

A Study on the Recreational Forest: Evidence from Korean Recreational Forests

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Abstract. This study searched the influence of service quality attributes on satisfaction of recreational forest based on ‘Expectation and Disconfirmation Model’[1] and ‘Consumption-System Approach’[2], and suggested data to improve quality and business effectiveness of recreational forest. In the prior researches mostly were limited in causal relationship between “attributes of recreational forest → satisfaction” and this research suggested understanding of the influence of each attributes on satisfaction using logistic regression analysis and presents predictive model of it.

Keywords: Service Quality, Attributes, Satisfaction, Logistic Regression

1 Introduction

Nature Recreational Forest is defined as an outdoor recreation space for the health recreation and national moral of the citizens as well as a forest, which is constructed and managed that contributes to the role of superintendent of natural education and enhancing income of forest land owners. It is also determined as a green belt located in the places with high recreation value inside the city or suburbs [3].

Due to the industrialization, urbanization and change of the psychographic elements in today’s society, the need for a nature recreational forest as part of people living environment has become more important than before; therefore, demand for natural recreational forest is constantly increasing. In addition, constructing nature recreational forest is enhancing the life quality including health recreation or national moral of the citizens, invigoration of regional tourism etc., and it has an important for the green development [4,5]. Such interests on recreational forest can be found on academic researches. Subject Recreational Forest had been studied into big five forms: 1)research on user’s type, 2)research on tourist attraction, 3) research on regulations and business effects related to recreational forest, 4) research on construction

and operation of recreational forest, 5) research on scenic rating and community relationship.

2 Theoretical Background and Modeling

2.1 'Expectation and Disconfirmation Model' and 'Consumption-System Approach'

Oliver [1] suggests three factors confirmation/ disconfirmation, perceived performance, and satisfaction that has influence on satisfaction/ dissatisfaction and proposes Expectation and Disconfirmation Model. Expectation and Disconfirmation Model schematized that expectation on pre-purchase performance has influence on product performance, expectation, evaluation of gap between expectation and product performance, and satisfaction or dissatisfaction; perceived product performance has influence on evaluation of gap between expectation and product performance and satisfaction or dissatisfaction; evaluation of gap between expectation and product performance has influence on satisfaction and dissatisfaction. After Oliver [1]'s suggestion, Spreng, MacKenzie, and Olshavsky[6] offered new model using factors expectation, perceived performance, confirmation/ disconfirmation and clarified the role of additional factors desires and desires congruency in the satisfaction formation process.

Mittal, Kumar and Tsiros[2] suggested Consumption-System Approach which have attribute-level performance, satisfaction, and behavioral Intention. Consumption-System Approach is the theory based on General Living System theory.

2.2 Formulation of research Model

General model of logistic regression analysis on explaining factor with separate independent 'n' number is illustrated in the following equation (1).

$$\bullet \quad \text{logit} = \beta_0 + \beta_1 X_1 + \dots + \beta_n X_n \quad (1)$$

Here, $\text{logit} = \log(p/(1-p))$, $p = \Pr(Y = 1 | \text{all } X)$. Generally, in case of regression analysis, when independent variables are relatively small numbered then it is useful for explaining dependent variable. In this regard, explaining factors adopted in this research are the continuous variables which were previously mentioned 7 factors influencing user satisfaction of recreational forest. In such context, the following equation (2) is the logistic regression model which explains satisfaction of recreational forest.

$$\ln \left(\frac{P_i}{1-P_i} \right) = \beta_0 + \beta_1 X_1 + \dots + \beta_7 X_7, i = 1, 2, \dots, 7 \quad (2)$$

Here, p_i is possibility of satisfaction about recreational forest

3 Method

On the basis of Kang and Park[7]'s definition on Service quality attributes of recreational forest composed 24 questionnaires dividing into seven factors such as reservation service, accessibility, facility, human service, natural scene, resource management, and service value. The user satisfaction of recreational forest composed in three constructs. Such service quality attributes and satisfactions of recreational forest measured by 5point Likert scale using strongly disagree to strongly agree.

This research has accomplished questionnaire from guests who visited recreational forest during June to September, 2011 to measure the influence of service quality attributes on user satisfaction of recreational forest. To minimize the generalization of the study, in this research visitors who live in urban areas and have experience in using recreational forest were selected to accomplish the questionnaire.

Total 300 units of questionnaire were collected and exempting untruthful samples 277units of questionnaire have been used in the analysis.

4 Empirical Analysis

The study has implemented logistic regression to identify the influence of seven factors on user satisfaction of recreational forest

Through the result of logistic regression to investigate the influence of the factors on user satisfaction of recreational forest, the final logistic regression model can be defined as equation (3) of below and result of analysis were constructed in shown with Table 1.

$$\ln\left(\frac{P_i}{1-P_i}\right) = (1.663) + 0.856(\text{hum.serv}) + 1.636(\text{serv.value}) + 0.391(\text{scene}) + 0.809(\text{res.system}) + 0.524(\text{accessibility}) + 0.514(\text{res.mgnt}) + 0.686(\text{facility}) \quad (3)$$

Table 1. Variable in the equation

	B	S.E,	Wals	df	sign	Exp(B)
Hum.service	.856	.193	19.700	1	.000	2.354
Serv.value	1.636	.249	43.001	1	.000	5.132
Scene	.391	.189	4.289	1	.038	1.478
Res.system	.809	.195	17.169	1	.000	2.245
Accessibility	.524	.191	7.555	1	.006	1.689
Res.management	.514	.178	8.357	1	.004	1.672

Facility	.686	.194	12.558	1	.000	1.986
Constant	-1.663	.229	52.808	1	.000	.190

Logistic regression on seven influencing factors of user satisfaction of recreational forest showed that three factors, natural scene, accessibility, and resource management, are found satisfied at the 0.05 significance level as influencing on user satisfaction. Other four factors, human service, service value, reservation system, facility, and constant were found satisfied at the 0.01 significance level.

Exp (β) value of service value appeared 5.132 and it was observed that if service value increases by unit then user satisfaction of recreational forest increases by 5.132 times than user dissatisfaction. In sequence, the Exp (β) value of human service, reservation system appeared 2.354 and 2.245 each, and other factors, facility (1.986), accessibility (1.689), resource management (1.672), and natural scene (1.478) has influence on user satisfaction in such order.

Service value, human service, reservation systems, resource management are the management attributes of recreational forest. Whereas facility, accessibility, and natural scene are the variable that already constructed or created fitting with natural environment and the changes are not that simple. Management attributes of recreational forest such as service value (5.132), human service (2.354), and reservation system (2.245) are in the higher place between attribute factors that influence user satisfaction of recreational forest.

5 Conclusions

This research tried to determine whether the service quality attribute has any influence on user satisfaction of recreational forest. In doing so, in order to examine each attribute's influence on user satisfaction, logistic regression analysis was used instead of solely using structural equation model applying causal relationships.

Up to now user satisfaction enhanced on constructed recreational forest limited by geographically and environmentally. So in order to increase number of users will need differentiation to meet user's characteristics. For example: If customer pays high charge, need to offer high quality service than just simply broaden the lodging facilities and will be able to maximize service value of users.

Management attributes of recreational forest such as service value, human service, reservation system are in the higher place between attribute factors that influence user satisfaction. Normally, recreational forests have been constructed in the area with excellent natural environment because visitors feel satisfaction from facilities and natural scene of recreational forest. Most of constructed recreational forests have similar forms of facility or environment. So, one of the best way to increase user satisfaction is good operation of recreational forest.

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