
How Previous Visits Shape Trip Quality, Perceived Value, Satisfaction, and Future Behavioral Intentions: The Case of Forest-Based Ecotourism in Sri Lanka

Priyan Perera¹, Richard Vlosky²

1. Department of Forestry and Environmental Science, University of Sri Jayewardenepura, Sri Lanka
2. Forest Products Development Center, School of Renewable Natural Resources, Louisiana State University Agricultural Center, Baton Rouge, LA, USA

Correspondence with:

Priyan Perera

priyan@sjp.ac.lk

Department of Forestry and Environmental Science

University of Sri Jayewardenepura

Sri Lanka

How Previous Visits Shape Trip Quality, Perceived Value, Satisfaction, and Future Behavioral Intentions: The Case of Forest-Based Ecotourism in Sri Lanka

Abstract

A better understanding on relationships between future behavioural intentions and its antecedents allow ecotourism operators to manipulate their ecotourism products to optimize customer satisfaction, and improve marketing efforts. Although the relationship between previous visits and future behavioural intentions have been previously studied, less attention has been given on understanding the process of how previous visits interact with other key determinants of behavioural intentions such as trip quality, perceived value, and satisfaction to form future behavioural intentions. This study proposes a model to examine the role of previous visits in predicting future behavioural intentions to participate in ecotourism, and the relationship between previous visits and future behavioural intentions is modelled in a quality-satisfaction domain. Results suggest previous visits, trip quality, satisfaction and perceived value as important predictors of ecotourists' intention to revisit and recommend the destination, as well as their propensity to engage in ecotourism in the future. Trip quality was the most important determinant of future ecotourism behavioural intentions. Implications of the study are discussed in the perspective of ecotourism marketing.

Keywords: ecotourism; previous visits; behavioural intentions; trip quality; satisfaction; perceived value

How Previous Visits Shape Trip Quality, Perceived Value, Satisfaction, and Future Behavioral Intentions: The Case of Forest-Based Ecotourism in Sri Lanka

Introduction

Ecotourism is the “responsible travel that conserves natural environments and sustains the well-being of local people” (TIES, 2010). The appeal of ecotourism is widening as the negative environmental and socio-cultural impacts of mass tourism are becoming more apparent. According to the International Ecotourism Society, ecotourism is one of the fastest growing segments in global tourism market (TIES, 2005). The United Nations Environment Program (UNEP) and Conservation International predictions suggest that most of tourism’s expansion is likely to occur in and around world’s remaining natural areas (Christ, 2005). The International Ecotourism Society further predicts the fast growth in nature tourism, and suggests early conversions to nature-based sustainable forms of tourism to secure market gains (TIES, 2005).

Ecotourism has wider implications for biodiversity-rich tropical countries such as Sri Lanka. Sri Lanka at present is in a rapid post-war recovery process, and the country’s tourism sector is also gaining momentum. For instance, tourist arrivals in 2011 reached a record high of 855,975, which was a 30.8% increase compared to the previous year (SLTDA, 2011). The Western European tourism market, which has traditionally been the major tourism market for Sri Lanka, is rapidly gaining the market share. This was evident from the survey of foreign departing tourists in 2008-2009 conducted by the Sri Lanka Tourism Development Authority. The study reported that over 55% of tourists visiting Sri Lanka are from West Europe (SLTDA, 2010). In addition, North America as a region has also emerged as a fast growing tourism market for Sri Lanka.

A recent report by TIES (2005) points out that more than two-thirds of U.S. and Australian travellers, and 90% of British tourists consider active protection of the environment, and support of local communities to be part of a tourist hotel’s responsibility. The same report further elaborates that in Europe, 20% to 30% of travellers are aware of sustainable tourism and green options, while 5%-10% of travellers demand green holidays. To take advantage of these growing environmentally-conscious tourism markets, it is critical that Sri Lanka diversify its tourism products to

include sustainable tourism models such as ecotourism. The Sri Lankan Government has also recognized the importance of developing nature-based sustainable tourism options to cater diverse tourist markets. The new development policy framework of the Government of Sri Lanka also emphasizes the importance of opening up opportunities to facilitate sustainable tourism ventures such as ecotourism, agro-tourism, and cultural tourism (Department of National Planning, 2010).

With rising demand, the ecotourism market is becoming more heterogeneous, and ecotourism operators are facing the task of meeting expectations of diversity of ecotourism product consumers (Higham & Carr, 2002). Recent ecotourist profiling studies in literature highlight the heterogeneity of ecotourism market and ecotourists' expectations (Kerstetter, Hou, & Lin, 2004; Perera, Vlosky & Wahala, 2011). In general, tour operators' success depends on their ability to provide customer wants. From the demand perspective, attracting the tourists to revisit and recommend the destination to others are key aspects in successful tourism destination development (Chen & Tsai, 2007). In order to succeed in the present competitive business environment, tourism operators need to be aware of trends and dynamics in tourist demand. However, when it comes to marketing ecotourism, there's a need for tour operators to create demand for tourism products that are more environmentally sustainable and socially responsible to the destination. A better understanding on relationships between tourists' future behavioural intentions and its antecedents allow ecotourism operators to manipulate their ecotourism products to optimize customer satisfaction, and improve marketing efforts. As such, this study examines the role of previous visits in predicting future behavioural intentions to engage in ecotourism in a tropical forest-based ecotourism setting.

Literature Review

Tourist behaviour consists of several stages which include pre-visit decision-making, onsite experience, experience evaluations, and post-visit's behavioural intentions and behaviours (Williams & Buswell, 2003). Tourism experience is also an aggregated term that encompasses pre-visit, travel to, destination/on-site, travel from, and post-visit (Yuan, Morrison, Liping, Cai, & Linton, 2008). Hilgard and Bower (1981) proposed the notion of "generalization phenomenon" or the "carryover effect" in responding to similar or related stimuli by humans. Applying this notion to tourism

context, Pearce (1982) showed that tourism experience is not limited to a particular destination and instead, the entire experience has an impact on pre-visit, on-site visit and post-visit stages. Pearce's work further underlined that tourists tend to build perceptions on tourism destinations that they think, have similar characteristics to destinations they have visited before. Morwitz (1997) suggests consumers with previous experience can make accurate predictions of whether or not to engage in the same behaviour in the future, than those with no such previous experience. Ouellette and Wood (1998)'s meta-analysis of behavioural studies further support the notion that frequency of past behaviours affects future behaviours. For instance, analysing data from four wilderness areas, Williams, Patterson, and Roggenbuck (1992) observed stronger place and wilderness attachment to be associated with previous visits. This theoretical background provides the foundation for first four hypotheses tested in the model (i.e. H1: Previous visits directly and positively affect future behavioural intentions, H2: Previous visits directly and positively affect trip quality, H3: Previous visits directly and positively affect perceived value, and H4: Previous visits directly and positively affect satisfaction) in an ecotourism context (Figure 1). Although the relationship between previous visits and future behavioural intentions (H1) has been established by previous works, the effects of previous visit on trip quality (H2), perceived value (H3) and satisfaction (H4) have not been well-researched. Based on Pearce's (1982) argument of tourism experience having a carry-over effect to pre-visit, on-site visit and post-visit stages, the presence of relationships stated in H2, H3 and H4 are examined.

