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The Willingness to Pay for Beach Recreational Facilities in Malaysia

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ABSTRACT

The tourism sector plays an important part in Malaysia's economy. It includes beach and recreational tourism. However, most recreational beaches in Malaysia do not impose an entrance fee on visitors. Depending on government funding to maintain recreational beach facilities is not the best option for the future. Therefore, funding directly from visitors is needed to help cater for beach maintenance costs. Based on this, it is crucial to understand how much visitors are willing to pay for the recreational use of beaches, as any money collected could be used to help to improve facilities and services at beach areas. This study investigated visitors' willingness to pay for recreational beach facilities and has provided policy recommendations for better management of tourist facilities and services in the future. Teluk Kemang beach in Port Dickson was chosen as the case study location. This study applied the Choice Experiments (CE) method, and the model used was the Conditional Logit (CL) model. This research used four attributes: amenities, recreational facilities, cleanliness, and entrance fee. The CL results revealed that visitors were willing to pay for good amenities and cleanliness, with values of RM2.07 and RM2.43, respectively. Therefore, it was discovered that it was practical to charge an entrance fee to cover improved maintenance of beach facilities.

JEL Classification: Q51, Q57

Keywords: Tourism; Recreational beach; Facilities; Willingness to pay; Choice Experiment

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INTRODUCTION

Tourism is considered a major sector that contributes to Malaysia's economy. Over the years, the number of tourists visiting Malaysia has kept increasing. Campaigns, such as 'Malaysia Truly Asia', 'Fascinating Malaysia', 'Naturally More' and 'Celebrating 50 Years of Nationhood', have been promoted and organised. These campaigns have stimulated both the number of tourists arriving in Malaysia and domestic tourism. Tourist receipts have increased from RM82.1 billion in 2016 to RM86.1 billion in 2019 (Tourism Malaysia, 2021). However, in 2020, due to the COVID-19 pandemic, tourist receipts significantly dropped to only RM12.7 billion.

The World Tourism Organization (UNWTO) (2017) stated that Malaysia was ranked sixth among the most visited countries in Asia. Meanwhile, Malaysia ranks as the second most visited country after China in South East Asia, making Malaysia a top choice for tourism. Malaysia is also famous for its white sandy beaches, which are the main attraction of the beach tourism sector. Environmental amenities and features are indeed decisive in the selection of tourist destinations (Badariah et al., 2017)

According to Marzetti et al. (2016), every year, beaches worldwide receive millions of visitors for recreational activities, such as; camping, swimming and surfing. As the provider of environmental goods and services, the coastal ecosystem is important since it generates the well-being of the local people and stimulates socio-economic development (Hattam et al., 2015). More than half of visitors are keen on sun, sea and sand (3S) destinations making beaches a major attraction, and a pristine beach is one of the five main choices for tourists (Zielinski et al., 2019). Therefore, the preservation and maintenance of beach areas are important to ensure that their benefits can be continuously delivered to local people and countries.

Since beaches are open space areas exposed to the continuous arrival of tourists without limits, overcrowding and the excessive use of recreational beach facilities remain challenging problems. Beach facilities sometimes cannot cater to the high demand from visitors. Overcoming this situation requires proper management plans from responsible bodies. Concerns related to the management and regulation of the recreational value of beaches worldwide increased a few decades ago when beaches first began to be perceived as places for relaxation and recreation (Pena-Alonso et al., 2018). Consequently, many researchers have since addressed this management issue (e.g., Williams and Micallef, 2009; Ariza et al., 2010; Botero et al., 2014; Lozoya et al., 2014; Kelly et al., 2018; Mota and Pickering, 2021).

Management funds to maintain and upgrade public facilities come typically from central and local governments. However, budgets are often limited and insufficient to cover maintenance costs, let alone improvements. Thus, other methods should be considered to raise funds for the maintenance and improvement of public facilities. According to Willis (2003), the introduction of entrance fees was considered appropriate for public areas to defer increasing maintenance costs when public funding was limited. The pooled entrance fees at public spaces would be hypothecated for administration purposes to provide better-quality visitor facilities.

In addition, awareness among beach visitors needs to be enhanced, as everybody is responsible for taking care of such public spaces. It is also crucial for beach management to ascertain what facilities should be upgraded from visitors' viewpoints. The choices and preferences of visitors are vital information that reveals a particular facility's importance in making budget allocations more functional. A public facility's future requirements cannot be fully met without understanding its users' preferences and expectations (Vaz et al., 2009).

