

Willingness to pay for highlands' agro-tourism recreational facility: A case of Boh Tea plantation, Cameron Highlands, Malaysia

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Abstract. The increase in tourist demand for highland experience is inevitable. Cameron Highlands, established as a Tea Plantation Estate during the British Colonial era in 1929, has evolved into a major highland tourism destination providing a cool climatic experience coupled with scenic beauty in the midst of Tudor concept architecture which enhances the destinations historical value. Realising such tourism potential, the Boh Plantation management has provided a visitor centre as recreational facility for tourist utilisation. However, the absence in imposing an entrance fee has left a vacuum in determining the recreational economic value of this facility as the benefit of this agro-tourism product to tourists remains unknown. It would be important for the management to identify the benefit since the development and maintenance of the facility is costly. Hence, the purpose of this paper is to estimate the benefit of such establishment in highlands area by assessing visitor's Willingness to pay (WTP). The study examines, explores and debates the issues in a critical yet supportive environment especially highlands. The study obtained 179 usable questionnaires from visitors during weekends, weekdays and public holidays. The result showed that 59% of the visitors were willing to pay for the agro-tourism product. The WTP was estimated at RM 7.21 (€1.81). Three factors were found to be influencing WTP which were monthly income, years of education and perception on scenery. Although the study was conducted post development, the finding indicated the WTP for current management practise. Should the management change its style, it would also affect WTP and also the total economic value. Since WTP is established concept, the finding of the study reflects on the opportunities, barriers and challenges inherent in embracing post-disciplinary approaches to research and suggest ways to further enhance the approach.

Introduction

1.

Recreation activities can be defined as active participation occurs at the source of supply- the site- although elements of the experience- particularly anticipation and reflection- occur back home



(Seabrooke and Miles, 1993). Many recreational activities are related to its environment. Highlands has been attracting tourist to visit for recreational purposes. In Malaysia, highland recreation areas are identified as main tourism destination of the country. One of the famous locations is Cameron Highlands (CH), which is very synonym to outdoor recreational activity, ecotourism and agriculture. CH is the smallest district in the state of Pahang, Malaysia which is situated at the North-Western of the state (Figure 1). The total of land area is 71, 218 ha. What is interesting about CH is that, it is not only the focus of attention of the visitor either from local people or foreigner; instead it has been recognized as the biggest highland resort in Malaysia. Among the attraction of this destination is that the location is located at the Titiwangsa Mountain Range with the elevation of 1500 meters from the sea level. Due to its altitude, the temperature in CH varies between 18° C to 25 °C during the day. CH is also known for montane climate vegetation and fauna, together with many beautiful landscapes. Many infrastructures in CH have adopted the English-style villages with various flowers garden, due to its historical development.

Table 1. Visitor Arrivals to BOH Tea Plantation, Cameron Highlands

MONTH	YEAR 2011	YEAR 2010
January	10450	11159
February	10450	10431
March	10450	16729
April	10450	14882
May	10450	15196
June	10450	23731
July	10450	25147
August	10450	11677
September	10450	17236
October	10450	20839
November	10450	19363
December	10450	26937
TOTAL	125400	213327

2. BOH Tea Plantation, Cameron Highlands as a Tourism Area

One of the tourism destinations in CH is the BOH Tea Plantation (BTP) located in Sg. Palas. The history of BTP started by an Englishman, A.J. Russell in 1929, with its original purpose was mainly for tea production. The plantation has been a main tea producer in the country since then. BTP covers an area of 8000 acres and solely planted with tea and has been recognized as the biggest tea plantation in Southeast Asia. Nowadays, BTP has become one of a main tourist attraction in CH.

Realising the growth in visitor demand, BTP has erected a visitor centre in Sg. Palas, housing an indoor amphitheatre, a teashop, washroom, a café with vista, parking and interpretive exhibits. In this centre, a free guided factory tours on tea production and process factory is made available for visitors. Statistics in year 2010 and 2011 (Table 1) shows an increasing visitor arrivals to BTP. This shows the popularity of BTP as a recreational area at CH. This place is always crowded on weekends and school holidays. This facility requires high cost in development and the maintenance of the facilities due growing number of tourist arrivals. Since there is no entrance fee, it is a good

practice for BTP management to understand of how much the facility has benefited their visitors. Hence, the purpose of the study is to estimate the willingness to pay (WTP) of local visit to BTP, CH.

The significant of this study to the BTP's management is that the study can reveal the value associated with current management scheme. This information is useful in planning especially in relation to budget allocation where the estimated value can justify the allocation for development and maintenance of the area. In addition, this research also provide visitor's typology, which means the study gives more information about travel characteristic on visitors to the managing agency and this may help the agencies in understanding their visitors.

3. Contingent Valuation Method and Willingness to Pay

Contingent Valuation Method (CVM) is one of the method that used to estimate the economy value which have in a certain area that involve service and also the existing source of nature. There were a lot of opinion about this method that have been stated in the previous research with one of them is from Ajzen and Driver (1992) which stated that CVM is a tool used to place an amount of money for goods and service that usually do not have place in market (Zaiton et al., 2012). There are also people stated that CVM is a technique used to evaluate all types of ecosystem and service that related to the environment. This method was used to assess neither direct usage nor indirect usage.

