



Estimating the Travel Cost Function of Tourists: A Study of Kuruva Island Ecotourism in Wayanad.

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ABSTRACT

This research paper is about Estimating the Travel Cost Function of Tourists arriving in Kuruva Island, an ecotourism in Wayanad which has recently emerged as an important recreation hot spot. Recreational activities had started to gain wide recognition during modern fast paced life. The demand for ecotourism and recreational activities is been on a rise day by day. Demand has been coming from both foreign as well as domestic tourists. Ecotourism is rallied ahead in such recreational activities as compared to other conventional tourist activities. The increased influx of tourists to these areas also started to create associated problems. This includes the Loss of biodiversity, increased pollution, destruction of habitat of various flora and fauna and even the impact on local culture and tradition. To carry out the estimation the following factors are taken into account. Firstly, the demographic and socio-economic profile of the visitors to Kuruva Island, secondly, the visitors' perceptions about the services available at Kuruva island and how much they value each of these services. And finally, the travel cost function of the visitors to Kuruva Island

KEYWORDS: Ecotourism, Travel Cost Function, Recreation, Wayanad, Kuruva Island.

I. INTRODUCTION

Recreation has an important role in our daily life. The demand for Ecotourism and recreation has been increasing day by day. Demand may come from foreign as well as domestic tourists. Ecotourism is rallied ahead while comparing to other conventional tourist activities. The increased influx of tourists these areas create additional problems. Loss of biodiversity, increased pollution, destruction of habitat for wild animals and Impact on local culture and traditions are some of the after effects of these developments. Most important among them is the negative impact of the ecosystem services of an area. If such services exploit

unsustainably for a long period of time, these resources will be perished and the countries that depends on the revenue generated from tourism will be affected most. Many of the environmental services do not have markets. This is because of the fact that most of them belong to the category of public goods or open access resources. Lack of clear definition of property rights often results overexploitation of these areas.

Wayanad district offers a wide array of ecotourism services. Recent years have witnessed a spurt in the ecotourism activities. Kuruva is one of the most sought tourist destinations in Kerala. Kuruva Island (Kuruva Dweep) is a group of islands located in the middle of east following Kabani River. This island is isolated but an array of unknown species of birds, herbs and orchids are the monarchs of Kuruva Island. The specific geographical characteristics of Kuruva Island make this place very calm and the forest is always evergreen. These mind blowing characteristics have made this place attractive to the tourists who are nature lovers or travelers who love silent atmosphere

Other unique characteristics of these islands are the bridges made of bamboo and rare species of trees. It is a must see destination for nature lovers and a popular picnic spot. A perfect destination for those wants to have a lazy walk through the shoreline of a river enjoying the nature's beauty. Its unique geographical characteristics make it a place where not only the leaves but also silence evergreen being away from cities and thus it has become a place of attraction. In recent years major ecotourism destinations of the world are facing lots of problem. Increased pressure on tourism sites, biodiversity loss, garbage collection and treatment, hygiene conditions and pollution etc., are some of them. Commercialization of tourism and enclave tourism activities etc., are on the rise. Kuruva Island faces loss of biodiversity and destruction of flora and fauna. This problem creates a negative



impact on the eco system services offered by Kuruva

II. OBJECTIVES OF THE STUDY

1. To assess the visitors perceptions regarding various ecosystem services of Kuruva Island.
2. To find the Travel Cost Function of visitors and find out the major determinants of the visits to the Island

III. METHODOLOGY OF THE STUDY

The study is mainly depends upon the primary data collected with the help of a questionnaire. The data are collected from the tourists who visited Kuruva islands. The respondents are approached at the end of their visits so that they are able to answer the questions effectively. The attitudinal questions used in the survey could only be answered by the tourist only after spending some time in the Dweep. We have selected a total of 100 samples.

