WTP) to determine the value of a natural system or environmental service. This approach seeks a measure of consumer choice in hypothetical situations and not based on consumer behavior in real situations. These approaches include the bidding game, the exchange game approach, the no-cost option approach, the priority scoring technique and the Delpi scoring technique.

Suparmoko (2000) reveals that the travel cost method is a technique for evaluating environmental services for recreational resources. The use of this method utilizes information about the time and monetary expenditures made by visitors to a recreation area to travel to and from the recreation area. This technique is to predict the demand curve for the use of a recreation area whether or not using entrance fees.

Another survey technique method is contingency assessment. This method is done by asking residents about the value they give to a commodity that has no market. This method is based on the view that for people who have true but hidden preferences for certain types of environmental goods. The next assumption, the person has the ability to transform these preferences into the form of monetary value (money). Furthermore, it is assumed that people will act in the future according to what they say when a hypothetical situation is presented to them.

Previous research

Hakim et.al. (2011) has conducted a study on the economic value of the natural tourism object of Rawapening, Indonesia. This research measures the economic value of Rawapening by using the method of travel costs and contingent valuation. This study found that the factors that significantly affect the likelihood that individuals are willing to pay a certain amount for environmental quality improvement are auction value, income and education. Furthermore, the determinants of the number of visits include visiting experience, travel costs, income, age and perception. In addition to this, Economic value and consumer surplus are also obtained.

Salma and Susilowati (2004) have conducted research published in the Journal of Development Dynamics. The study measures the economic value obtained from natural tourism visitors to Curug Sewu, Kendal Regency by using individual travel cost method. The analytical tool used is multiple linear regression with the number of individual visits as the dependent variable and six variables as independent variables, namely the travel cost, tourism objects, the age, income and distance variable. From this research, the economic value of Curug Sewu is obtained. It was also found that only two variables were statistically significant, they are the travel cost.

Dewo et.al. (2008) in his study on the development of ecotourism on Sempu Island, Malang Regency. This study aims to identify the characteristics and perceptions of tourists, the characteristics of the community, as well as setting the direction of development with a number of criteria and alternatives in a hierarchical framework by using AHP. In addition, Ngamsomsuke et.al (2011) developed an indicator of sustainable cultural heritage tourism which is presented in. This study was specifically conducted to develop appropriate indicators for sustainable cultural heritage tourism by implementing the Analytic Hierarchy Process (AHP). The results show that tourists' architectural character of tourist sites and regional design are two important indicators for tourists to cultural heritage tourism. Finally, Purnamasari et.al. (2005) conducted a Study on the Development of

Ecological-Based Nature Tourism Products in the Wana Wisata Curug Cilember Region (WWCC), Bogor Regency which was published in the Journal of Tropical Forest Management. In this study, the SWOT and AHP methods were used. With the AHP analysis, it was found that the priority of tourism products developed were waterfalls, natural scenery, camping, hiking, waterfall energy therapy, observing plants, observing animals, and outbound.

METHOD

The population in this study are all tourists on Air Manis Beach whose number is uncertain, so the sampling technique used is convenien sampling. By using this technique, the minimum sample size is 99 tourists, but in this study the number of samples used is 2 times the minimum sample size, so that results with higher precision can be obtained. After sorting the questionnaire including the completeness of its contents and the conditions for taking the sample, the questionnaires that are eligible to be processed are 180 questionnaire packages.

The sampling technique used in this study can be classified as purposive sampling. Sampling was carried out based on considerations that included: (a) The selected respondents were adults, at least 15 years old; The number of male and female respondents is maintained in a relatively balanced or equal number; (c) The distribution of respondents is divided equally between the beginning of the month and the end of the month. Furthermore, it is distributed between holidays (Saturday, Sunday or public holidays) and working days with a proportion of at least 60: 40; (d) Respondents from a group may only be taken by one person.

The survey was conducted by applying closed interviews based on a questionnaire. The questionnaire was built to determine the demand for Air Manis Beach ecotourism obtained by the method of travel costs, willingness to pay, and assessment of tourist objects. The questionnaire that was built contains five parts, namely: (i) information about the object of study and research objectives, (ii) motivation, desires, and activities of respondents, (iii) demographic characteristics of respondents, respondents' perceptions of tourism, and (iv) ratings of respondents towards tourism. attractions for environmental services for tourism. (v) Also supported by open questions for additional entrance ticket prices that are willing to be paid if tourism services increase.

The method used to determine the ecotourism potential of Air Manis Beach from the perspective of consumers or tourists, is the method of travel costs. The questionnaires that have been compiled and collected are then analyzed with the following functions:

$$QD = f (TC, Y, SOCECO)$$

where, QD is the number of tourist demand to Air Manis Beach using a proxy for the number of visits made by the respondent. In the travel cost method, tourism demand is mainly influenced by the total travel costs. Total travel costs include components of transportation costs, consumption costs, accommodation costs and various expenses made by each individual while in a tourist attraction. In this study, the determinants of Air Manis Beach tourism demand were expanded by adding the Y variable or respondent's monthly income, as well as socio-economic variables that contributed to the formation of the best model. Alternative socioeconomic variables include age, gender, education level, marital status. This tourism demand function is estimated using the least squares method of regression.