Therefore, this study conducted a survey using a questionnaire concerning beach facilities with the participants being visitors to Teluk Kemang beach. The objectives of this study were twofold; 1) to examine the general preferences for tourist facility attributes at Teluk Kemang beach and 2) to examine how much the public was willing to pay to improve Teluk Kemang beach's tourist facility attributes. The results from this study will be helpful for policymakers in designing better and improved provision of beach facilities.

LITERATURE REVIEW

Outdoor recreation research has provided economists with tools for economically evaluating natural resources in recreational use. These tools, created in response to natural resource management issues, have been used to quantify the benefits of non-market goods, such as; national parks, dams, sport fisheries, lakes, and other natural resources. Hence, this review has concentrated on the methods and studies used to estimate the economic value of recreational beach activities. A non-market valuation can determine the economic value of goods and services not traded in traditional markets. Travel cost has been the most commonly used non-market valuation method in beach valuation studies (Ariza et al., 2012; Prayaga, 2017; Zambrano-Monseratte et al., 2018). Contingent valuation (Lindsay et al., 1992; Bishop et al., 2011; Dribek and Voltaire, 2017; Choi et al., 2021) and choice experiments (Beharry-Borg and Scarpa, 2010; Peng and Olsen, 2017; Ardeshiri et al., 2019) have also been popular non-market valuation methods.

Existing literature on outdoor recreation demand analysis for beach services has been divided into two major research streams. The first describes research that calculates beach access's recreational value as a result of a change in a site's characteristics related to water quality (Beharry-Borg and Scarpa, 2010; Peng and Oleson, 2017). The second stream of research has focused on characteristics that are not directly related to water quality. This second stream has been subdivided further into two sections. The first describes the recreational value of beach access as a result of changes in site quality characteristics unrelated to water quality. Among the studies in this field are congestion (McConnell, 1977) and beach nourishment (Landry et al., 2003; Schuhmann et al., 2016).

The second determines an economic value for beach access but does not directly relate to a site's quality attributes (Parsons et al., 2000). For example, Matthews et al. (2018) used CE to investigate individuals' recreational visits to New Zealand's Coromandel Peninsula beaches. Every beach has a unique mix of attractions with potentially complex exchange patterns. According to the findings, a competing destination and an agglomerating choice model, with multiple ease of access variables for each attribute, comprised the best fit.

The study described in this paper falls into the second of the categories mentioned above, focusing on characteristics that are not directly or completely related to water quality. Although CE has gradually become the dominant method in environmental economics for studying the value of multi-attribute resources, limited studies have concentrated on beach recreation's quality of recreational facilities.

In Malaysia, the use of CE to value outdoor recreation has generally been limited to non-beach-related recreation. Most of the studies have focused on marine parks (e.g. Yaacob, 2009;), public parks (e.g. Shuib et al., 2006; Kaffashi et al., 2015; Hasan-Basri et al., 2015; Hasan-Basri and Karim, 2016; Mohamad et al., 2018; Mohamad et al., 2020) and protected areas (e.g. Othman et al., 2004; Hassan et al., 2018). For example, Hasan-Basri et al. (2015) used CE to estimate the willingness-to-pay (WTP) for recreational attributes of public parks in the city centre of Kuala Lumpur, Malaysia. The result from this study revealed that the most favoured attribute of parks in Kuala Lumpur was recreational facilities, with WTP values ranging from RM3.25 to RM39.96. The results indicated that the community would pay up to RM40.00 per visit to improve the attributes.

To the best of this study's authors' knowledge, research on beach-related outdoor recreation remains limited. Thus, the present study adds to the existing body of literature in two ways:

(1) Using a choice experiment, this study has provided valuation estimates for four attributes associated with beach recreation (amenities, recreational facilities, cleanliness, and entrance fee), which have not previously been undertaken in Malaysia.

(2) The study's findings will be useful in providing policy implications for attributes related to improvements in the quality of recreational beach facilities.