In CVM research, users will be directly asked on how much money they are willing to pay for services that related with the environment. In CVM, the main concept use in WTP is the maximum value that people are willing to pay for towards goods or for services. Particularly, the WTP is an amount of money that people are willing and able to invest to ensure they can enjoy the source and the recreation facilities provided to them (McConnell, 1985). Other than that, Dupont (2002) said that in order to obtain WTP measures for environmental quality improvements leading to better recreational opportunities, the payment of a specific amount of money is arrange to fund the activities that will lead to the outcome ascribed to survey respondents.

CVM has been tremendously used in assessing users' recreational benefit studies. Yuan (2009) conducted a study on the visitor's WTP for facilities and services in Kuala Lumpur City Center (KLCC) Park, Malaysia. He estimated that the minimum amount that respondent agree to pay was RM1.00; while the maximum amount was RM30.00, and the mean for this maximum amount was RM5.40. Hayati (2009) estimated the WTP for urban forest in Johor Bahru, Malaysia was as low as RM1.67. This study adopted CVM as the framework in order to obtain visitors' WTP.

4. Methodology

4.1 Sampling and Fieldwork procedure

Data for this study were collected using a structured questionnaire. The questionnaires were distributed to the visitors in BTP. The data collection period covers weekdays, weekends, public holidays and school holidays. A total of 180 useable questionnaires were obtained during 3 months data collection in 2012. The questionnaire consisted of 3 sections; section 1 on visit and travel characteristics; section 2 on WTP; and section 3 on visitor profile. To ensure a full returned questionnaire, visitors were interview face-to-face by trained enumerators. Data collected were analyzed using SPSS version 20.0.

4.2 WTP Model

In the study, respondents were asked if they were willing to pay if the management charge entrance fee to the visitor centre of BTP. Respondents were explained that the fee was for maintenance of the recreational facility and also for conservation purposes. The study adopted modified bidding game technique. In this technique, the respondents were approached with different starting WTP prices. If a respondent agrees with proposed price, they were asked to state the highest WTP above the proposed price. On the contrary, if the respondents do not agree with the proposed price, they were asked to state the highest WTP price below the proposed price. To determine the WTP price and factor

influencing WTP, a multiple regression was employed. The functional model is shown as in Equation 1 below;

$$WTP = f(VISIT + ONSTIME + SIGHT + UNIQ + BEAU + RECM + ATTR + EXP + AGE + DIST + YSREDU + SI + INC + C) \quad \dots (Eq. 1)$$

Where:

WTP	- Maximum amount of WTP (Dependent variable)
VISIT	- Frequency of visits for the past 12 months (Scale data)
ONSTIME	- Visitors' length of stay in term of hours
SIGHT	- Sightseeing activities as a motive of visit (Dummy, 1=yes, 0=no)
UNIQ	- Uniqueness of Topography as a motive of visit (Dummy, 1=yes, 0=no)
BEAU	- Perception of beautiful scenery as a motive of visit (Dummy, 1=yes, 0=no)
RECM	- Recommendation from friends as a motive of visit (Dummy, 1=yes, 0=no)
ATTR	- Attractive promotion as a motive of visit (Dummy, 1=yes, 0=no)
EXP	- Total of expenditure on site (Scale data)
AGE	- Age of respondent (Scale data)
DIST	- Distance from residential area to BTP (Scale data postcode)
YSREDU	- The respondents' number of year educational level (Scale data)
SI	- Respondents' satisfaction of recreational activities, facilities and services provided (Likert scale, 1= strongly disagree, 2= disagree, 3= agree, 4= strongly agree)
INC	- Monthly income (RM/month)
C	- Constant

5. Results and Discussion

5.1 Visitor Profile

Fifty seven percent of the respondents are female and 51% are single, suggesting almost equal visitors profile to BTP. Majority of the respondents (79.9%) had tertiary education level. Mean income is found to be RM3,235.15 (€743.46). The mean for age is 30 years old (Table 2). These suggest that respondents to BTP are mainly educated, young adults with middle income.

5.2 Visit Characteristics

The average frequency of visiting to BTP is 1.79 times per year. 55.9% respondents stated that it is their first time visiting BTP. Average time spent at the site is 2.36 hours. 45% respondents come with their family. Majority of the respondents (76%) indicated that the purpose of visit is to enjoy the scenery and environment at BTP. The result suggests that the visitors to BTP are day-trippers, new and stay only for a short while. They visited BTP to enjoy the natural environment at the site.

5.3 Willingness To Pay for Recreational Experience and Conservation

The result shows that 59% respondents said that they are willing to pay if the management charges the entrance fee is for the maintenances and conservation of the area.