Furthermore, the contingent valuation method is used. The model formed in this study using the contingency valuation method assumes that visitors to tourism objects, will receive an offer of entrance ticket prices to maximize their utility, which can be described in the following equation (Hanemann, 1984 in Hakim, 2010; Cuhls, *et al.,* 2022)

$$V (1,Y − A; S) + \quad V (0,Y; S)+$$

where V is the indirect utility function, Y is income (monthly household income), A is the bid for the entrance ticket, S represents the socioeconomic characteristics of the individual or known as

demographic characteristics, as well as the presence of a stochastic component.

In this case, the willingness to pay (WTP) framework is used to obtain a measurement of individual surplus or individual equivalent surplus. Individual respondents are assumed to know their utility function, which is determined by income variables, whether or not there is improvement in tourism objects and individual demographic conditions. Meanwhile, other variables such as price, as a simplification, are assumed to be unchanged.

Furthermore, individuals who are faced with the choice of whether to accept or reject the market hypothesis offer level will have a probability (Pi), where the individual who will accept the ticket price offer can be expressed in the form of a logarithm or log-logit model. In this study, the perception method of ecotourism objects is also used. In this case, the level of consumer satisfaction with tourism objects includes infrastructure, attractions, and tourist choices measured using a questionnaire with a Likert scale. At the same time, open questions are asked about consumer expectations of Air Manis Beach ecotourism for future development policies.

RESULT AND DISCUSSION

Characteristics of respondents

Respondents who are tourists of Air Manis Beach ecotourism objects have characteristics as presented in Table 1 below:

Table 1. Description of respondent's characteristics

Characteristics	Amount	Percent
Gender:		
Male	92	51,1
Female	88	48,9
Age:		
16 -- 23	95	52,8
24 -- 29	51	28,3
30 –40	20	11,1
> 40	14	7,8
Education Level		
Not school	0	0
Primary School	1	0,6
Junior High school	14	7,8
Senior high school	44	24,4
Diploma	3	1,7
First degree	15	8,3
Second degree	101	56,1
	2	1,1
Status marital:		
Single	129	71,1
Married	51	28,3

Work:		
Civil Servant	18	10,0
Private employee	26	14,4
Entrepreneur	33	18,3
Informal worker	8	4,4
Housewife	8	4,4
College Student	73	40,6
Student	10	5,6
Others	4	2,2
Income per month (in million):		
< 1 million	95	52,8
1 - 1.999.999	36	20,0
2 - 2.999.999	15	8,3
3 - 3.999.999	24	13,3
4 - 4.999.999	5	2,8
> = 5.000.000	5	2,8
Family Income per month (in million):		
< 1 million	1	0,6
1 - 1.999.999	14	7,8
2 - 2.999.999	46	25,6
3 - 3.999.999	57	31,7
4 - 4.999.999	32	17,8
> = 5.000.000	30	16,7

Source: Data processed (2013)

Based on Table 1 we can see that most of them who visit air manis beach are male (51%,) aged around 16 – 23 (52.8%), their level of education is first degree (56.1%) with status is single (71.1%), where they are student (40.6%), with income less than 1 million (52.8%) per month and their family income around 3 million – 3,999,999 million (31.7%)

Demand behavior towards air manis beach ecotourism

The results of the study revealed a number of respondents' behavior in making requests for the Air Manis Beach ecotourism object. The behavior of ecotourism demand includes regional origin, distance from home to tourist objects, the demand or number of visits during the last three years, ways to come to tourist objects and their destinations as well as total transportation costs. Besides that, it can also be explored the length of time spent at Air Manis Beach, the number of alternative tourist attractions, and the desire to revisit the Air Manis Beach ecotourism object.

Area of origin and distance

Based on the area of origin of the respondents, shows that the majority of respondents come from West Sumatra. The number reached 166 people or 92.2 percent of all respondents. These results can reflect that the Air Manis Beach tourism market is still limited for tourists in West Sumatra. Economically, the size of the Air Manis Beach tourism market is still very narrow. Only 7.8 percent of respondents came from outside West Sumatra. Respondents from outside the Province of West Sumatra came from neighboring provinces, namely Riau as much as 3.3 percent, North Sumatra by 1.7 percent, and Jambi by 1.1 percent. The respondent's mileage to Air Manis Beach shows a logical result. Tourist behavior considers the distance to a tourist attraction. 67 respondents or 37.2 percent, had a distance of less than 20 km from their house to Air Manis Beach. Followed by 24.4 percent within 21-40 km. The distance that is getting further away, although it varies slightly, shows a tendency to get smaller. The number of respondents who traveled more than 250 km to Air Manis Beach was only 15 respondents or 8.3 percent. In sum, most tourism is from local visitors.