Every 10th visitor comes out of the gate is surveyed during lean hours and every 20th person is surveyed during peak hours. Care should be taken to include only one respondent from one team of visitors in order to avoid bias in a survey which uses limited number of samples. In order to find out the travel cost function and the major determinants of it, we use travel cost method, one of the widely used method which follows the revealed preference approach. The Travel cost functions used in our model is described as:

$$TC_i = f(DT_i, Y_i, O_i, Ed_i, A_i, G_i)$$

Travel Cost = f (Distance Travelled, Income of the Visitors, Occupation of the visitors, Education attained, Age of the respondent, Gender of the respondent)

IV. TRAVEL COST FUNCTION

The study was mainly focused about the visitor's Travel Cost Function and what are the important factors determining a tourist's decisions to travel to Kuruva Island. Also the study focused on the tourist's perceptions regarding various ecosystem services provided by Kuruva Island. The Major findings of the study and suggestions are given below.

The Travel cost functions used in the study is $TC_i = f(DT_i, Y_i, O_i, Ed_i, A_i, G_i)$. which means Travel Cost = f (Distance Travelled, Income of the Visitors, Occupation of the visitors, Education attained, Age of the respondent, Gender of the respondent). Dummy variables are exerted in place of categorical variables. The regression result shows that many of the predictor variables used in the

model is insignificant. Only two variables found to be significant at .001 level. These are Distance travelled and Monthly income of the respondents. Therefore the resulting regression function can be stated as

$$TC_i = 700.409 + 4.811(DT_i) + 0.012(Y_i)$$

That is, Travel Cost = 700.409 + 4.811(Distance Travelled) + 0.012 (Monthly Income). Regression analysis shows that the *R* value is 0.684 which indicates relatively high degree of correlation, and 46.9% variation in the Travel Cost can be explained (*R*-squared = .469) by the variables which are used in the analysis. ANOVA results indicate that the regression model predicts the dependent variable significantly well. In our model The *F* value is significant at less than 5% levels. The histogram and a normal P-P plot regression standardized residual shows that the residuals are distributed around zero.

V. MAJOR FINDINGS OF THE STUDY:

- The study shows that out of the 98 respondents surveyed 88 (90%) people opined that they consider watershed is important function of the Kuruva Island. 94% of the respondents believe that Kuruva Island is important for them as it support the ecosystem. 84 respondents opined that Kuruva Island is very important in terms of the recreational and sightseeing aspects. 81% people consider the bamboo rafting facility is very much attractive and important. A large number of people support the view that the river island provide an opportunity to walk through the jungle and provide a beautiful ambiances.
- About 33% of the visitors who have visited earlier are of the opinion that the environmental quality of the island is affected seriously and getting worse after their last visit.
- The Hygiene and Sanitation condition of Kuruva also affected very much. 50% of the respondents say that the Hygiene and Sanitation condition has become worse after their previous visit.
- Cost and affordability is not an important variable while taking decision to travel Kuruva Island.
- Scenic Beauty is proved to be one of the important factors which contribute to the influx of tourists to Kuruva Island. About 56% of the total visitors responded that scenic beauty affects their decision very much or extremely affected.
- 53 visitors were explicitly states that Biodiversity is attracts them very much. It has little affected to 23 persons.



- Environmental quality found in Kuruva is another attractive variable which affects the decision regarding the choice of destinations.
- Tourist Service quality is not an important factor affecting the visiting habits of respondents. They were little cared about the quality of services they are getting. Most of them are fond of the natural and serene beauty of this river delta region.
- In the case of recreational services and amenities, 36 persons considered it is very much affect their decision.
- The quality of tourist sites is rated as Good by most number of respondents. There is not a single respondent opined that the quality of Kuruva Island as a tourist spot is bad or very bad
- Regarding Biodiversity a total of 68 (72% of the respondents) expressed their opinion that they feel Very good or good. Majority of respondents felt satisfactory about the facilities and amenities in Kuruva Island
- Cleanliness and Hygiene conditions in Kuruva were also appreciated by the visitors. 63 and 58 respondents respectively opined that the cleanliness and hygiene conditions have been good or very good.
- 67% of the visitors surveyed were of the opinion that their overall experience at Kuruva is good. Their proportion is still higher if we add the very good responses, that is, the percentage went up to 75%.
- Among the various problems identified, the visitors were not interested in many of them, only very less number of people opined that they have concerns over the Biodiversity Loss, Pollution, Garbage Collection and Treatment, Hygiene & Sanitation conditions etc.
- About 65% of respondents argue that they consider Biodiversity loss to be addressed first.
- Majority of the visitors do not agree to limit the number of tourists visiting Kuruva Island for sustainable tourism activities

