Assessment of Tourist Satisfaction in the Simien Mountains National Park, Ethiopia

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Abstract

This study was aimed to measure the satisfaction level of tourists who visited the Simien Mountains National Park (SMNP) using six variables: product quality, quality of service, accommodation, hospitality, infrastructure, and tourist information. Tourist satisfaction surveys are essential tools used to gather information regarding tourists' opinions. Among the various measures of tourist satisfaction and theoretical models, the study used the perceived performance quality model. A cross-sectional study design and a mixed methods approach were used. A sample of 370 foreign tourists was randomly selected to complete self-administered questionnaires. Key informant interviews were also carried out. The Statistical Package for Social Science (SPSS) version 20 was employed to analyze the quantitative data. To determine the level of association of explanatory variables, a multiple regression model was applied. The majority (65.3%) of the respondents was satisfied or very satisfied with their visiting experience in SMNP. Product quality (β1 = .379), service quality (β2 = .315), infrastructure (β5 = .232) and accommodation (β3 = .211) were significantly correlated with overall tourist satisfaction at (P < 0.001). Product quality carried the heaviest weight for tourists' satisfaction.

The results showed that quality dimensions such as product quality, accommodations, service quality, infrastructure, and information and their components contribute directly to the satisfaction of tourists. The capacity of service providers, infrastructures in and around the park, and ecotourism facilities are in need of enhancement without impairing the park’s natural and exceptional scenic value.

Key words: Tourists, satisfaction, Simien Mountains National Park, Ethiopia, sustainability.

Introduction

Destination attributes and tourist satisfaction

Tourist satisfaction surveys are one of the most essential tools used to gather information regarding tourists’ opinions of a destination (Vinh, 2013). Destination attributes such as effectiveness of service, cleanliness of accommodation, manners of inhabitants, professionalism
of employees, efficiency of service, the natural environment including weather conditions, price and value of services, ease of communication, safety can all be used to evaluate the level of tourist satisfaction of a particular destination (Endalkachew and Endalew, 2018; Binyam, 2011; Yuskel, 2000).

Measuring customer satisfaction is one of the most frequently examined topics in the hospitality and tourism field (Binyam, 2011, Fornell 1992, Yuskel, 2000) because it plays an important role in the survival of the tourism industry (Neal & Gursoy, 2008). Tourists' satisfaction depends on the facilities, services, and programmes that are available besides their recreational experiences (Al-Ababneh, 2013; Clerides and Pashourtidou, 2007; Mihaela, 2014). Tourists interact with many different components of the destination product, which is a package of diverse attributes that includes not only the historical sites and natural beauty of spectacular scenery (Endalkachew, Aschallew and Mulugeta, 2015), but also the wide range of services and facilities catering to the everyday needs of tourists (Laws, 1995).

The performance of interaction with the different components of the tourism product affect tourist satisfaction (Zhou, 2018). The quality of these interactions and experiences are the basis for overall holiday satisfaction and future travel decisions (Teare, 1998, Weiermair, 2000). According to Fornell (1992) tourists express their satisfaction or dissatisfaction after they have experienced tourism services and products. Tourists who are highly satisfied with the product and service quality, are generally motivated to revisit a destination and may recommend the destination to their friends (Huang et al., 2015). High quality service could develop positive service perceptions, results in high satisfaction, whereas poor quality of service develops negative perceptions of service and dissatisfaction (Binyam, 2011).

**Theoretical models of measuring tourist satisfaction**

Theoretical models of measuring tourist satisfaction have been adopted from marketing research and extensively studied by different scholars, for instance Kano's service quality measure model (Kano, 1984), the perceived performance model (Tse and Wilton, 1988), Parasuraman et al., (1988) who developed the SERVQUAL multi criteria service quality model, the expectancy-disconfirmation model (Pizam & Milman, 1993), the holiday satisfaction model developed by Tribe and Snaith (1998), performance quality (Baker and Crompton, 2000), and the multiple linear regression by Meng et al. (2008). To determine the tourist satisfaction level, four major theoretical approaches have been discussed in the tourism literature (Yoon and Uysal, 2005); namely disconfirmation theory, equity theory, norm theory and perceived-only performance theory. Of these, the expectation disconfirmation theory and perceived-only performance theory are most frequently used (Frero, and Gomez, 2017; Lankton and McKnight, 2012). The expectation disconfirmation theory is based on the post-purchase concept (Yoon & Uysal, 2005), where tourist satisfaction is measured by a gap analysis between tourists' expectations and travel perceptions of services offered (Hassan and Shahnewaz, 2014). The perceived-only performance approach measures tourist satisfaction with the actual performance of the products/services, regardless of the existence of any previous expectations (Kozak, 2001).