Number of visits of air manis beach ecotourism

Another important finding in this study is the demand for Air Manis Beach ecotourism. Demand for ecotourism with an indicator of the number of visits is divided into 2, namely visits in the last one year and the last three years. Respondents' visits to Air Manis Beach in the past year have intervals from 1 time to at most 10 times. Total visits from all respondents reached 430. So that the average number of visits was 2.39 times. The standard deviation is 1.86 and the variance is 3.4. During the last year during the survey, as many as 40.6 percent of respondents only visited once. Furthermore, 28.3 and 12.2 percent of respondents visited 2 and 3 times in one year, respectively. In fact, there are 4 respondents, or 2.2 percent who visit up to 10 times a year.

The number of visits will certainly increase if the time span is extended. This study also asked about the number of visits in the last 3 years. The results show that as many as 36 (20 %) and 40 respondents (22.2 %) visited 1 (one) and 2 (two) times. The highest number of visits reached 40 times which was carried out by 2 respondents. The total number of visits reached 885 times. When divided by the number of respondents, the average number of visits is 4.9 or 5 times.

The way of coming, number of groups and types of vehicles

Tourist behavior can be explored from the method used in visiting tourist objects. In this study, information was obtained that the majority of respondents came to Air Manis Beach with friends. The number reached 111 respondents or 62.5 percent. Furthermore, 31.1 percent of respondents came with their families and only 7.2 percent came with tour groups. Most tourists come with their family, peers, or co-workers. Their number is around 2 up to 40 people. The average number of groups is 5 people while the model number is 2 people with a frequency of 36.1 percent.

Efforts to develop tourist objects/destinations need to be supported by providing good infrastructure such as transportation. For this reason, this study also explores information about the types of vehicles used by tourists. The study found that the type of vehicle that was used the most to visit Air Manis Beach was motorbikes as many as 114 respondents (63.3 %). Followed by private cars by 21.7 percent, and rental/charter by 10 percent.

Findings on how to arrive can be related to the type of vehicle used. These results indicate that those who come to air manis beach consist of a small group. Only a few who come in a tour group and use official vehicles or charters. Then we can conclude that Air Manis Beach tourist attraction has not been part of the tour package organized by the travel agency.

Travel expenses

Travel costs consist of various components, namely: transportation costs, consumption costs, and costs for various purposes (such as cottage rental, toilet fees, documentation costs, and purchase of souvenirs). This research also explores information about transaction costs in the form of retribution which tend to be informal by the local community.

The total travel costs incurred by one respondent vary from the lowest of IDR. 15,000 to reach the highest IDR. 1,477,000 where the total travel costs of all respondents reached around IDR. 57,307,000. So that the average travel cost spent by each respondent is IDR. 318,372. The total travel costs by tourists are mostly in the lowest quintile with an interval of IDR. 15.000, - up to IDR. 309,999 (80.6). This result, as with the characteristics of the respondents, is caused by the large number of tourists who come from Padang, so it requires relatively cheaper costs. The grouping of travel costs shows that the travel costs classified as a medium are very small. Expenditure in the second quintile (IDR. 310,000 – IDR. 604,999) is only 2.8 percent, even travel costs in the third quintile are not by any respondent, and travel costs in the fourth quintile are only 1.2 percent. In fact, more expenditure in the fifth quintile (more than IDR. 1,195,000,-) reached 15 percent.

The results of the study reveal that the largest component of travel costs is consumption costs. Out of 180 respondents spent their travel costs for eating or drinking at the tourist attraction amounting to around IDR. 57.2 million to IDR. 38.8 million or 67.9 percent. While accommodation costs were spent around 6.3 percent of the travel cost, cottage rentals at 3.5 percent, the retribution is

reach 2 percent of the total travel costs. The components of travel costs are presented in detail in table 2 below.

Table 2. Components of respondents' total travel costs

Components of Travel Cost	Amount (IDR)	Percent
1. Transportation Cost	13.637.500	23,8
2. Consumption cost	38.860.000	67,9
3. Accommodation Cost		
a. Rent House	3.581.500	6,3
b. mat rental	2.035.000	3,5
c. Toilet fee	500.000	0,9
d. Documentation cost	143.500	0,2
e. Souvenirs	76.000	0,1
f. Others	432.000	0,7
4. Social Transaction Cost (Sumbangan/pungutan)	395.000	0,7
Total Travel cost	57.262.000	100

Source: Data processed (2013)

*The cost of consumption by t*ourists to Air Manis Beach is quite large because it reveals the average expenditure of respondents for individual consumption at the Air Manis Beach tourist attraction, which is IDR. 216.000,- With a note, this number does not calculate the consumption value brought by the respondent from home. The number of respondents who brought food/consumption from home reached 39 people or 21.7 percent. These results reveal a relatively more expensive tendency for food and drink prices at the Air Manis Beach tourist attraction so the average consumption cost is relatively high while encouraging tourists to prepare food from home or from outside the Air Manis Beach tourist attraction. These results also reveal the willingness of consumers to make consumption expenditures as a component of tourism demand or to derive environmental service benefits.