STUDY DESIGN AND IMPLEMENTATION

Negeri Sembilan, Malaysia, is well-known for its traditional Minangkabau customs and culture. According to the Tourism Malaysia 2017 annual report, Negeri Sembilan was one of Malaysia's five top-visited states, with 5.34 million domestic tourists in that year (Tourism Malaysia, 2019). In addition, the state is famously known for its beautiful beaches, especially Teluk Kemang Beach, located in Port Dickson. It has been reported that the beaches in Port Dickson, especially Teluk Kemang, are attractive. However, they are not yet ideal regarding the facilities provided (Sabapatty, 2018). The beach in Port Dickson's proximity to the Klang Valley makes it a popular weekend destination for residents of Selangor and Kuala Lumpur (Azizi, 2019). Teluk Kemang is usually crowded with people during weekends when visitors flood the beach area.

When the number of tourists is at its peak, excessive tourism occurs. The signs of excessive tourism are; human and vehicle congestion, scattered rubbish, dirty toilets, and surroundings. It is hard to maintain cleanliness as the number of tourists increases, especially with their 'ignorant' attitude (Abdullah et al., 2012). Providing many facilities and improved infrastructure has made Teluk Kemang the most interesting beach in the Port Dickson area for visitors. Hence, it is important to understand whether visitors fully utilise the provided facilities or not. Additionally, knowing if the facilities and services need to be upgraded further. By doing so, visitors will become more comfortable and utilise the amenities to the fullest extent. As revealed by Latiff and Imm (2015), the quality of the tourism facility significantly affect the tourists' satisfaction and their intention to revisit the place.

Data collected for this research originated from a choice experiment survey designed to elicit visitors' preferences for improvements in recreational beach facilities in Port Dickson. Figure 1 shows the location of Port Dickson. The present study proposed several improvement options for Teluk Kemang beach, which were shared with visitors. Each option was defined by different improvement levels of three non-price attributes: amenities, recreational facilities and cleanliness. The last attribute was the non-price attribute or entrance fee. The WTP for an improvement in an attribute of a beach facility was estimated by the ratio of the estimated coefficient of the attribute to the coefficient of the entrance fee attribute. The different attribute levels used in the survey are shown in Table 1. The choices of attributes and levels used in this study were made based on; a review of related literature, feedback from focus group discussions with beach users, and a discussion with an officer of Port Dickson Municipal Council, the responsible government body for providing tourist facilities at Teluk Kemang beach.

Source: https://id.maps-malaysia-my.com/malaysia-peta

Figure 1 Location map of Port Dickson

Table 1 Attributes and Attribute Level for the CE Survey in Port Dickson

Attributes and Expected Sign	Description of Levels
a) Amenities (+)	
The visitor amenities provided at the beach are essential, as these are the most basic things that should be provided in all public places. Clean and comfortable amenities can increase visitors' satisfaction, thus giving them a greater incentive to return to visit.	***Basic:*** *Limited toilets + smaller prayer rooms* **High**: More toilets and prayer rooms + clean
b) Recreational facilities (+)	
The recreational facilities should allow visitors to conduct more activities at the beach other than swimming or picnicking. Improving the recreational facilities may encourage more people to undertake healthy activities at the beach.	***Basic:*** *Small playground + no jogging track* **High:** Larger playground + add jogging track
c) Cleanliness (+)	
The beach's cleanliness is vital for visitors and the environment. No visitors will come if the sand or water quality is poor. Besides, the beach's surroundings must be clean with minimal trash. Thus, adding more beach dustbins will help people dispose of their litter correctly.	***Basic:*** *Visible particles in the water and on the sand + fewer dustbins* **High:** Clean water and sand + no trash + more dustbins
d) Entrance fee (-)	
An entrance fee is a fee that is charged to every visitor entering the beach. The fee collection will be used to finance the cost of maintenance and facilities upgrades at the beach.	**RM0:** Current entrance fee is zero **RM1:** Entrance fee amount RM1 **RM2:** Entrance fee amount RM2 **RM3:** Entrance fee amount RM3 **RM4:** Entrance fee amount RM4 **RM5:** Entrance fee amount RM5

Note: Italic is the status quo (SQ) or current condition

Once the attributes and levels were determined, the fractional factorial designs generated from the SPSS software application were used to construct five CE choice cards for each respondent. Visitors were required to indicate their preference between two hypothetical options and the status quo option in each of the five-choice cards.

