

Tourists' Willingness to Pay for Destination Quality Improvement in Komodo National Park

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Abstract --This study is to scrutinize the willingness to pay (WTP) and willingness to contribute (WTC) in helping the conservation of Komodo National Park. In addition, this research is also to determine what are the factors affecting WTP and WTC of the tourists. Descriptive statistical analysis techniques are used to determine the value of WTP and identify their WTC for conservation. Cross-Tab data analysis techniques with Chi - Square test analysis were applied to determine the factors affecting WTP and WTC. The mean of WTP values obtained for domestic travellers is <Rp. 200,000 while foreign tourists amounted to < US \$ 20. 66% of tourists are willing to participate in conservation. The result showed that the factors that have significant relevance to the WTP tourists are last marital status and occupation, whereas factor that has been linked to the WTC of tourists is age of the tourists.

Keywords --Willingness to pay, willingness to contribute, Komodo National Park.

1. Introduction

Indonesia is the largest archipelagic country in the world with abundant natural resources with 17,508 islands, comprising five large islands and small islands with vast land and sea areas and diverse ecology. Compared with other foreign exchange earning sectors, tourism is a source of foreign exchange earning which occupies the fifth position after oil, coal, rubber and apparel.

Government of Indonesia under the leadership of Mr. Joko Widodo and Mr. Jusuf Kalla make the tourism sector as a locomotive of national economy. The steps taken by the government especially the Ministry of Tourism in realizing the policy is through the determination and development of destinations throughout Indonesia to be able to hook the number of tourists as much as 20 million by the end of 2019. In 2016 the government has set 10 priority tourist destinations, including Labuan Bajo, Borobudur, Mandalika, Bromo-Tengger-Semeru, Thousand Islands, Toba, Wakatobi, Tanjung Lesung, Morotai, and TanjungKlayang. Ten priority tourist destinations are expected as the right step for tourism acceleration in order to reach the target of tourist visits in 2019 (www.kemenpar.go.id).

Labuan Bajo as one of the favored destinations is the capital of West Manggarai Regency, East Nusa Tenggara Province. The city has a very strategic geographic location, since Labuan Bajo is located in the western part of Flores Island which is the entrance of the region from the western part. Labuan Bajo is surrounded by a cluster of small islands with seaports and natural tropic scenery, especially during sunset. Labuan Bajo is also an ecotourism-based tourist destination.

One of the attractions of Labuan Bajo based on ecotourism since 1984 is Komodo National Park (KNP) has been made as a world-class natural heritage by UNESCO. The area became the original habitat of the endemic species of Indonesia is Komodo (*Varanus komodoensis*), the largest lizard in the world that is currently protected its existence. The existence of the Komodo dragon is highly protected internationally because it is the only ancient reptile that can survive until now whose original habitat is found only in KNP.

The increase in the number of tourists showed an increase in the popularity of tourist destinations which is certainly a good thing. However, on the other hand an increase in the number of such visits also creates their own

concerns, which may reduce the ability of the park to carry out its primary function as a conservation area. Loss of biodiversity is becoming an increasing global concern (Pyne, 2013). The decreasing of the main function of KNP as a conservation area is indicated by the decrease of population of Komodo dragon. In 1981, Walter Auffenberg conducted a study that found that the population of the Komodo dragon was estimated at 7,213 in KNP. Then in 2014 research on the number of Komodo dragons in KNP conducted by Maria R Panggur, S.Hut, reported that the population of dragons in KNP is estimated to number 5,933 tails. This phenomenon requires KNP to re-prioritize its main function as a conservation area other than as a tourist destination.

Conservation efforts require a high cost. Therefore it takes a variety of funding sources to do these conservation activities. Various sources of funding for the conservation of the KNP can come from the government and tourists who visit the tourist destination. This is an effort to educate and build awareness of tourists on the conservation value of KNP, which can be realized in the form of contributions in the form of admission and donation. Revenue from such a fee could also be used to improve visitor interpretive facilities and educational programs (although some visitors may not need or want such programs) that could further strengthen conservation objectives. The money could also be used to purchase land/forests (Tisdell & Wilson, 2003).