Alternative attractions and desire to revisit

The next research on the behavior of the demand for Air Manis Beach ecotourism is to survey a number of alternative tourism objects that respondents have and want to revisit. Alternative beach ecotourism objects include Padang Beach, Pasir Jambak Beach, Caroline Beach, and Bungus Beach which are all located in Padang. The alternative tourist attraction is relatively close to Air Manis Beach, except for Pasir Jambak Beach. Carocok Beach which takes place in Pesisir Selatan was also proposed as an alternative location, although its location is not in Padang, however, its transportation route is in line with Air Manis Beach. In detail, respondents' perceptions of alternative tourism objects are presented in Table 3 below.

Table 3. Distribution of alternative tourism objects

Alternative Attractions	Frequency	Percent
Padang Beach	81	45,0
Carocok Beach Caroline Beach	77	42,8
Bungus Beach	28	15,6
Pasir Jambak Beach	28	15,6
Others :	18	10,0
Teluk Bayur	7	3,9
Siti Nurbaya Area	3	1,7
Gandoriah Beach	3	1,7
Others beach	4	2,2
Others (Bukittingi, central market)	2	1,1

The results of the study revealed that the alternative tourism objects that were suggested by the

respondents were Padang Beach 45% and other beaches 2.2%. Respondents' statements about alternative tourism objects indicate that Air Manis Beach has relatively the substitute. However, Air Manis Beach environmental services can be complementary to a number of other tourist objects when integrated in a package or tourism development area. The results of the study imply a number of tourist objects can be integrated regionally in a tourist area with Air Manis Beach. The biggest potential is their location is relatively sided by side with the Siti Nurbaya Tourism Area and Teluk Bayur Harbor. It is also supported by a number of nearby attractions, namely Caroline Beach, Bungus Beach Area and Nirwana Beach. Even with Carocok Beach and the surrounding beaches located on the Pesisisr Selatan which are still in one transportation network route

This study also asking about the desire to return to Air Manis Beach in the future. This question can measure tourist satisfaction with the benefits of environmental services for tourism provided by Air Manis Beach. Interesting results reveal that 176 respondents or 97.8 percent stated that they would visit Air Manis Beach again in the future. Only 4 respondents or 2.2 percent said they did not want to revisit Air Manis Beach. These results reveal that Air Manis Beach has its own charm for tourists or at least by the respondents who are the sample.

The high level of desire to revisit implies the high potential of Air Manis Beach as an ecotourism object. This potential must be developed in the future. Its development can provide greater benefits for tourists as well as for the surrounding community and the government. This result is also a challenge in developing Air Manis Beach ecotourism. On the one hand, it reveals that the magnitude of the benefits of environmental services is felt by tourists. However, with the high cost of travel and the problem of accessibility and low promotion, especially for residents outside Padang.

Respondents' perception of tourism services

Perception of tourist attraction

This study also aims to know the perception of tourists toward the attraction of air manis beach. The results show that the largest tourist attraction is Batu Malin Kundang Site with an average score of 4.27 with an attractiveness index of 85.33 and the lowest is water sports with an average score of 3.83 with an attractiveness index of 75.

Table 4. Atraction of Air Manis Beach

Attraction	Total Value	Average Value	Index
Malin Kundang	768	4,27	85,33
View	744	4,13	82,67
Family recreation	750	4,17	83,33
Water sports	675	3,75	75,00
Pisang Island	689	3,83	76,56

Assessment of Air Manis Beach ecotourism services

The results of the study revealed many opinions about respondents' assessments. The respondent said that 15.6% strongly disagree and 49.4% stated disagreed about the number of trash cans being adequate. In addition, 43.4% of respondents stated that it was relatively easy to reach the Air Manis Beach location and 30.6% stated that it was relatively difficult to reach the location and 26.1 percent stated that they were neutral.

About Accessibility of transportation to Air Manis Beach is highly dependent on the subjectivity of the respondents. In fact, accessibility to Air Manis Beach has been supported by the availability of paved roads to tourist attractions. This condition underlies the respondents to state the ease of accessibility to tourist objects. But on the other hand, the condition of the asphalt road to the location is still relatively small, thus reducing the flexibility for multi-purpose vehicles when passing.

The condition of this road is complicated by the topography of the location so there are many climbs and bends. This argument may underlie respondents to answer the difficulty of accessibility to

tourist objects. These two conditions also explain the respondents who stated that they were neutral.