An example of the CE choice card used in the study is presented in Figure 2 below. Two possible development alternatives for the tourist facilities at Teluk Kemang beach and the status quo were presented. Suppose visitors desired a high level of amenities and cleanliness but were happy with basic recreational facilities and were willing to pay an RM5 entrance fee per person to access the beach. In that case, the visitors should select Alternative 1.

Suppose visitors desired a high level of amenities and recreational facilities but were happy with a basic level of cleanliness and were willing to pay an RM3 entrance fee per person to access the beach. In that case, the visitors should select Alternative 2. If the visitors were satisfied and happy with the current condition of Teluk Kemang beach and were not willing to pay an entrance fee, They should select Status Quo. Visitors were asked to tick (√) their preferred option.

As stated by the National Oceanic and Atmospheric Administration (NOAA) panel report in 1992, face-to-face interviews are the most appropriate technique for gathering information from respondents in any stated preference survey, including CE (Portney, 1994; Arrow et al., 1993). A pilot study was conducted in early September 2020 involving 32 participants. The pilot test results revealed that all variables were significant and followed the expected signs. The actual survey was carried out from October to December 2020. Two interviewers were carefully trained to conduct and clarify the questions.

There were three sections in the questionnaire. Section A elicited information about the attitudes and perceptions of the respondents toward beach recreation. Section B presented the CE choice card, and Section C elicited information about the respondents' socio-economic backgrounds. Convenience sampling was applied and the targeted visitors were those aged eighteen years old and above. Once each interview was finished, the next individual to pass was invited to be interviewed. Therefore, this study systematically sampled the next individual to avoid selection bias. Respondents anonymity was assured and that respondents were free to step away from the survery. In all 300 surveys, 257 were collected with usable responses. According to the rule of thumb suggested by Permain et al. (1991), for modelling preference data, sample sizes over 100 can provide a basis (as cited in de Bekker-Grob et al., 2015). Therefore, the sample size gathered from this study was considered sufficient.

	Alternative 1	Alternative 2	Status Quo
Amenities	High 	High 	Basic 
Recreational Facilities	Basic 	High 	Basic 
Cleanliness	High 	Basic 	Basic 
Entrance Fee	RM 5 	RM 3 	RM 0
Your Option			

Notes: The status quo is the current condition.

Figure 2 A sample CE choice card

ECONOMETRIC SPECIFICATION

The model most frequently applied to evaluate CE data is the Conditional Logit (CL) model. The CL model is established with the notion that all error terms are independently and identically distributed (IID) in the CE choice card. The probability of an individual n selecting alternative i can be expressed as:

$$P_{ni} = \frac{exp(\mu V_{ni})}{\sum_j^i exp(\mu V_{nj})} \quad (1)$$

where μ is the scale parameter. The scale parameter is expected to be μ=1. By assuming that Vni is linear in parameters, the functional form of an individual systematic component of the utility function can be expressed as below:

$$Vni = \beta 1X1ni + \beta 2X2ni + \beta 3X3ni \ldots. BkXkni \quad (2)$$

where Xs are the variables in the utility function and the βs are the coefficients to be estimated. If a single vector of coefficients βs that applies to all the utility functions related to all of the alternatives is defined, Equation (1) can be rewritten as:

$$P_{ni} = \frac{exp(\beta' V_{ni})}{\sum_j^i exp(\beta' V_{nj})} \quad (3)$$

where:

P_{ni} = Respondent n choice probability of alternative i;
V_{ni}, V_{nj} = vectors describing the attributes of i and j; and
β = vectors of coefficients.

The following procedure was used to evaluate the choice probability and to analyse the welfare measure by estimating the coefficient value of β in Equation (2). The normal method of defining the value of coefficients β can be done through the maximum likelihood procedure (Hanley et al., 2001), as shown below:

$$LL = \sum_{n=1}^{N} \sum_{j=1}^{J} y_{ni} \log P_{ni} \quad (4)$$

where:

LL = Log likelihood function; and
y_{ni} = indicator variable defined as $y_{ni} = 1$ if respondent n chooses alternative i and zero otherwise.

The final step was to estimate the WTP value or welfare measure using the CE data. A welfare measure helps recognise the influence of attribute changes in economics and implications to the related policy. The WTP value can be obtained by dividing any non-price attribute's coefficient value by the price attribute's coefficient value (Hoyos, 2010). The value indicates how much money respondents are willing to pay to benefit from the attribute improvement (Bennett and Adamowicz, 2001). The formula for the WTP can be expressed as follows:

$$WTP = - \beta i / \beta cost \quad (5)$$

where:

βi = the non-price coefficient; and
βcost = the price coefficient.