Less attention has been given in the literature on understanding the processes of how previous visits interact with other determinants of behavioural intentions to form future behaviours. This literature gap is more apparent in tourism research. As in the case of other forms of tourism, ecotourism behaviour also involves destination choice, subsequent evaluations, and future behavioural intentions. Interrelationships between quality, satisfaction, and behavioural intentions have been studied by numerous tourism scholars (Compton & Love, 1995; Baker & Compton, 2000; Tian-Cole et al., 2002). Being a unique form of tourism, the antecedents of ecotourism behavioural intentions and satisfaction may vary from those of other conventional forms of tourism. For instance, hard-core ecotourists are more demanding for experience with wildlife and nature, and less demanding for service quality (McKercher, 2001). For hard-core ecotourists, satisfaction derived from participating in ecotourism activities and wildlife observation is of greater importance than the satisfaction derived from superior service

quality. However, quality attributes are more important for causal ecotourists who account for a greater share of ecotourism market (Weaver, 2001). Hence, the hypothesized model tested in this study explores whether the trip quality influences satisfaction (H5) in the context of an ecotourism experience (Figure 1).

Review of marketing and tourism literature can lead to confusion over differentiation of the two terms quality and satisfaction. For instance, an individual's reactions to attributes of a vacation destination may imply "satisfaction" in marketing literature, while the same may define "quality" in tourism literature (Compton & Love, 1995). In services-based industries such as tourism, the customer is a key component of the service delivery process, and the role of customer significantly affects the overall service quality (Zeithmal, Bitner & Gremler, 2009). In the context of tourism and leisure services, past studies have attempted to discriminate quality and satisfaction constructs based on the differences between quality of opportunity and quality of experience (Compton & Love, 1995). The quality of opportunity or performance refers to attributes of a service those are under service supplier's control, while quality of experience or satisfaction encompasses attributes that are under control of the visitor (Baker & Crompton, 2000). In other words, satisfaction is a psychological outcome or emotional state of mind an individual has after a recreational experience.

Past studies suggest higher levels of satisfaction and quality lead to increased loyalty, repeated visitations, greater tolerance of price increases, and enhanced reputation through positive word of mouth communications (Baker & Crompton, 2000; Tian-Cole et al., 2002). The hypothetical model proposed in this study examines the intermediary roles of trip quality (H8) and satisfaction (H10) in determining future behavioural intentions. Here, "trip quality" was considered synonymous with quality of performance. Attributes that are under ecotourism provider/ operators' control were measured in the perspective of visitors.

In the context of post-consumption evaluations, perceived value is the consumer's overall assessment of the utility of a product/service based on perceptions of what is received and what is given (Zeithaml, Bitner, & Gremler, 2009). In other words, perceived value is the benefits received for the price paid. Perceived value is strongly related to customer satisfaction, and higher perceived value results in higher customer satisfaction (Bojanic, 1996). However, it differs from concepts of quality and satisfaction. Marketing scholars argue that consumer behaviour can be better explained using perceived value (Gallarza & Saura, 2006). Empirical researches reveal the positive

impact of perceived value on future behavioural intentions and behaviours (Petrick, 2004; Lee, 2007). Petrick, Morais, and Norman (2001) suggest that satisfaction measurement should be used along with perceived value measures. Recent studies emphasize the moderating role of perceived value between service quality and satisfaction (Woodruff, 1997; McDougall & Levesque, 2000; Gallarza & Saura, 2006). An empirical study by Gallarza and Saura (2006) found that quality is an antecedent of perceived value, while McDougall and Levesque (2000) identified service quality and perceived value as the most important drivers of satisfaction. They further recommend incorporating perceived value and quality dimensions to customer satisfaction models. In a recent study on war-related tourism in Korea, Lee, Yoon, and Lee (2007) found that underlying dimensions of tourist's perceived value have a significant effect on tour satisfaction. Higher levels of satisfaction further influenced tourists to positive communications or destination recommendations to others. Hence trip quality, perceived value and satisfaction have been identified as valid predictors of future behavioural intentions. These theoretical and empirical relationships provide the foundation for alternative hypothesis "H6: Trip quality directly and positively affects perceived value", "H7: Perceived value directly and positively affects satisfaction", and "H9: Perceived value directly and positively affects future behavioural intentions" tested in the model.

Founded on these theoretical and empirical relationships in literature, this study proposes a model to examine the relationships among key variables at each stage of ecotourism behaviour. The relationship between previous visits and future behavioural intentions is examined in a quality-satisfaction domain. The attitude-behaviour relationship is widely studied and acknowledged by behavioural scientists. According to the multi-component view of attitudes, an attitude comprise of cognitive, affective and conative components (Ajzen, 1989). Rosenberg and Hovland (1960) described these three components to resemble beliefs, feelings, and behavioural intentions. The proposed model follows the multi-component view of attitudes. Accordingly, past visits represents cognitive component, trip quality and satisfaction represent affective component, while the intention to engage in ecotourism in the future resembles conative component. These model components also reflect the temporal nature of ecotourism experience.

Figure 1 illustrates the hypothesized model, and the alternative hypotheses tested by the model can be summarized as follows.