Table 5. Respondents' assessment of tourism object services

Service Items	Sangat tidak setuju	Tidak setuju	Netral	Setuju	Sangat setuju
Ease of reaching the location	10,0	20,6	26,1	37,8	5,6
The parking area is adequate	2,8	13,9	18,9	56,7	7,8
Adequate parking space management	7,8	40,0	23,3	25,0	3,9
Adequate number of toilets	7,2	35,0	33,9	19,4	4,4
The condition of the toilet is clean	7,8	33,9	39,4	16,7	2,2
Adequate number of trash cans	15,6	49,4	23,3	10,0	1,7
Prayers room are adequate	5,0	19,4	40,6	32,8	2,2
The condition of the prayer room is clean	5,0	16,1	43,3	32,8	2,8
Adequate number of gazebos	1,2	10,6	28,3	56,7	3,3
Many people sell souvenirs	1,7	17,2	38,3	37,8	5,0
Souvenir seller serves well	1,1	10,6	36,7	47,8	3,9
Map/leaflet information is adequate	6,7	48,3	26,7	16,7	1,7
Information on travel rules is adequate	6,1	47,8	31,1	14,4	0,6
Adequate number of security guards	6,7	38,9	33,9	18,3	2,2
Sufficient number of lifeguards	7,2	38,9	36,1	15,6	2,2

Services for tourists include the provision of social infrastructure, including prayer rooms and shelters (gazebos). Respondents' assessments of the prayer room facilities was neutral (40.6). As many as 35 percent stated that they agreed with the statement that the prayer room facilities were adequate, while the level of disapproval was 24.4 percent. Regarding the cleanliness of the prayer room, 43,3 stated that they were neutral. On the security aspect, 45 percent respondents said it was good, the number who disagreed reached 22.3 percent, while the neutral opinion was 32.8 percent. In terms of cleanliness, the service is lower than security. The number of those who agree is only 26.6 percent compared to those who disagree, reaching 55 percent, while those who are neutral are 18.3 percent.

Inductive analysis results

In this inductive analysis section, the results and analysis of the Air Manis Beach tourism demand function will be presented using the travel cost method and the willingness to pay function using the contingent valuation method. With these two methods, an economic evaluation of the Air Manis Beach ecotourism object can be carried out.

Economic valuation with travel cost method

In the travel cost method, the economic value of environmental goods as shared property is carried out by calculating the number of demand for these goods. The concept of demand for private goods is adopted. The difference is demand for environmental services for tourism is indicated by the number of visits to a tourist attraction in a certain period of time, usually during the last 1 year. For this reason, the travel cost method conducts a survey of visitors by asking the number of visits. In the travel cost method, the number of demand for an item is largely determined by the total travel costs required by each sample of tourists. The basic model in this method is that the demand for travel to a tourist attraction is a function of the total cost of the trip. The total cost of travel is a proxy for the price of environmental goods. Total travel costs reflect the total expenditures made by tourists to obtain or consume environmental services provided by an ecotourism object. The total cost of this trip includes transportation costs, consumption costs, and various costs incurred by tourists while at the tourist attraction.

Before performing a regression analysis with the least squares method, the first thing to do is to

estimate the curve to assess the more precise functional form of the regression model between the number of visits and travel costs. Using SPSS 17, curve estimation is done by comparing various estimates of functional forms including linear, quadratic, logarithmic, and exponential. The results are shown in Table 5.20.

Table 6. Comparison results between model and parameter estimation

Equation	Model Summary					Parameter Estimates		
	R Square	F	df1	Df2	Sig	Constant	B1	B2
Linear	.022	4.066	1	178	.045	2.596	.000	
Logarithmic	.019	3.499	1	178	.063	3.593	-.236	
Quadratic	.025	2.248	1	178	.109	2.433	.001	-1.094E-6
Exponential	.031	5.783	1	178	.017	2.077	.000	

The results of regression models show that the best equation is in the exponential form. In the exponential equation, the highest coefficient of determination is 0.031. This means that with the exponential functional form, the travel cost variable has a higher ability to estimate the number of visits to Air Manis Beach, which is 3.1 percent compared to other equations such as quadratic 2.5 percent. Likewise, the F-test value which has a significance value of 0.017 means that it is significant at the 95 percent confidence means that the cost of travel affects the number of visits.

This exponential form shows that this regression model is linear in parameters but non-linear in variables. For that, a variable transformation must be carried out. Consequently, the study conducted a number of tests by comparing the log-linear, semilog, and double-log models. The second step is based on considerations in expanding the model. Expansion of the model from the travel cost method, as well as the demand for private goods, the number of tourist visits is also influenced by tourist income. In this case, it is indicated by the average monthly income from tourists. For selected respondents who have not worked, this income is indicated by the average monthly expenditure

The next step is to expand the model to include socio-demographic variables that affect the number of visits. The selection of economic variables becomes an interesting challenge in using the travel cost method. Socio-economic variables have many alternatives including age, gender, education level, marital status, dependents. The diversity of use of socio-economic variables is an interesting challenge in finding the right model and function in explaining consumer behavior in making tourism requests. Social and regional characteristics as well as tourist objects greatly influence the considerations in the selection of social variables and demographic characteristics. Moreover, each variable also has a number of indicators.