Currently KNP impose different pricing policies for domestic and foreign tourists. This different admission pricing policy is based on Government Regulation No. 12 of 2014 on Types and Tariffs of Non-Tax State Revenue (PNBP) applicable to the Ministry of Forestry. Under this policy, foreign tourists are required to pay Rp. 150,000 per person, while domestic tourists are only required to pay Rp. 5,000 per person. The admission price of KNP is still relatively cheap compared to other national parks in Indonesia. A profound understanding of visitors' perceptions regarding environmental management practices will further assist national park managers in improving the management thereof and educating tourists about environmental issues and best practice behaviour. Tourists are seen as significant role-players in terms of their contribution to environmental management in national parks (De Witt, 2015).

Therefore, research on willingness to pay needs to be done with goal (1) to identify the value of WTP (willingness to pay) tourists in the form of admission to KNP (2) to identify WTC (willingness to contribute) towards the effort of Conservation of Komodo dragons in KNP (3) to determine factors that have relation to willingness to pay and willingness to contribute in conservation efforts in KNP.

2. Literature Review

National park like other environmental resources and public goods used by humans can benefit in many different ways. Those environmental resources have many functions relating to the ecological functions. They also offer recreational resources to everyone who visits this park. National parks which are offered as ecotourism sites can enhance national income, and have economic impacts to society around the area of national park. Then, it can make up the national economic growth. A strategy that could be formulated and implemented by the government and the private sector in managing the national park that would combine both the opportunity and challenge is by getting revenues from the use of the resources by charging entrance or user fees (Shamsudin, et. al., 2009). National parks were established primarily to conserve and enhance natural scenery, wildlife, and cultural heritage (Kaffashi, 2015). The economic valuation plays a key role in the measurement of damages from ecosystem degradation (Bal & Mohanty, 2014). By charging visitors an economically viable entrance fee to nature based ecotourism sites is one of the promising options that would curtail the problem of fund inadequacy for conservation in many destinations (Adamu, 2015).

According to Pearce (1994), willingness to pay is an individual's willingness to pay for an environmental condition (an assessment of natural resources and natural services) in order to improve the quality of the environment. WTP is calculated based on the ability of each individual or society to pay or spend money in order to improve environmental conditions in accordance with the standards it wants. This willingness to pay is based on the consideration of the costs and benefits that the customer will receive. In this case, the WTP is the value of the potential utility of natural resources and environmental services. Samdin et.al. (2010) stated that the most important recent issue faced by the national parks is, it's inappropriate entrance fees. This creates several problems in parks; the most common is a lack of income generation. Sources of information such as knowledge of visitors' profile, trip characteristics, and paying characteristics are important for any development plan at protected areas and national park. The data on visitor profile is useful in identifying target groups, so that the relevant authority can develop more specific guidelines and plans in promoting and marketing. Willingness to Pay (WTP) is routinely identified through

a questionnaire-based approach, and has been used as a guideline to develop an efficient pricing in protected areas (Cameron, 1988). Examining how visitors recreate in parks, the financial support visitors are willing to bestow upon parks, and the relationship between these two factors, may help park managers improve facilities and services under their direction. Park managers may also be able to precisely tailor the opportunities they offer to all segments of the population (Whiting, 2011).

3. Methodology

Analysis technique in this research is Descriptive Statistic Analysis. Descriptively the data are analysed in the form of cross table analysis and the results were described in accordance with research objectives. The total respondents were 300 people. The descriptive statistical analysis method is used to identify the value of willingness to pay of respondents and the value of willingness to contribute towards conservation of the park. The data source used is the primary data in the form of interviews and questionnaires. The data collected in this study were analysed inferential statistically using Chi- Square method, to identify the factors that influence the willingness of tourists to pay. The factors were based on demographic of the tourists.

4. Results and Discussion

Profile of Tourist in Komodo National Park (KNP)

Respondents of domestic tourists who visited KNP came from various provinces in Indonesia. Most of the respondents came from East Nusa Tenggara 19.3%, followed by Bali 19.3%, Jakarta 10%, East Java 9.3%, West Java 7.3%, and the rest came from Central of Java, Kalimantan, Sumatra and West Nusa Tenggara. This proves that the interest of local tourists to visit KNP is considered quite high. While foreign tourist respondents were dominated by tourists who come from Europe, which is equal to 70.7%. Tourists who come from other than Europe are American 16.7%, Asia 2.7%, and Australia is 10%. It can be concluded that the market share of tourists in KNP are tourists who comes from Europe.