H1: Previous visits directly and positively affect future behavioural intentions

- H2: Previous visits directly and positively affect trip quality
 H3: Previous visits directly and positively affect perceived value
 H4: Previous visits directly and positively affect satisfaction
 H5: Trip quality directly and positively affects satisfaction
 H6: Trip quality directly and positively affects perceived value
 H7: Perceived value directly and positively affects satisfaction
 H8: Trip quality directly and positively affects future behavioural intentions
 H9: Perceived value directly and positively affects future behavioural intentions
 H10: Satisfaction directly and positively affects future behavioural intentions

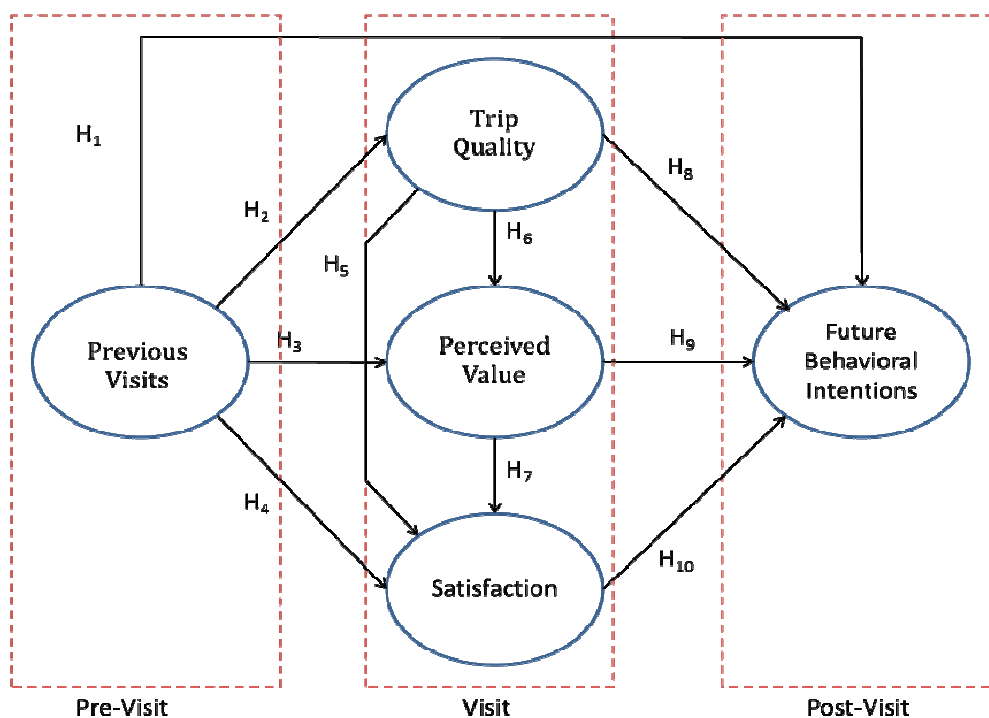


Figure 1. The conceptual model to explain the role of previous visits in determining future ecotourism behavioural intentions.

Methodology

Sample

For the purpose of this study, four forest-based tourism destinations were chosen as study sites based on visitation records. Accordingly, Sinharaja Forest Reserve, Horton Plains National Park, Yala National Park, and Minneriya National Park were

selected. During the period of September, 2009 to January 2010, the questionnaire was administered at these four highly visited forest-based tourism destinations in Sri Lanka. A total of 1360 questionnaires were administered with 340 questionnaires at each site. Visitors over 18 years of age were interviewed at the forest recreation area exits while they were leaving.

Questionnaire

A structured questionnaire was the primary research instrument. Performance-construct measures suggested by Tian-Cole et al. (2002) were used to measure trip quality. Trip quality was operationalized by five items in the questionnaire. Six items were initially utilized to measure future behavioural intentions. Both trip quality and future behavioural intentions were measured using a seven point Likert scale anchored by 1 = strongly agree to 7 = strongly disagree. Previous visits, perceived value and overall trip satisfaction were measured using single items in the questionnaire, as suggested by previous works (Tian-Cole et al., 2002; Yuan et al., 2008). The questionnaire was pre-tested using a sample of 25 visitors before finalizing.

Process

Data were collected during week-ends where highest number of visitors was expected. To minimize the selection bias, systematic sampling technique was adopted. Accordingly, every one-in-three visitors coming out of the park exit was selected to administer the survey. Visitors who complied with the request to participate in the survey were interviewed while those who declined to participate were treated as non-respondents. Prior to data analysis, data were cleaned by performing a consistency check. Incomplete questionnaires with many missing responses were discarded. Data analysis consisted of initial assessment of the validity of measurement constructs using a principal component exploratory factor analysis. This was followed by SEM procedure with Amos® to investigate the relationships among previous visits, trip quality, perceived value, satisfaction, and future behavioral intentions.

Results

A total of 547 individuals participated in the survey. Out of this, there were 525 usable questionnaires. This included 498 domestic visitors and 27 foreign visitors. General respondent socio-demographic characteristics are summarized in Table 1. Approximately 68% of the respondents were male. Most of the individuals who participated in this study were in the age group of 18 to 25 years. Approximately 73% of

the respondents had a high-school education or lower. This represents the highest level of education completed by respondents at the time that they participated in the survey. The average monthly income for domestic visitor respondents was US\$ 277, while the figure for foreign visitors was US\$ 6,625.

Table 1. General respondent socio-demographic profile.

Socio-demographic variable	Frequency	Percentage
Gender (n=513)		
Male	351	68.4
Female	162	31.6
Age (n=507)		
18 - 25 years	235	46.4
26 – 35 years	169	33.3
36 – 45 years	73	14.4
46 or older	30	5.9
Education (n=506)		
Secondary School	55	10.3
High-school	315	62.3
Bachelor's degree	103	20.3
Graduate degree	36	7.1
Marital status (n=503)		
Married	147	29.2
Unmarried	356	70.6
Individual monthly income (n=263)		Mean (USD)*
Local visitors (n=247)		277
Foreign visitors (n=16)		6625

* Based on the currency conversion rates as of 05-01-2010

Model Constructs and their Measurements

Previous visits, perceived value and overall satisfaction were measured with single items. The construct “trip quality” was operationalized by five items measured on a seven point Likert scale. To evaluate the validity and reliability of five items in measuring the latent construct, a principal component factor analysis with varimax rotation was performed. The Kaiser-Meyer-Olkin (KMO) test statistic of 0.841 suggested the sampling adequacy to perform a factor analysis while significance ($p = 0.00$) in Bartlett's test of sphericity indicated correlated measured items. According to Hair et al. (2005), factor loadings above 0.6 indicate independent variables identified a-priori, are well

represented in a particular factor, while variables with factor loadings below 0.4 represent poor representation. Hence, for this study, a lower level of 0.5 was used as the threshold. Results confirmed that five items used to measure trip quality are uni-factorial, i.e. five items indeed measure the same construct (Table 2). To assess the reliability of selected items in measuring the latent model construct, the Cronbach's alpha score was computed. It is generally accepted that a value greater than 0.7 for Cronbach's alpha indicates sufficient scale reliability (Cortina, 1993; Gliem & Gliem, 2003). The Cronbach's alpha exceeded 0.7 for the set of five measured items of trip quality.