RESULTS AND DISCUSSION

Descriptive Analysis

Table 2 presents the respondents' sociodemographic profiles, including; gender, age, ethnicity, education level, occupation, and monthly gross income. The total number of respondents who completed the survey was 257. The respondents consisted of 28.8% males and 71.2% females. The proportion of females was higher than males because, during data collection at the beach, men were less willing to participate in the survey than women.

Most of the respondents belonged to the 18-24 age group with 29%, followed by those aged 35-44 (24.8%) and 25-34 (23.2%). All of the visitors were local people. The respondents largely consisted of Malays (87.2%), followed by Indians (7.0%) and Chinese (5.4%). More than half of the respondents in this survey

were highly educated, with 60.3% and 2.7% receiving undergraduate and postgraduate degrees, respectively, while another 19.5% have received matriculation or diplomas. Meanwhile, respondents who had completed secondary school accounted for 16.3%, and 0.8% had only completed primary school. Based on the results in Table 2, it can be concluded that most Teluk Kemang beach visitors had a high education level.

Most respondents worked in the management or business field, with 34.7%, followed by public servants (19%) and professionals (17.9%). Based on the monthly gross incomes presented in the table below, the largest income group was between RM4001 to RM6000, comprising 32.5%, followed by the income group RM2001 to RM4000 (30.4%) and the income group less than RM2000 (17.6%).

Table 2 Sociodemographic characteristics of the respondents

Variables		**Percentage (%)**
Gender	Male	28.8
	Female	71.2
Age	18-24	29.0
	25-34	23.2
	35-44	24.8
	45-54	17.2
	55 and above	5.8
Ethnicity	Malay	87.2
	Chinese	5.4
	Indian	7.0
	Others	0.4
Education	Primary school	0.8
	Secondary school	16.3
	Matriculation/Diploma	19.5
	Undergraduate	60.3
	Postgraduate	2.7
Occupation	Services industry	9.3
	Professionals	17.9
	Self-employed	11.7
	Management/Business	34.7
	Student	7.0
	Public servants	19
	Others	0.4
Income	Less than RM2000	17.6
	RM2001 to RM4000	30.4
	RM4001 to RM6000	32.5
	RM6001 to RM8000	10.0
	RM8001 and above	9.5

Perceptions of the importance of recreational beach facilities

Table 3 presents the percentage importance levels of the beach recreational facility attributes. In this question, the respondents explained how the importance of each attribute could influence their decision to visit and enjoy recreational activities at the beach. A five-level Likert Scale was used to allow respondents to express their opinions; 1 = Not important at all, 2 = Not important, 3 = Neither important nor unimportant, 4 = Important, 5 = Very important.

More than half of the respondents (85.6%) stated that amenities were a very important attribute influencing their decision when visiting a beach. About 9.3% of the respondents stated that amenities were important, and only a small percentage of the respondents stated that amenities were neither important nor unimportant (3.9%) and not important at all (1.2%).

For the recreational facilities attribute, about 38.2% of the respondents stated that this attribute was very important, and this was followed by neither important nor unimportant (26.7%), important (19.2%), and not important (13.5%) and not important at all (2.4%).

Most respondents agreed that cleanliness influenced their decision when visiting the beach, with 85.2% stating that this attribute was very important, followed by 10.1% stating it was important. Only a small percentage of the respondents stated that these attributes were neither important nor unimportant (3.5%) and not important at all (1.2%), whilst none (0.0%) stated that it was not important.

Meanwhile, regarding the entrance fee, more than half of the respondents stated that this attribute was very important (52.8%), followed by neither important nor unimportant (16.5%), important (14.4%), not important at all (8.8%) and not important (7.5%).

Table 3: Percentages of the importance of recreational beach facilities

Attributes	Percentage (%)				
	1	2	3	4	5
Amenities	1.2	0.0	3.9	9.3	85.6
Recreational facilities	2.4	13.5	26.7	19.2	38.2
Cleanliness	1.2	0.0	3.5	10.1	85.2
Entrance fee	8.8	7.5	16.5	14.4	52.8

Note: 1 = Not important at all, 2 = Not important, 3 = Neither important nor unimportant, 4 = Important, 5 = Very important.