Table 2. Socio-Economic Statistics

	Minimum	Maximum	Mean	Std. Deviation
Age	18	65	30.60	8.857
Year Education	11	17	15.83	2.386
Monthly Income	RM500 (€114.90)	RM30,000 (€6,894.23)	RM3235.14 (€743.46)	2965.48

5.4 Regression Analysis Result

The determination coefficient, R^2 measures the proportion of the variation in the dependent variable explained by the independent variables. A higher R^2 would imply that the calculated Y equation line fits closer to the data points (Ahmad, 1994). However, the R^2 for the study was found to be low (0.163), which showed that only 16.3% of the respondents' WTP is explained by the independent variables. One possible reason is due to the selection of independent variables used in the model. There may be other possible variables which may have influences on visit decision which are not included in the model.

T-test at 95% confidence interval (t-tabulated value 1.96) was employed to test for statistical significance of regression coefficients. Any t- computed value which is greater than the t-tabulated value implies that the variable plays an important role in determining the dependent variable. From the 14 factors that have been listed, only three of the factors were significant at 0.05 confidence level (Table 3). These factors are beautiful scenery, years of formal education and monthly income. The coefficient indicated that the relationship between independent variable and dependent variable either directly proportional or inversely proportional. The result shows that beautiful scenery and monthly income are directly proportional with maximum amount of WTP; while the year of formal educational is inversely proportional with maximum amount of WTP.

To interpret the results, the variable perception on beautiful scenery has influenced visitor's WTP positively. The more they enjoy the scenery, the more they are willing to pay. This is consistent with the main reason of visiting BTP; to enjoy the natural environment of BTP. BTP is well known for its beautiful scenery of tea plantation at low temperature climate. Therefore, it is a popular destination among visitors especially during the school holidays and weekends. In other words, they are willing to spend more money if they feel they can enjoy the scenery more; in a longer period or a better quality.

Monthly income is found to be influencing the WTP and it is directly proportional with WTP by the visitors to that place ($b=0.001$). This is because as income increase; the WTP also increase due to higher purchasing power. This statement is supported by Yuan (2009), which stated that the higher the income, they are more WTP and the reason is because they have more discretionary income to enjoy recreational activities that they participated.

The third variable is the years of formal educational. It is found to be inversely proportional to WTP ($b= -0.513$). Demographic analysis shows that most of them are educated, hence making the visitors sensitive and aware towards of environmental issues such as land clearing for plantation, landslides and etc. CH is also well known for large areas of vegetable farming. Many of these farms are located at slope areas. There are environmental degradation issues such as soil erosion and landslides in CH in relation to human activities such as farming. Thus, visitors with higher education level have more awareness. They are more sensitive towards environmental intervention issues and quality degradation. It is assumed that these are the factors that contribute to the negative relationship between education and WTP.

Table 3. Factors Affecting Visitor's WTP for Recreational Experience at Sungai Palas BOH Tea Plantation, Cameron Highlands

Variable	B	Beta	p-value
(Constant)	4.797		0.467
Beautiful Scenery	2.929	0.167	0.025*
Year of Education Level	-0.513	-0.178	0.027*
Monthly Income	0.001	0.229	0.005*
Frequency Visiting	-0.225	-0.076	0.379
On site Time	0.402	0.060	0.421
Sightseeing Activity	0.018	0.001	0.988
Uniqueness of Topography	-2.006	-0.137	0.074
Recommendation From Friends	-1.180	-0.056	0.453
Attractive Promotion	1.023	0.033	0.670
Total Expenditure	0.001	0.078	0.324
Distance	-0.008	-0.096	0.272
Age	-0.009	-0.012	0.877
Satisfaction Index	1.187	0.070	0.362
Crowding	0.891	0.100	0.188

a. Dependent Variable: Maximum amount (WTP)

5.5 Estimated Mean WTP

Based on the three identified variables influencing WTP, a mean WTP is then estimated using Equation 2 below:

$$\text{WTP} = f(\text{BEAU} + \text{YSREDU} + \text{INC} + \text{C}) \quad \dots(\text{Eq.2})$$

Taking the mean value of all independent variable, the mean WTP value is estimated at RM7.21 (€1.65) for the year 2012. This is the value estimated by taking the factors that affecting the WTP.

6. Conclusion

The BOH tea plantation has become one main attraction not only in Cameron Highlands but in the country as a whole. The attraction in the tea plantation greatly depends on the naturalness of the area. It is the main reason of visit arrival, the conservation of its natural environment is the utmost importance. Hence, the study is conducted to assess how much the visitors are willing to contribute to recreation and nature conservation. The study has found that visitors are willing to pay for recreational facilities and conservation at BTP. Nevertheless, the WTP value is relatively low.

It is recommended that subsequent study to be conducted to identify the low WTP of domestic tourists. A comparative study on foreign tourist is also suggested although number of foreign tourist is slightly low than domestic tourists. From the visitors' profile it is understood that most of them are educated with middle income and accompanied either by family or relatives. It is, therefore suggested more educational programmes and facilities to be provided at the location. This might enhance visitors experience at the location and might contribute to their satisfaction, thus increasing the WTP. The study has provided to an indicator of visitors' satisfaction to the management of BTP.

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