Table 2. Means, factor loadings and reliabilities of measurement items.

Variable/Measurement item	Mean \pm Standard Deviation	Factor loading	Variance explained (%)	Cronbach's alpha
Trip quality				
Amenities (TQ3)	3.98 \pm 1.01	0.991	63.96	0.854
Cleanliness (TQ4)	4.40 \pm 0.85	0.855	12.97	
Staff/Volunteers (TQ2)	4.68 \pm 0.93	0.792	10.87	
Education (TQ1)	4.88 \pm 0.97	0.739	7.94	
Information (TQ5)	4.76 \pm 0.99	0.681	4.24	
Future behavioural intention				
Likelihood of recommending the destination to others (BI2)	5.14 \pm 1.12	0.921	64.42	0.709
Likelihood of revisiting this destination in the future (BI3)	3.84 \pm 1.01	0.872	27.67	
Future involvement in ecotourism (BI1)	5.23 \pm 1.19	0.571	7.91	
Past visits				
How many times have you visited forest-based attractions in Sri Lanka?	2.31 \pm 2.01			
Perceived value				
Today's visit offered good value for the money	5.44 \pm 1.07			
Satisfaction				
Overall satisfaction with the visit	5.96 \pm 0.99			

A set of six items was initially used to measure future behavioural intentions. Exploratory factor analysis conducted to assess the validity of measurement items produced two distinct factors with measurement items "interest to participate in ecotourism in the future", "willingness to participate in ecotourism in one year", "likelihood of participating in ecotourism in one year", and "willingness to become a member of an environmental conservation organization" loading on a single factor. Since the measurement item "willingness to become a member of an environmental conservation organization" had a poor loading on the factor (loading of 0.449), it was omitted from further analysis. A composite average score was computed for this factor, and this was named as "future involvement in ecotourism". To recheck the performance of the new composite variable/factor along with other two measured variables, a factor

analysis was performed (KMO statistic = 0.58 and $p = 0.001$ for Bartlett's test). Yielding of a uni-factorial solution with satisfactory factor loadings indicated that the three items measured the same underlying construct (Table 2).

Assessing the Measurement Model

The model was built in Amos®, and the initial structural equation model to predict ecotourism behavioural intentions is shown in Figure 2. Amos® estimates both measurement and structural models simultaneously. Each latent variable and its predictors collectively form the measurement model, while structural model examines the hypothetical relationships between endogenous and exogenous variables in the model. In the structural equation model, indicators TQ1, TQ2, TQ3, TQ4 and TQ5 represent education, staff/volunteers, amenities, cleanliness and quality of information respectively. These indicators were used to measure the latent construct trip quality. Indicators BI1, BI2 and BI3 represent future involvement of ecotourism, likelihood of recommending the destination and the likelihood of revisiting the destination respectively (Figure 2).

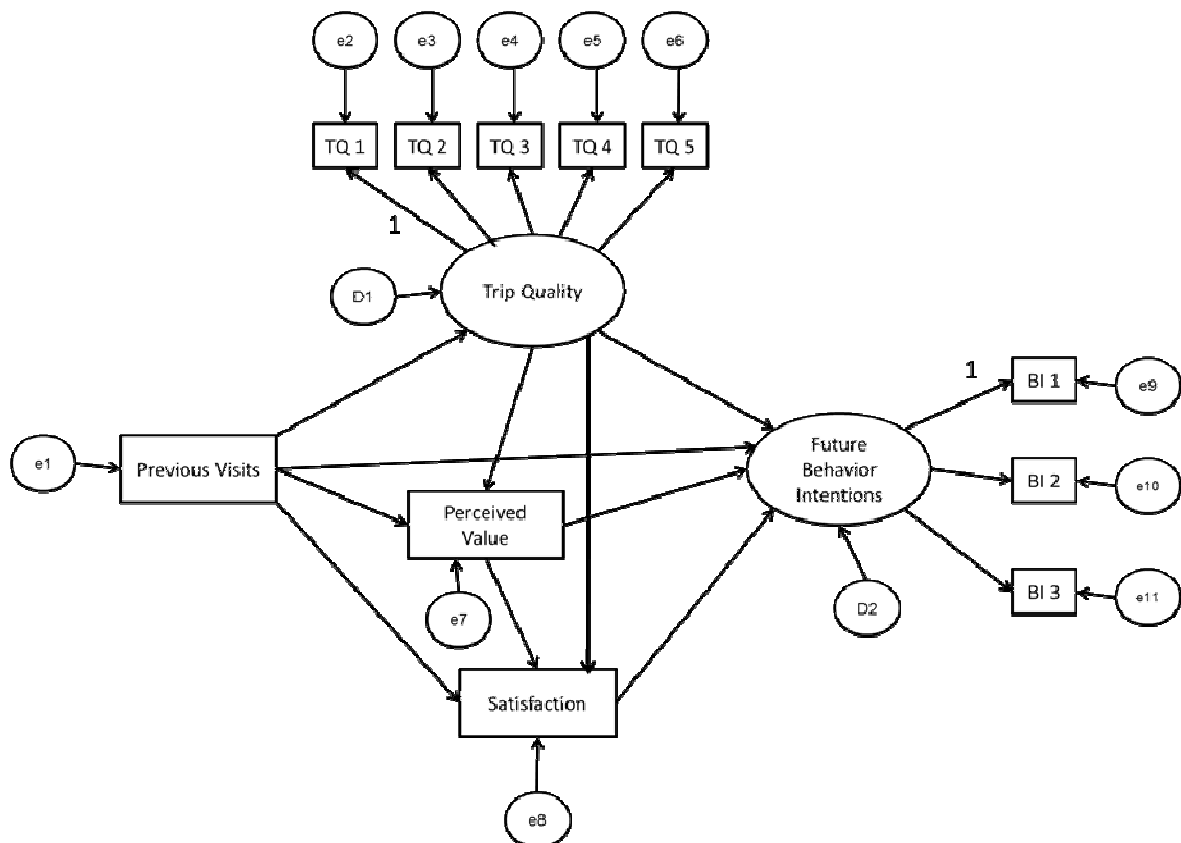


Figure 2. Structural equation model to investigate the role of previous visits on future behavioural intentions.