Most of the domestic tourists who come to KNP are dominated by tourists aged from 18-25 years old and 26-35 years old, with the percentage of both groups are 44% and 38.7%. This indicates that domestic tourists from the younger age group are larger than the old age group. Therefore, the market share of tourists to KNP is a young traveller. Furthermore, the male tourists dominated with a percentage of over 62%. It can be concluded that tourism activities in KNP a more favoured by men. More domestic tourists are still single with a percentage 64%, with the last education level of more than 58.7% are graduates of bachelor and high school 31 %. The type of work of domestic tourists who come to visit the KNP varied. 34% are employee, professional 24.7%, students 15.3%, self- employed 13.3%, and the rest are civil servants and housewives. Annual income level is at most <20 million rupiah with 48%.

Foreign tourists who come to KNP are also dominated by tourists from the age group 18-25 years (33.3%) and the age of 26-35 years (46%). It also shows that the interest of foreign tourists from the young age group is greater than the old age group. Therefore, the market shares of foreign tourists to KNP are young traveller. Similarly with domestic tourists, foreign tourists who visit the KNP are more of male tourists with 52%, but also many tourists who visited are females. Hence, can be concluded that tourism activities in KNP for foreign tourists are preferred by both men and women, with single of marital status is 68%, and the last education level are 38% with bachelor degree, 24% graduated high school, 23% have a master degree, and 12% hold doctoral degree. This shows that some tourists who visited the KNP have a relatively high level of education. Based on the type of work, foreign tourists who come to KNP are from various fields, but dominated by professionals 52.6%, business 12.7%, students 10%, with varying levels of income.

The characteristics of domestic tourists who visit based on the number of visits to KNP in the last 3 years, the first time tourists visited 64.7%, who visited twice 12.7%, and 10% for those who visited more than three times. The largest percentage of purpose of visiting destinations was 'for holiday' with 88.7%. Based on sources of information obtained on KNP, the largest source of information is through family/friends with a percentage is 48%, internet 26%, and social media 14.7%. Based on travel companions chose to travel with, friends was 58.7%, visited with family was 20%, with group 14.7%, and 6.7% chose to visit alone. The decision maker visited to KNP, 48.7% was own decision, by friends 27.3%, by the family 14.7%, and the company 9.3%. The cost of tourists to visit under Rp.

1 million 38.7%, from Rp. 1.1 million to Rp. 2 million 24%, Rp. 3.1 million to Rp. 4 million is 22.7%, and Rp. 2.1 million to Rp. 3 million 14.7%. The duration of visit in KNP under 5 hours 57.3%, visit time 5-10 hours 26%, over 15 hours 10.7%, and 11-14 hours 6%.

As for the characteristics of foreign tourist visits, who visited the KNP for the first time 90%, the second time is 6.7%, and who visited more than 3 times 3.3%. The greatest goal is for a vacation is 92%, for photography 4%, 2.7% for learning, and exercise is 1.3%. Based on information sources before visiting KNP, the most information from the internet 38%, from family/friend/relative 31.3%, social media 7.3%, media such as television is 6.7%, by travel agent is 6.7%, book is 5.3%, from magazine is 1.3%, and from other sources is 3.3%. Based on travel companions to KNP with friends is 54%, alone 22%, with family 20%, The rest travel with group is 4%. Based on making a decision to visit KNP, by own decision 74%, by family 9.3%, by friends 14.7%, and by company is 2%. The cost of preparing for a visit is less than US \$ 200 39.3%, US \$ 201 - US \$ 400 is 30.7% US \$ 401 - US \$ 600 17.3%, and more than US \$ 600 12.7%. The length of visit in KNP less than 5 hours was 38.7%, 5-10 hours 10%, then long visit 11-14 hours 8.7%, more than 15 hours 42.7%.

The willingness to pay (WTP) and willingness to Contribute (WTC) in helping conservation of KNP

For domestic tourists, more than half of respondents stated willing to pay more, with a percentage of 96.7%. The availability of domestic tourist to pay more than entrance ticket to KNP most respondents choose to pay 'lesser than Rp. 200.000'. This is probably due to the market share of KNP is from the young age group who have not had a job and fixed income. The main reason of domestic tourists who do not want to pay more is because conservation is the responsibility under the auspices of the government. While foreign tourists amounted to < US \$ 20 or do not want to pay more than the entrance fee that has been set by the KNP. More than half of the total respondents (67.3%) said they did not want to pay more.