Choice Experiment Analysis

Basic Conditional Logit Model

Table 4 shows the results for the CE by using the basic CL model. The econometric function for this model can be written as:

$$U = \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \varepsilon \quad (6)$$

where:

U = Utility;
X_1 = AMEN2 (amenities);
X_2 = REC2 (recreational facilities);
X_3 = CLEAN2 (cleanliness);
X_4 = PRICE (price); and
ε = error term.

As presented in Table 4, all variables were highly significant at the 1% level, except for the REC2 attribute. It was surprising to see that the REC2 attribute was not significant, even though this attribute was significant in the pilot study results. This outcome could be related to the results presented in Table 3, whereby more than half of the respondents valued amenities, cleanliness and an entrance fee as very important attributes, and less than half of the respondents stated that recreational facilities were very important.

Table 4 Results of the Basic Conditional Logit Model

Variables	Coefficient	Standard error	t-statistic
AMEN2	0.58698448	0.08477928	6.924***
REC2	0.05929167	0.08099715	0.732
CLEAN2	0.68725051	0.07323205	9.385***
PRICE	-0.28332434	0.02672616	-10.601***
Summary Statistics			
LL(βb)	-1314.264		
LL(β0)	-1377.5133		
Pseudo-R2	.04592		
Adjusted Pseudo-R2	.04443		
Number of Observations	1285		

Note: ***significance at 1%, **significance at 5%, *significance at 10%.

Willingness to pay Estimation from the Basic CL model

The willingness to pay for each attribute was estimated using Wald test procedures. Based on Table 5, the highest WTP was for the CLEAN2 attribute at RM 2.425. This result meant the visitors would pay RM2.425 to enjoy clear water and sand with no trash and more dustbins at the beach. The second highest WTP value was for the AMEN2 attribute at RM2.071. This result meant that visitors would pay RM2.071 to have more prayer room facilities and toilets in clean and good condition. The result was insignificant for the recreational facilities attribute (REC2), which consisted of larger playgrounds and more jogging tracks. Thus, it can be concluded that the respondents were unwilling to pay for improvements in recreational facilities.

Table 5 Results of the willingness to pay estimation

Variables	Coefficient	Standard error	t-stat
AMEN2	2.07177573	0.27368865	7.570***
REC2	0.20927135	0.28297166	0.740
CLEAN2	2.42566707	0.28465886	8.521***

Note: ***significance at 1%, **significance at 5%, *significance at 10%

CONCLUSION AND FUTURE DIRECTIONS

Overall, the CE results revealed that visitors preferred improved amenities with more toilets and prayer rooms in clean condition, and they were willing to pay RM2.07 to obtain these services. Visitors also preferred clear water and sand with no trash and more dustbins being provided at the beach area. For this, they were willing to pay RM2.43. This research has shed light on visitors' preferences regarding beach recreational attributes for policymakers and beach management. Policymakers or any organisation relevant to beach management can use the results from this study to improve and design better recreational service provisions in the future.

The first implication is the use of the money from public for the improvement of beach facilities. Since government funding is often limited, funds from the public can help cover shortcomings . Acquiring government funds is difficult, as there is always strong competition from other government projects and schemes. Consequently, the money received is scarce and often insufficient to cover basic beach maintenance. As a result, many public amenities often lack maintenance or are abandoned.

As a result, policymakers should consider imposing entrance fees or other charges on visitors to increase revenue to cover the cost of beach maintenance and improvement. Furthermore, the findings of this study showed that respondents were willing to pay for the enhancement of the attributes. According to the WTP findings, the respondents agreed and accepted the and accepted the proposal to levy entrance fees to access the beach. The respondents recognised the advantages resulting from the implementation of an entrance fee system.

The second implication regards the distribution of funds. The outcome of this research has presented which attributes the respondents valued the most and which were less valued. Policymakers can consider this information when allocating budgets to ensure that allocations will be used effectively to upgrade the most important facilities.

In future research concerning this topic, the analysis of this study could be improved by estimating using other models, such as the Mixed Logit Model (MXL) or Latent Class Model (LCM), that account for the heterogeneity of individual preferences. In addition, the present study's model could be extended to cover other important recreational areas in Malaysia by using different tourist facilities' attributes and levels. Such future studies would offer rich information to responsible policymakers when planning the better provision of recreational facilities and services.

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