In measurement model fitting, SEM performs a confirmatory factor analysis to assess whether the observed variables chosen by the researcher to represent a latent construct actually do serve the purpose. A good measurement model should adequately account for both convergent and discriminate validity. In convergent validity it is assessed whether there's a *convergence* in indicators that were used to measure latent constructs. According to Hair et al. (2005) convergent validity requires evidences of item reliability, construct reliability and average variance extracted. Convergent validity of each factor was tested by examining the standardized factor loadings. Factor loadings of 0.50 or higher, preferably 0.70 or higher for indicator variables are deemed acceptable. For indicator variables used in this analysis, factor loadings exceeded 0.5 for all indicator variables except for BI1. In addition, *t-values* above 2.0 indicate the statistical significance of associated factor loadings. As indicated in Table 3, *t-values* for all standardized factor loadings of measurement items were significant at $p = 0.01$ significance levels.

According to Hair et al. (2005), Composite Reliability (CR) and Average Variance Extracted (AVE) are important indices in testing the reliability of constructs. CR values in excess of 0.7 considered acceptable while the minimum threshold for AVE is 0.5. CR and AVE scores were computed for the two latent variables using standardized regression weights for respective indicator variables, and results are summarized in Table 3. Accordingly CR and AVE scores for both latent constructs "trip quality" and "future behavioural intentions" exceeded minimum threshold values, indicating satisfactory convergent validity.

Table 3. Convergent and discriminant validity of measurement scales.

Variable	Factor loadings	Standardized factor loading	t-value	CR	AVE
Trip quality					
TQ 1	1.000	0.665	-	0.862	0.561
TQ 2	1.061	0.736	14.81**		
TQ 3	1.469	0.904	17.26**		
TQ 4	1.096	0.822	16.21**		
TQ 5	0.876	0.571	11.87**		
Future behavior intention					
BI 1	1.000	0.371	-	0.753	0.532
BI 2	2.286	0.891	8.34**		
BI 3	2.018	0.811	8.04**		

**Significant at $p < 0.01$ level

Discriminant validity was tested by comparing the AVE for the two latent constructs with the estimated squared correlation between the two constructs (Fornell & Larcker, 1981). To demonstrate good discriminant validity, the AVE should be greater than the squared correlation for the model constructs under investigation. The estimated correlations between model constructs are provided in Table 4. The AVE values for “trip quality” and “future behavioral intention” were 0.56 and 0.53 respectively. The squared correlation between the two latent construct was estimated to be 0.55. Based on the evidence, the latent construct “trip quality” met the criterion for adequate discriminant validity while “future behavioral intention” nearly met the criterion. Hence it was presumed that the measurement model met discriminant validity.

Table 4. Estimated correlations between model constructs.

	Previous visits	Trip quality	Perceived value	Satisfaction
Trip quality	0.14			
Perceived value	0.09	0.21		
Satisfaction	0.07	0.21	0.51	
Future behavioural intention	0.33	0.74	0.27	0.28

Assessing the Structure Model Fit

Structural model tests the causal relationships between theoretical constructs specified in the model. Structural model fitting in Amos[®] generate numerous model fit indices. The Chi-square goodness of fit test (χ^2) indicated a value of 80.731 with 37 degrees of freedom (d.f.). Although non-significance is desired for χ^2 test, the result was significant at $p = 0.001$ level. The χ^2 test is sensitive to sample size. For larger samples, it usually gives significance. Hence, the χ^2 value divided by its degrees of freedom is considered a more appropriate test for larger samples (Hair et al., 2005). A $\chi^2/d.f.$ ratio of less than five is deemed acceptable. For the hypothetical model, $\chi^2/d.f.$ ratio was 2.181, and hence indicated a good model fit. Other goodness of fit indices and alternative indices reported in Table 5 further indicated good model fit under their respective decision criteria. These evidences suggest that the sample data satisfactorily fit to the structural model. Furthermore, modification indices suggested no significant improvements to the model and hence, this was accepted as the final model.

Table 5. Structural model fit indices for the hypothesized model.

Indices	Index value	Decision criteria	Decision
Chi-square test			
Chi-square	80.731	$p > 0.05$	Rejected
Chi-square /d.f.	2.181	< 5	Accepted
Goodness of fit indices			
GFI	0.973	> 0.9	Accepted
AGFI	0.952	> 0.9	Accepted
PGFI	0.545	> 0.5	Accepted
NIF	0.964	> 0.9	Accepted
Alternative indices			
CFI	0.980	> 0.9	Accepted
RMSEA	0.048	< 0.05	Accepted
RMR	0.035	< 0.05	Accepted

Path Analysis and Hypothesis Testing

Path analysis method is useful in testing theoretically meaningful relationships among variables that are often difficult to specify in regression models (Schumacker & Lomax, 2004). Table 6 summarizes the direct, indirect and total effects between all the model constructs. Positive parameter coefficients indicated positive relationships between variables. Four paths indicated direct effects only, while the rest had indirect effects involved. The total effect of previous visits on future behavioural intentions was 0.334.

Table 6. Direct, indirect and total effects between model constructs.

	Path	Direct effect	Indirect effect	Total effect
Trip quality	← Previous visits	0.139	-	0.139
Perceived value	← Previous visits	0.058	0.028	0.086
Perceived value	← Trip quality	0.201	-	0.201
Satisfaction	← Previous visits	0.018	0.056	0.074
Satisfaction	← Perceived value	0.482	-	0.482
Satisfaction	← Trip quality	0.103	0.097	0.200
Future behavioural intention	← Previous visits	0.226	0.108	0.334
Future behavioural intention	← Perceived value	0.067	0.044	0.110
Future behavioural intention	← Satisfaction	0.091	-	0.091
Future behavioural intention	← Trip quality	0.685	0.031	0.717

The positive direct effect of previous visits on future behavioural intentions was 0.226 while the indirect effect through trip quality, perceived value, and satisfaction was 0.108. The total effects of trip quality, perceived value, and satisfaction on future behavioural intentions were 0.717, 0.091, and 0.110 respectively. Apart from its positive direct effect of 0.685, trip quality influenced future behavioural intentions indirectly through two pathways; trip quality→ perceived value→ satisfaction→ future behavioural intentions, and trip quality→ satisfaction→ future behavioural intentions. Hence previous visits and trip quality can be identified as important antecedents of future behavioural intentions to engage in ecotourism. For the endogenous variable “satisfaction”, perceived value and trip quality seems to be the crucial predecessors with higher positive total effects.