The percieved-only performance model (Tse and Wilton, 1988) suggests that customer's satisfaction or dissatisfaction with a product can be assessed only by examining their evaluation of the actual performance. It has been argued that regardless of the existence of any previous expectations, the customers are likely to be satisfied when a product or service simply meets a certain level of quality (Lee and Yoo, 2000). Baker and Crompton (2000) also state that since performance quality is under management’s control, the model may be more useful than other
theories because the basis for the construction of a tool for a tourism provider, is to accurately evaluate customer satisfaction levels.

Using the perceived-performance approach, various destination variables were identified. For instance Wang and Qu (2006) studied tourist satisfaction using twelve variables (i.e. accommodations, shaping facilities, restaurant facilities, quality of accommodation, personal safety, tourist information, beach cleanliness, and state of the roads, beach promenades, drinkable water, and traffic flow and parking facilities). While, Clerides & Pashourtidou (2007) used only six (i.e. accommodation, restaurants, cleanliness of natural environment, taxi and bus service) as basis for measuring tourist satisfaction. But other research includes the important destination attributes such as efficiency of services and cleanliness of accommodation, courtesy of residents, courtesy of employees, efficiency of service at tourist facilities, the natural environment of the area, the price and value of services, ease of communication, safety aspects, weather conditions of the area etc., which were used to assess the level of tourist satisfaction of a particular destination (Yuskel, 2001). Based on the aforementioned evidences, the purpose of this study is to measure the overall satisfaction level of tourists in SMNP using six summarised variables such as product quality, quality of service, accommodation, hospitality, infrastructure, and tourist information. The hypothesis of this study is that there is a correlation between tourist satisfaction and independent variables.

Conceptual framework of the study

![Conceptual framework](image)

**Figure 1. Constructed conceptual framework (Authors own)**

Research Methods

Description of the study area

The Simien Mountains National Park is located in the northern highlands of Amhara National Regional State, 122 km northeast of Gondar City in Ethiopia. It was established in 1969 and after ten years, in 1978, it was registered as a World Heritage Site due to its grand scenery, rare and endemic mammal species, and the ancient traditional living style of the people living in this remote area (Endalkachew and Endalew, 2018). The park lies within five districts i.e. Debark, Adi Arkay, Beyeda, Janamora, and Tselemt, bordering 38 Kebeles of these districts.
The topographical ruggedness with its steep escarpments, rolling hills in the highlands, and flat terraces dissected by rivers in the lowlands, are peculiar characteristics of the park (Endalkachew and Endalew, 2018). Erosion on the Simien Mountains has created one of the most spectacular landscapes in the world, with jagged mountain peaks, deep valleys and sharp precipices dropping some 1,500 meters (Nievergelt, 1998). The temperature of the park drops below 0°C in winter months and some mountains are covered by snow lasting for a couple of days (Hurni, 1986).

The SMNP is a component of the Afro-alpine centre of plant diversity, with about 550 higher plant species, 12% of which are endemic species (Puff and Nemomissa, 2005). The Park is home to a number of threatened and endemic species of animals, i.e. Walia ibex, Ethiopian wolf, Gelada baboon and Menilek’s Bushbuck (Nievergelt, 1998, Endalkachew, 1999). It is known that these prized animals are the flagship species of the country. There are habitats for 182 bird species, six of which are endemic (Endalkachew and Endalew, 2018; Nievergelt, Good, and Guttinger, 1998).
The park has huge biophysical tourism resources with the potential to attract visitors from around the globe if properly managed and developed.

Research design

A cross-sectional study and survey research design was used to describe characteristics of visitors in the SMNP. A questionnaire-based survey was designed in order to address the objectives of this study.