Domestic tourists' willingness to contribute (willingness to participate in conservation) is 77.3% of respondents said they would participate in conservation. This means the level of concern of domestic tourists towards conservation is high. In addition few respondents who declared do not want to participate in conservation, which are 34 respondents. While foreign tourists, 54.7% said they wanted to participate in conservation efforts in KNP. It also shows that the level of awareness of foreign tourists on conservation is quite high.

Domestic tourists have willingness of to contribute in conservation efforts in KNP, 63.3% by donation, and the rest refuse to donate. This is because not all respondents have high income. Nevertheless, as many as 13 respondents said they wanted to donate every year to the KNP. 55.3% foreign tourists said they are willing to contribute by donation in conservation efforts in KNP, and the rest refuse to donate, 81 respondents said they wanted to donate only every time they visiting KNP, and 2 respondents stated that they wanted to donate every year to the KNP. The reason of foreign tourists do not want to donate are because of many confusing rules, it is not time to donate, it is included in the entrance ticket, distant residence, they do not have money to donate, and there is the opinion that nature does not require intervention of human.

Regarding the sector that is trusted to manage the funds by domestic tourists, respondents trust the government and local communities more. Nevertheless, for foreign tourists, the sector that is trusted to manage conservation funds, the respondents trust the local community and NGO more.

The factors affecting WTP and WTC of tourists

The relation of the age of tourists, according to the results of chi-square testing, domestic tourists have significant relation to the variable of domestic tourists desire to pay more, as well as for foreign tourists. While the variable of the tourists desire to participate in conservation, the result to domestic tourists expressed a significant relation. However, for foreign tourists, there was no significant relation to the variable of tourists desire to participate in conservation. For the variable 'desire to donate', there was no significant relation, both for domestic and foreign tourists.

The relation of marital status of tourists, domestic tourists have no significant relation to the variable of tourists' desire to pay more, but the result is different on foreign tourists. Marital status has a significant relation to the variable of tourists' desire to pay more. Against the variable soft tourists' desire to participate in conservation activities, the results of chi-square testing between the marital status of domestic tourists and foreign tourists have no significant relation, similarly result for the variable of tourists' desire to donate.

For the relation of income per year of tourists to the willingness of tourists to pay more, for domestic and foreign tourists equally have no significant relation. Likewise, the variable of the tourists' desire to participate in conservation and the variables of tourists desire to donate.

The linkage of last education to the variable of tourists' desire to pay more, domestic and foreign tourists showed no significant relation towards this variable. Similar results were obtained with the variable 'desire to participate' in conservation and the variables of 'tourists' desire to donate'.

For tourists' occupation on the variable of 'desire to pay more', domestic tourists claim to have no significant relation. Nonetheless, foreign tourists have significant relation. Against the variables of 'desire to participate in tourism conservation activities', domestic tourists have no significant relation. Analogous test results were obtained on foreign tourists. The same result also occurs in the variables of 'desire to donate in conservation efforts' for domestic and foreign tourists.

5. Conclusion and Recommendation

Based on the exposure to the above discussion, it can be concluded that the amount of WTP earned for domestic tourists is <Rp 200,000 (meanwhile the entrance fee is Rp 5000) while for foreign tourists <US \$ 20 (currently entrance fee is Rp 150,000). Tourists both domestic and foreign are also willing to participate in conservation efforts in KNP. The willingness of tourists to participate in KNP conservation activities can be in the form of a donation.

Not all demographic factors of tourists have significant relation to willingness to pay and to the willingness of tourists to participate in the conservation (willingness to contribute). Factors that have significant relation to willingness to pay are age factors for both domestic and foreign tourists, and marital with employment factors for foreign tourists only. While the willingness of tourists to participate in the conservation (willingness to contribute), only the age factor was significant for domestic tourists.

Based on the above conclusions, there are several suggestions. First, the determination of a more rational admission rates for both domestic and foreign tourists. Second, increasing visitors' trust in conservation fund management through a more transparent management by involving stakeholders such as communities and NGOs. Third, publicize conservation programs and report on progress to demonstrate the sincerity of managers in maintaining the sustainability of KNP. Lastly, is establishing conservation programs that involve visitors directly to enhance their sense of responsibility and concern according to the demographic factors of tourists.

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