Standardized path coefficients along with their t-statistics were used for hypothesis testing (Table 7). Significant relationships were observed between previous visits and trip quality, trip quality and perceived value, perceived value and satisfaction, trip quality and satisfaction, previous visits and future behavioural intentions, satisfaction and future behavioural intentions, and trip quality and future behavioural intentions. Hence seven out of ten hypotheses tested using the structural model were accepted at $p < 0.05$ significance level ($H_1, H_2, H_5, H_6, H_7, H_8,$ and H_{10}). Four paths were significant at $p < 0.001$ level. Alternative hypothesis $H_3, H_4,$ and H_9 were rejected at $p < 0.05$ significance level.

Table 7. Hypothesis testing with standardized path coefficients.

	Path		Standardized coefficient	t-statistic	P
Trip quality	←	Previous visits	0.139	2.996	0.003*
Perceived value	←	Previous visits	0.058	1.346	0.178
Perceived value	←	Trip quality	0.201	4.290	0.000**
Satisfaction	←	Previous visits	0.018	0.476	0.634
Satisfaction	←	Perceived value	0.482	12.500	0.000**
Satisfaction	←	Trip quality	0.103	2.491	0.013*
Future behavioural intention	←	Previous visits	0.226	5.275	0.000**
Future behavioural intention	←	Perceived value	0.067	1.632	0.103
Future behavioural intention	←	Satisfaction	0.091	2.195	0.028*
Future behavioural intention	←	Trip quality	0.685	7.377	0.000**

* $p < 0.05$ and ** $p < 0.001$

The magnitude of standardized coefficient reflects the strength of relationship. Accordingly, trip quality had the strongest significant relationship with future behavioural intention (standardized coefficient = 0.685, $p < 0.001$). Perceived value also showed a strong positive relationship with satisfaction (standardized coefficient = 0.482, $p < 0.001$). In addition, relationships between trip quality and perceived value, and previous visits and future behavioural intentions showed relatively strong positive relationships. In Figure 3, paths indicated with solid continuous arrows reflect significant relationships, while paths indicated in dashed lines reflect deleted or insignificant paths. In essence, Figure 3 provides evidences for four important pathways where previous visits influence future behavioural intentions:

1. Previous visits → trip quality → perceived value → satisfaction → future behavioural intentions
2. Previous visits → trip quality → satisfaction → future behavioural intentions
3. Previous visits → trip quality → future behavioural intentions
4. Previous visits → future behavioural intentions

Squared multiple correlations associated with endogenous model constructs are also indicated in Figure 3. Accordingly, previous visits, trip quality, perceived value, and satisfaction explained 64% of the variance in future behavioural intentions. This suggests that the proposed model satisfactorily explains future behavioural intentions using the selected predictors.

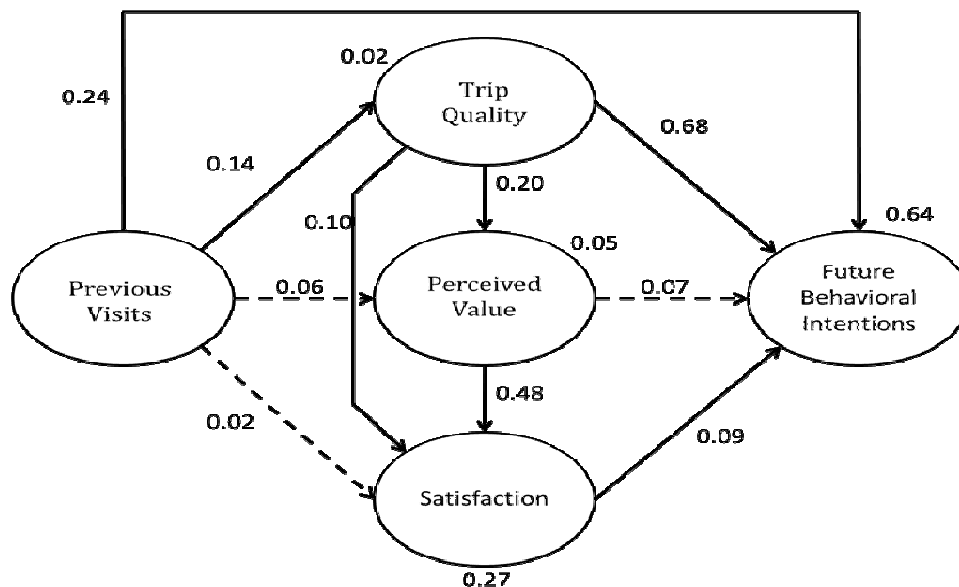


Figure 3. Path diagram with causal relationships.

Discussion and Conclusion

The structural model developed in this study examined the ecotourist behaviour by exploring causal relationships among previous visits, trip quality, perceived value, satisfaction, and future behavioural intentions. Interrelationships among quality, satisfaction, and behavioural intentions have been previously examined by numerous travel research scholars (Compton & Love, 1995; Baker & Compton 2000; Tian-Cole et al., 2002). The relationship between previous experiences/visits and future behaviours is also well documented (Morwitz, 1997; Ouellette & Wood, 1998). This study investigated the mediating roles of trip quality, perceived value and satisfaction in the relationship between previous visits, and future behaviours. The model expands the understanding of antecedents of future behavioural intentions, and especially contributes to consumer research in ecotourism from the theoretical perspective.

An important finding of this study was that trip quality tends to highly influence future behavioural intentions. The direct influence of trip quality was found to be much stronger than the indirect influence through perceived value and satisfaction. These results contradict the findings of Chen and Tsai (2007) who reported insignificant or uncertain effect of trip quality on future behavioural intentions. In this empirical model, the trip quality was considered analogous to “quality of performance” described in Baker and Crompton (2000), and only the attributes that are under the control of ecotourism provider/operator were measured in the perspective of visitor. With ecotourism being a unique and knowledgeable form of tourism that demands more for nature experience and less for facilities, one can expect quality attributes to be less important. However, as suggested by Weaver (2001), quality attributes are more important for causal ecotourists who in general, account for the greater share of ecotourism market. A recent study revealed that the majority of visitors to forest-based attractions in Sri Lanka fall in to the category of soft-core or causal ecotourists (Perera et al., 2011). This may explain the strong positive relationship observed between trip quality and future behavioural intentions.

In this study, the attributes measured to determine trip quality included conservational or educational activities, staff/volunteers, amenities/infrastructure, cleanliness and quality of information. “Wildlife observation” which may be an important factor, was not included as an attribute since in most circumstances it is out of the control of ecotourism operator, especially in self-guided tours. On the other hand, as suggested by Tian-Cole et al. (2002), “nature or wildlife observation is so pervasive in

visiting a forest-based attraction that it permeates into all aspects of the experience". The selected attributes represented essential components of a typical ecotourism product. Even the attribute "amenities/infrastructure" can be referred to access roads, bird watching platforms, educational facilities and eco-lodges etc. in the context of ecotourism. Hence it is likely that, even for hard-core ecotourist, trip quality can serve an important precursor for future behavioural intentions.