Based on these three steps, the best models presented and discussed in this study are: (i) according to an exponential relationship, the number of visits is transformed into the natural logarithm (ln), (ii) the travel cost variable uses units of one thousand while the income variable uses the average monthly income interval, in order to obtain coefficient units that are easier to read and interpret, (iii) after conducting a number of simulations on various indicators for socio-demographic variables, the indicators that are judged to form the best models are gender and young age. The gender variable is a dummy variable, namely 1 for men and 0 for others. Young age variable is also a dummy variable, namely 1 for those aged less than 30 years and 0 for those aged the same or more than 30 years.

By using the eviews 6 software, the results of the multiple linear estimation are obtained as presented in table 5.21. The results of the multiple linear estimation using the travel cost method are the results of a test to see the effect of travel costs (TC), income (INC), gender (GEND), and age (MUDA) on the number of tourist visits to Air Manis Beach (Qd). The equation formed from these results can be written simply as

$$\ln Qd = 1{,}37 - 0{,}00026TC^{**} - 0{,}079INC^{*} + 0{,}202GEND^{**} - 0{,}231MUDA^{*}$$
$$(-2{,}21) \qquad (-1{,}90) \qquad (-2{,}06) \qquad (-1{,}74)$$

Table 7. Estimation results of multiple linear regression with travel cost method

Variable	Coefficient	Std. Error	t-Statistic	Prob.
TC	-0.000256	0.000115	-2.213696	0.0281
INC1	-0.078576	0.041256	-1.904591	0.0585
GEND	0.202001	0.098165	2.057769	0.0411
USIAMUDA	-0.231488	0.132947	-1.741205	0.0834
Adjusted R-squared	0.048820	S.D. dependent var		0.640900
S.E. of regression	0.625060	Akaike info criterion		1.925446
Sum squared resid	68.37248	Schwarz criterion		2.014139
Log likelihood	-168.2902	Hannan-Quinn criter.		1.961407
F-statistic	3.296834	Durbin-Watson stat		1.931590
Prob(F-statistic)	0.012370			

The classical assumption test is carried out so that the estimation results obtained are not biased. The results of the classical assumption test reveal that the model that is formed is free from all classical assumption problems including multicollinearity, heteroscedasticity, and autocorrelation. The results of the classical assumption test are presented in appendix 2. The estimation results that have been obtained are free from bias, so they can make accurate estimates. Based on these estimates, a number of factors can be interpreted that affect the number of tourist visits to Air Manis Beach. As will be stated in the sub-section of the following sub-chapter.

The effect of travel costs on the number of tourist visits

The cost of travel as a representation of the price of Air Manis Beach environmental services for traveling has a coefficient of -0.00026. That is, if the travel costs increase by a thousand rupiah, it will reduce the number of visits by 0.00026 times. The value of this coefficient is the same as every increase in travel costs by one million rupiah, which reduces the number of visits by 0.2 times. This is in line with the findings of Hakim et.al. (2011) and Salma and Susilowati (2004). Like the demand for private goods, the number of visits is the amount of demand for environmental services which will decrease as prices go up as reflected by the cost of travel. Then, increasing travel costs will reduce consumer satisfaction followed by reduced demand for the goods and services concerned, ceteris paribus. The implication of this finding for the development of the Air Manis Beach tourist attraction is to reduce the number of cost components including transportation costs, consumption costs, accommodation costs, and transaction costs. Reducing travel costs will increase the number of visits to Air Manis Beach.

The results of the previous study of the travel cost component revealed the largest cost component, namely the cost of consumption. Consumption costs can be reduced by arranging and supervising restaurants, or food and beverage vendors to make a price list for each menu, as well as by providing awareness to food and beverage traders to set reasonable prices that provide long-term benefits for them. Economically, the increasing number of tourists should also increase the economies of scale for traders in tourist attractions to set a smaller profit margin with a larger number of sales.

The Regional Technical Management Unit (UPTD) of Air Manis Beach Tourism Object and the local government can provide incentives for traders to set food and beverage prices fairly by setting shop rentals or retribution services. This policy shifts the beneficiary received by the local government from retribution income to the income of traders, which in turn also improves the regional economy. Furthermore, cost reduction can also be done by reducing transportation costs. The local government can do this by improving the public transportation network to Air Manis Beach which makes it possible for tourists to take advantage of public transportation services at a relatively low cost. Road widening and improving road quality can also facilitate access to Air Manis Beach which can save on transportation costs. At the same time anticipating the increase in transportation costs due to congestion or traffic jams. In an effort to reduce transportation costs, it can be considered to create a shorter transportation route connecting Air Manis Beach with the Siti Nurbaya area and Padang Beach.