VI. SUGGESTIONS

- Environmental Valuation should be an important policy tool in the environmental policy and management. In India its application is limited. In future these techniques shall be implemented.
- Travel cost method can be used to find the recreational demand of the visitors. There are very less attempt has been made in Kerala to find its recreational values.
- Forest, wetlands, mangroves and aquatic eco systems are the major types of eco systems in

Kerala. They should be protected so that they would become the greatest source of earnings to state SDP.

- Most of the visitors value Kuruva in terms of its Biodiversity, Ecological Importance, rather than its recreational facilities. Therefore care should be taken to protect the nature at Kuruva Island.
- Recreational facilities can be increased without creating problems to the ecology and environment of the region.
- Visitors have concerns about the Biodiversity loss at Kuruva Island. The policy makers should care about that.
- Majority of the visitors do not agree to limit the number of tourists visiting Kuruva Island for sustainable tourism. In order to reduce the pressure on Island, it is better to have an online booking facility for tourists involving large numbers.

VII. CONCLUSION

The study focused on four important areas relating to ecotourism activities in Kuruva Island. Firstly, the demographic and socio-economic profile of the visitors of Kuruva Island, secondly, the visitor's perceptions about the services of Kuruva island and how much they value each of them. And finally, the travel cost function of the visitors of Kuruva Island.

The study found that Kuruva Island has such an important role as a watershed, an ecosystem and a biodiversity hotspot. Our study highlighted the need for preserving and conserving the ecosystem services. The visitors also value very much about these services of Kuruva Island. Majority of them do not agree to make Kuruva as an important tourist destination by compromising its ecological and environmental services.

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Appendix – I

Table 1: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.684 ^a	.469	.350	1000.250
a. Predictors: (Constant), Others, Education, Dummy Female, Respondent's Age, Monthly income, Distance Travelled, Self Employed, Government Employee				
b. Dependent Variable: Total Cost				

Table 2: ANOVA^s

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	3.175E7	8	3968802.181	3.967	.002 ^a
	Residual	3.602E7	36	1000500.380		
	Total	6.777E7	44			
a. Predictors: (Constant), Others, Education, Dummy Female, Respondent's Age, Monthly income, Distance Travelled, Self Employed, Government Employee						
b. Dependent Variable: Total Cost						



Table 4.16: Residuals Statistics

	Minimum	Maximum	Mean	Std. Deviation	N
Predicted Value	468.47	4261.13	1793.56	849.471	45
Residual	-2.261E3	2149.239	.000	904.760	45
Std. Predicted Value	-1.560	2.905	.000	1.000	45
Std. Residual	-2.261	2.149	.000	.905	45

a. Dependent Variable: Total Cost

Table 3: Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	700.409	1129.188		.620	.539
	Respondent's Age	-1.712	12.433	-.019	-.138	.891
	Education	17.447	70.692	.035	.247	.806
	Monthly income	.012	.003	.482	3.730	.001
	Distance Travelled	4.811	1.299	.490	3.704	.001
	Government Employee	163.328	577.368	.045	.283	.779
	Self Employed	-303.187	431.923	-.106	-.702	.487
	Dummy Female	-391.123	354.561	-.144	-1.103	.277
	Others	-210.951	398.240	-.080	-.530	.600

a. Dependent Variable: Total Cost

Figure 4.6: Histogram