The observed strong positive relationship between previous visits and future behavioural intentions in the model supports Hilgard and Bower's concept of "generalization phenomenon" or the "carryover effect" in making similar choices (Hilgard & Bower, 1981). Such a relationship between previous visits and future behaviours has been documented in previous works (Williams et al., 1992; Morwitz, 1997; Ouellette & Wood, 1998; Yuan et al., 2008). Previous visits having direct and indirect effects on future behavioural intentions in quality-satisfaction domain further buttresses Pearce's (1982) argument of tourism experience percolating beyond a particular tourism destination, and having impacts on pre-visit, visit, and post-visit evaluation stages. Relatively strong positive relationships observed between trip quality and perceived value, as well as between perceived value and satisfaction further reconfirms the mediating role of perceived value between service quality and satisfaction. The tested model further emphasizes perceived value as a critical antecedent of satisfaction.

According to the model, perceived value showed no significant relationship with future behavioural intentions. This may be explained by visitors to forest-based attractions having environmentally oriented attitudes, and are more interested in having a quality experience. It appears that although perceived value plays a mediatory role between trip quality and overall satisfaction, deriving a better value for money may be secondary. Previous visits also showed a significant relationship with trip quality. This may be explained by visitors with previous experiences of visiting forest-based attractions in Sri Lanka tend to perceive that current trip would provide better quality or experience with ample opportunities to observe wildlife.

The study findings have several implications for recreational managers and ecotourism operators. In confirmatory with past tourism studies (Chen & Tsai, 2007; Lee et al., 2007; Yuan et al., 2008), the present study suggests previous visits, trip quality, satisfaction and perceived value as important predictors of ecotourists' intention to revisit and recommend the destination as well as their propensity to engage in ecotourism in the future. Among these, trip quality is of special importance. In the context of forest-

based recreation in Sri Lanka, recreational managers and ecotourism operators can better predict ecotourists' future behavioural intentions by assessing their subjective judgment of the trip quality. Visitors' revisit and recommendation intentions directly affect the ecotourism destination of interest, while visitors' intentions to involve in ecotourism in the future affect the ecotourism industry as a whole.

The model suggests that trip quality is an antecedent of perceived value, while perceived value significantly influences satisfaction. This calls for recreational managers and ecotourism operators to enhance the quality of their ecotourism products in such a way to give better value for the price. Enhancing trip quality may require building infrastructure to facilitate wildlife observation, improving on-site education, interpretation, information, and introduction of new ecotourism activities. Pricing strategies for ecotourism products should consider creating better value for customers. Ecotourism operations that provide quality experiences at a good price are likely to have satisfied and growing visitor base. In a typical ecotourism experience, the extent to which an ecotourist can observe the wildlife or nature without disturbances can have stronger effect on overall satisfaction than anything else, especially for a hard-core ecotourist. Hence, incorporating effective wildlife management and visitor controlling strategies are also important.

Study Limitations and Paths for Future Research

Present study has certain limitations, and lays the foundation for future research on several lines. In this study, the data collection was carried out over a four month period from September 2009 to January 2010. There was a need for accelerated data collection due to time constraints. Hence the sample captured in this study represents only a section of the visitors to forest-based recreational sites in Sri Lanka. Data collected at least in a one year period would have yielded a more accurate cross-section of visitors to forest-based attractions in Sri Lanka.

In this study, the proposed model was developed to explain the ecotourist behaviour. However, information from all visitors who visited study sites was used in behaviour modelling. Hence, it essentially explains the behaviour of individuals visiting forest-based attractions in Sri Lanka rather than the behaviour of true ecotourists. Numerous ecotourism scholars have contested defining ecotourists based on the type of sites visited, or on-site activities criteria (Tao et al. 2004; Kerstetter et al., 2004, Perera et al., 2011). Using a motivational and behavioural approach, Perera et al. (2011) developed profiles of visitors to forest-based destinations in Sri Lanka, and identified

four distinct visitor groups i.e. ecotourists, picnickers, egoistic tourists, and adventure tourists. Hence, future studies can be conducted to better explain true ecotourist behavior by initially developing visitor profiles with sufficiently large samples, and then testing the model on visitor segment that represent ecotourists.

Present study was solely focused on visitors to forest-based attractions in Sri Lanka. In fact most studies on ecotourism have been based on national parks or wildlife refuges (Uysal et al., 1994; Tian-Cole et al., 2002; Kerstetter et al., 2004; Lee, 2007). However, the concept of ecotourism goes beyond forest-based sites, and may include any nature-based or culturally significant destination. Future studies can include other ecotourism operations associated with marine and other aquatic ecosystems, as well as ecotourism operations focused on rural and cultural attractions. However, this study results can be generalized satisfactorily for visitors to forest-based attractions since the study sites selected included variety of forest types.

The proposed model showed a satisfactory performance with predictive model constructs accounting for 64% of the variance in future behavioural intentions. In this hypothesized model, satisfaction and perceived value were measured using single overall measures. Tourism scholars debate on the appropriateness of using single overall measures over multiple items to measure satisfaction and perceived value. Some studies have utilized multiple items to measure satisfaction (Tian-Cole et al., 2002). Future studies can also experiment with improving the proposed model by using multiple items to measure satisfaction and perceived value.

References

- Ajzen, I. (1989). Attitude structure and Behavior. In R. P. Anthony, J. B. Steven, & A. G. Greenwald (Eds.), *Attitude Structure and Function* (pp. 241- 245). Hillsdale, NJ: Lawrence Erlbaum Associates, Inc.Publishers.
- Baker, D., & Crompton, J. (2000). Quality, satisfaction and behavioral intentions. *Annals of Tourism Research*, 27(3), 785-804.
- Bojanic, D. C. (1996). Consumer Perceptions of Price, Value and Satisfaction i the Hotel Industry: An Exploratory Study. *Journal of Hospitality and Leisure Marketing*, 4(1), 5-22.
- Chen, C., & Tsai, D. (2007). How destination image and evaluative factors affect behavioral intentions? *Tourism Management*, 28(4), 1115-1122.
- Christ, C. (2005). Ecotourism is Transforming the Travel Industry. *Choices*, 11(6).