In addition to this, the supervision and enforcement of various illegal levies in tourist attraction

areas by the local government can be an important action to reduce travel costs. A number of transaction fees on Air Manis beach, such as fees for wooden bridges made by residents to replace concrete bridges to the Batu Malin Kundang site. This reduction in transaction costs can at the same time prevent the emergence of a bad perception and image of the organization of tourism, as well as reduce psychological reluctance to visit again.

Effect of income on the number of visits

Tourist income greatly affects the amount of tourism demand. In this study, the estimation results for the income variable use the average income or expenditure indicator of the respondents in an interval or income group. In this study, it is calculated as 1 if the income is less than IDR. 1 million; 2 for an income of IDR. 1.000.000,- up to IDR. 1,999,999; 3 for IDR. 2 million to IDR. 2.999.999,- with an interval of IDR. 1 million 6 for income more than IDR. 5 million. The estimation results obtained a significant effect at the 90 percent confidence level. The direction of the relationship is negative at 0.079. This means that an increase in income to a higher income group actually reduces the visit by 0.08 times.

The results of this study can be explained by at least two theoretical reasons. First, the negative relationship between an increase in income and the number of tourism visits reveals that Air Manis Beach tourism services are classified as inferior goods. This finding places the position and image of Air Manis Beach is a cheap tourist attraction. Second, Higher income to a certain extent is obtained by the workforce by increasing the supply of labor through longer working hours. Consequently, these longer working hours sacrifice leisure time, including traveling. These results have implications for planning the development of Air Manis Beach as an ecotourism object. There are two strategies that can be chosen, namely making Air Manis Beach a massive or exclusive tourist attraction. The strategy of making Air Manis Beach a massive tourist attraction emphasizes efforts to attract as many visitors as possible with a relatively cheap entrance fee. However, this does not mean ignoring efforts to provide better and more diverse services and infrastructure, and tourist attractions.

This option is more feasible to take considering that Air Manis Beach's capacity for visitors is relatively large and so far it has not been optimal or has reached an economical scale. Air Manis Beach the site of the Legend of Malin Kundang has historical and educational values that have become the nation's cultural heritage. It becomes a public good so it is open to many tourists. Meanwhile, the choice to become an exclusive tourist attraction by limiting the number of visitors, including the expensive entrance ticket, is relatively not in accordance with the existing development pattern and provides a multiplier effect that may be relatively small for the surrounding community.

The effect of gender on the number of tourist visits

In this study, gender is a dummy variable, namely 0 for women and 1 for men. The gender variable takes into account that certain types of tourism demand have special segments. Demand for nature tourism tends to be more attractive to men than women. Especially tourism that requires greater physical exertion and higher risk, such as hiking, caving, or other adventures in nature. The test results show that the gender variable has a significant effect on the 95 percent confidence level. The sign of the coefficient looks positive with a coefficient of 0.2. This means that the number of male tourist visits is 0.2 times more or one-fifth more than women.

The ecotourism object of Air Manis Beach is relatively more visited by men than women. Accessibility is quite difficult with narrow roads, climbing and winding is a general characteristic of natural ecotourism, which is a relative challenge to attract or even not become a major obstacle for men compared to women. To increase the number of visits to Air Manis Beach, especially for women, a number of policies that might be considered are easier transportation accessibility, security officers, and facilities that provide security and comfort such as shelter, safer tourist attractions such as the beach bikes, and toilet facilities (Lee, *et al.,* 2022).

The effect of age on the number of tourist visits

In this study, it was also found that the indicator that gives the best estimation results is to use a dummy variable, namely 1 for tourists aged less than 30 years and 0 for at least 30 years and over.

Travelers aged less than 30 years are classified as young. This age is usually characterized by social work as a student or student. Apart from being students or college students, they tend to be fresh graduates. If you work or get married, you tend to be less well-established. This is somewhat different from the social, demographic, and psychological conditions of the population aged at least 30 years who are relatively more secure economically and in marriage. The study obtained interesting findings that young age has a significant effect on the 90 percent confidence level. The interesting thing is that the negative sign on the resulting coefficient is 0.23. This finding reveals that young tourists have 0.23 times lower number of visits than residents who are relatively older or at least 30 years old.

The site of Malin Kundang is an attraction for residents who are relatively older than young people to exercise or adventure on Air Manis Beach. As a family tourism destination, tourists who are older are more likely to carry out historical-cultural activities as well as to instill values. The policy implication of the results of the research is increasing the importance of determining the positioning of the Air Manis Beach tourist attraction in the direction of regional tourism development and planning. The study shows that air manis beach visited by residents aged at least 30 years, has a relatively low level of income so it was classified as an inferior product. Then, efforts to develop Air Manis Beach are in accordance with its potential and the behavior and characteristics of its tourists. Once again, it should be noted that with its sampling system, the results of this study can provide an initial indication and lead to in-depth discussions to optimize the potential and develop the Air Manis Beach tourist attraction (Sengel *et al.*, 2022).