- Compton, J. L., & Love, L. L. (1995). The predictive validity of alternative approaches to evaluating quality of a festival. *Journal of Travel Research, 34*(11), 11-24.
- Cortina, J. M. (1993). What Is Coefficient Alpha? An Examination of Theory and Applications. *Journal of Applied Psychology, 78*(1), 98-104.
- Department of National Planning (2010). *Sri Lanka; The Emerging Wonder of Asia, Mahinda Chinthana, Vision for the Future. The Development Policy Framework of the Government of Sri Lanka*. Ministry of Finance and Planning.
- Fornell, C., & Larcker, D. F. (1981). Evaluating Structural Equation Models with Unobservable Variables and Measurement Error: Algebra and Statistics. *Journal of Marketing Research, 18*(1), 39-50.
- Gallarza, M. G., & Saura, I. G. (2006). Value dimensions, perceived value, satisfaction and loyalty: an investigation of university students' travel behaviour. *Tourism Management, 27*(3), 437-452.
- Gliem, J. A., & Gliem, R. R. (2003). Calculating, Interpreting, and Reporting Cronbach's Alpha Reliability Coefficient for Likert-Type Scales. *Midwest Research to Practice Conference in Adult, Continuing, and Community Education*, (pp. 82-88).
- Hair, J. F., Anderson, R. E., Tatham, R. L., & Black, W. C. (2005). *Multivariate Data Analysis* (6 ed.). Upper Saddle River, NJ: Prentice Hall.
- Higham, J., & Carr, A. (2002). Ecotourism Visitor Experiences in Aotearoa/New Zealand: Challenging the Environmental Values of Visitors in Pursuit of Pro-environmental Behavior. *Journal of Sustainable Tourism, 10*(4), 277-294.
- Hilgard, E., & Bower, G. (1981). *Theories of learning*. Englewood Cliffs, NJ: Prentice-Hall.
- Kerstetter, D. L., Hou, J. S., & Lin, C. H. (2004). Profiling Taiwanese Ecotourist Using a Behavioral Approach. *Tourism Management, 25*, 491-498.
- Lee, T. H. (2007). An ecotourism behavioural model of national forest recreation areas in Taiwan. *International Forestry Review, 9*(3), 771-785.
- Lee, C., Yoon, Y., & Lee, S. (2007). Investigating the relationships among perceived value, satisfaction, and recommendations: The case of the Korean DMZ. *Tourism Management, 28*(1), 204-214.
- McDougall, G. H., & Levesque, T. (2000). Customer satisfaction with services: putting perceived value into the equation. *Journal of Services Marketing, 14*(5), 392-410.
- McKercher, B. (2001). The business of Ecotourism. In D. B. Weaver (Ed.), *The encyclopedia of ecotourism* (pp. 565-578). New York: CABI Publishing.

- Morwitz, V. G. (1997). Why Consumers Don't Always Accurately Predict Their Own Future Behavior. *Marketing Letters*, 8(1), 57–70.
- Ouellette, J. A., & Wood, W. (1998). Habit and intention in everyday life: The multiple processes by which past behavior predicts future behavior. *Psychological Bulletin*, 124(1), 54-74.
- Pearce, P. L. (1982). Perceived changes in holiday destinations. *Annals of Tourism Research*, 9, 145–164.
- Perera, P., Vlosky, R., & Wahala, S. (2011). Motivational and Behavioral Profiling of Visitors to Forest-based Recreational Destinations in Sri Lanka. . *Asia Pacific Journal of Tourism Research*, DOI:10.1080/10941665.2011.627353.
- Petrick, J. F. (2004). The roles of quality, value, and satisfaction in predicting cruise passengers' behavioral intentions. *Journal of Travel Research*, 42, 397–407.
- Petrick, J., Morais, D. D., & Norman, W. C. (2001). An examination of the determinants of entertainment vacationers' intentions to revisit. *Journal of Travel Research*, 40, 41–48.
- Rosenberg, M. J., & Hovland, C.I. (1960). Cognitive, Affective and Behavioral Components of Attitudes." In M. J. Rosenberg, C. I. Hovland (eds.), *Attitude Organization and Change: An Analysis of Consistency Among Attitude Components*. New Haven: Yale University Press.
- Schumacker, R. E., & Lomax, G. (2004). *A Beginner's Guide to Structural equation Modeling* (2 ed.). Mahwah, New Jersey: Lawrence Erlbaum Associates Publishers.
- SLTDA (2010). *Tourism Research and Statistics*. Retrieved October 29, 2010, from <http://www.slt-da.gov.lk/>
- SLTDA (2011). *Annual statistical report, 2011*. Sri Lanka Tourism Development Authority.
- Tao, C., Eagles, P. F., & Smith, S. L. (2004). Profiling Taiwanese Ecotourists Using a Self-definition Approach. *Journal of Sustainable Tourism*, 12(2), 149-168.
- Tian-Cole, S., Crompton, J. L., & Willson, V. L. (2002). An empirical investigation of the relationships between service quality, satisfaction and behavioral intentions among visitors to a wildlife refuge. *Journal of Leisure Research*, 34(1), 1-24.
- TIES (2005). *Global Ecotourism*, The International Ecotourism Society, Washington, DC.
- TIES (2010). Retrieved August 12, 2010, from The International Ecotourism Society: http://www.ecotourism.org/site/c.orLQKXPCLmF/b.4835303/k.BEB9/What_is_Ecotourism__The_International_Ecotourism_Society.htm

- Uysal, M., McDonald, C. D., & Martin, B. S. (1994). Australian Visitors to US National Parks and Natural Areas. *International Journal of Contemporary Hospitality Management*, 6(3), 18-24.
- Weaver, D. (2001). *Ecotourism*. Milton, Qld: John Wiley & Sons Australia Ltd.
- Williams, C., & Buswell, J. (2003). *Service quality in leisure and tourism*. UK: CABI Publishing.
- Williams, D. R., Patterson, M. E., & Roggenbuck, J. W. (1992). Beyond the commodity metaphor: Examining emotional and symbolic attachment to place. *Leisure Sciences: An Interdisciplinary Journal*, 14(1), 29-46.
- Woodruff, R. B. (1997). Customer value: The next source for competitive advantage. *Journal of the Academy of Marketing Science*, 25(2), 139-153.
- Yuan, J., Morrison, A., Liping, A., Cai, L. A., & Linton, S. (2008). A Model of Wine Tourist Behaviour: a Festival Approach. *International Journal of Tourism Research*, 10, 207–219.
- Zeithaml, V. A., Bitner, M. J., & Gremler, D. D. (2009). *Services Marketing: Integrating Customer Focus Across the Firm* (5th ed.). Singapore: McGraw Hill.