Economic valuation of Air Manis Beach ecotourism with the contingency valuation method

The economic value provided by environmental services for tourism can be done using the contingent valuation method. First, the respondent's perception of the entrance ticket price that was valid at that time was IDR. 5000,-.. The options are cheap, medium, and expensive. Furthermore, the contingency method is applied. This method is done by providing a hypothesis about the condition of the Air Manis Beach tourist attraction. The market hypothesis is built by suggesting a scenario design for the development of tourism objects by improving services, facilities, and infrastructure as well as providing tourist attractions. Considering the high cost of this, tourists are asked for approval of the consequences in the form of an increase in ticket prices. Then the value of offers from tourists is also explored for additional ticket prices that are willing to be paid to improve tourism services.

As many as 133 respondents or 73.9 percent of respondents answered moderately. The number of respondents who answered cheap as an indication of the amount of utility they received compared to the ticket price was 20.6 percent, while those who assessed the price of admission as expensive when compared to the utility they got amounted to only 5.6 percent. After being asked about price perceptions, Respondents' level of agreement with the market hypothesis that has consequences for the increase in entrance ticket prices was found that the attitude of respondents who agreed to the increase in entrance ticket prices amounted to 105 respondents or 58.3 percent. On the other hand, with relatively similar figures, the number of respondents who disagreed with the increase in ticket prices was 75 or 41.7 percent (Kim *et al.*, 2021).

For respondents who agree with the increase in ticket prices, the question is continued to the main part of the contingent valuation method, namely the additional ticket prices that are willing to be paid for the development of the Air Manis Beach tourist attraction. The results show the additional distribution of ticket prices willing to be paid by tourists ranging from IDR. 1,000, - up to IDR. 15.000,-. The total amount of willingness to pay an increase in the price of admission is IDR. 498,000 or the average of every tourist who is willing to pay is IDR. 4,569,-. Furthermore, the mode value of the additional ticket price is IDR. 2,000 as many as 33 or 30.3 percent of the respondents are willing to pay extra. The value of the willingness to pay is quite large, namely an additional IDR. 3,000 as many as 20 respondents. In fact, there are 14 respondents who are willing to pay additional fees IDR. 1000 and 3 people are willing to pay an additional fee IDR. 15,000 of the ticket price during the survey, which is IDR. 5,000 per traveler (Hena, et al., 2021).

Based on the willingness to pay, the amount paid by all respondents is the total ticket price (IDR.

5,000, - x 180 respondents) plus an additional price that is willing to be paid for 498,000, which is IDR. 1.398.000,- The average willingness to pay tourists for each visit if the service and infrastructure at the tourist attraction increases are IDR 7.767,-. Thus, the consumer surplus for each visit is IDR. 2,767.

CONCLUSIONS

Based on the characteristics of the respondents, it can be concluded as follows: (i) tourists who visit Air Manis Beach are dominated from Padang; (ii) the average number of visits by respondents to Air Manis Beach is 5 times during the past year; (iii) more tourists travel with friends and family rather than tour groups. While the types of vehicles used are mostly motorbikes and private cars; (iv) The total travel costs of 80.6 are at intervals of IDR. 15,000,- up to 309,999,-. This component of travel costs is mainly for consumption and transportation costs. Only a small part is for accommodation, the other part is for transaction fees. (v) alternative tourist attractions other than Air Manis Beach are Padang Beach and Carocok Beach, next to Teluk Bayur port; (vi) almost all respondents reaching 97.8 percent want to visit Air Manis Beach again in the future; (vii) respondents' perceptions and assessments of tourist attractions show that the Malin Kundang site is still the main attraction. Another tourist attraction at Air Manis Beach is the beauty of the scenery, family tourism destinations, and Banana Island. ; (viii) Tourist attraction has not been supported by adequate services and infrastructure, both in terms of cleanliness (trash cans and toilets), security (security personnel) as well as transportation infrastructure (roads and parking) and information; (ix) the tourist attractions desired by respondents are massive and inexpensive, such as beach volleyball courts, control towers, children's playgrounds, and relaxing bicycles and beach soccer fields.

The results of the inductive analysis using the travel cost method found that travel costs, income, gender, and young age have a significant effect on determining the number of tourist requests. The partial test also revealed that all independent variables had a significant effect on 5 percent or 10 percent. Every one million increase in revenue reduces the number of visits by 0.2 times. Interestingly, the increase in income actually reduces the number of visits, which indicates that Air Manis Beach is an inferior good. The gender variable found that men had a one-fifth times higher demand for tourism than women. Another interesting result, residents aged at least 30 years actually have a higher demand than those aged less than 30 years which indicates Air Manis Beach is a family tour.

In terms of willingness to pay, more respondents stated that the price of admission during the survey (IDR. 5,000) was moderate. Based on the market hypothesis, respondents who agree to the additional price of admission to improve services and infrastructure in the Air Manis Beach tourist attraction area are 58.3 percent of respondents, while those who disagree are 41.7 percent. The total additional increase that is willing to be paid is IDR. 498,000 or an average of IDR. 2,767 per respondent.

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