Population of the study

The target population considered in this study was 4767 foreign tourists who visited Simien Mountain National Park.

Sample and Sampling Techniques

Both probability and non-probability sampling methods were employed. Of the fifteen campsites in the park, the researchers selected three (Buyit-Ras, Sankaber, Gich, and Chenek) using a non-probability sampling technique because these sites are frequently visited by tourists. In selecting respondents, a simple random sampling technique was used in all three sites.

Sample size determination

According to Endalkachew and Endalew (2018), between 2012 and 2016, an average of 4767 foreign tourists visited SMNP during the peak-season months of October, November and December. In order to determine the sample size of this study, Yemane’s (1967) formula was used

\[ n = \frac{N}{1 + Ne^2} \]

Where,  
- \( n \) = Sample size  
- \( N \) = Total population  
- \( e \) = Level of precision

\[ n = \frac{4767}{1 + 4767 (0.05)^2} = 369.032 \]

Ultimately, some 370 respondents were used as a sample out of the 4767 foreign tourists who visited Simien Mountain National Park.

Data collection tools and procedures

Primary data were collected through the survey of foreigners who visited SMNP in 2017. Researchers used self-administered structured questionnaires for quantitative aspects of the research. For the qualitative parts of the study, data was collected using open-ended questions included with the questionnaire. The open-ended questions help to triangulate data which is not addressed by the close ended questionnaire. Permission was obtained to conduct research and the respondents remained anonymous.
Model specification

In order to examine the explanatory variables that influence overall tourist satisfaction, the researcher employed a multiple regression model. The multiple regression model of the study is presented as:

\[ Y = \beta_0 + \beta_1\text{PRO} + \beta_2\text{SERV} + \beta_3\text{ACC} + \beta_4\text{HOS} + \beta_5\text{INFRA} + \beta_6\text{INFO}) + \epsilon_i \]

Where,

- \( Y \) = Overall tourists satisfaction regarding SMNP
- \( \beta_0 \) = Constant of the model
- \( \beta_1, \beta_2, \beta_3, \beta_4, \beta_5, \) & \( \beta_6 = \) Coefficients of explanatory variables
- \( \text{PRO} \) = Product quality
- \( \text{SERV} = \) Service quality
- \( \text{ACC} = \) Accommodation
- \( \text{HOS} = \) Hospitality
- \( \text{INFRA} = \) Infrastructure
- \( \text{INFO} = \) Information
- \( \epsilon_i = \) error term of the model

Methods of data analysis

Descriptive statistical tools such as frequency distribution, mean, percentages, tables, and graphs were utilized. The Statistical Package for Social Science (SPSS) version 20 was used to analyze the quantitative data. The qualitative data generated from open-ended questions were categorized in themes in accordance with the research objectives to triangulate quantitative information.

Reliability and validity of the questionnaire items

Cronbach’s alpha was used to test the reliability of the items included in the questionnaire. Both Field (2009) and Hair et al., (2010), recommend that coefficients of Cronbach’s alpha greater 0.70 are considered as a reliable indicator of the constructs under study. Therefore, using SPSS version 20, the reliability test of all items used to measure the independent variables in this study were above the minimum threshold of 0.70.

<table>
<thead>
<tr>
<th>No of items</th>
<th>Cronbach’s alpha value</th>
<th>Degree of reliability</th>
</tr>
</thead>
<tbody>
<tr>
<td>30</td>
<td>0.940</td>
<td>High reliability</td>
</tr>
</tbody>
</table>

Source: Survey questionnaire (2017)

In order to check validity of the questionnaire being used in this study, a pretest was carried out on 5% (19 visitors) of the total population. This helped to evaluate the questionnaire format and to avoid ambiguity of chosen variables for the survey. After receiving feedback from the pilot survey, the questionnaire was revised.
Result and discussion

Tourist satisfaction level in SMNP

Tourists were asked about their overall level of satisfaction regarding their visit to Simien Mountain National Park.

![Figure 3. Overall Tourist satisfaction level in SMNP (Source: Own survey data, 2017)](image)

Among the respondents 175 (65.3%) were satisfied or very satisfied with their experiences in SMNP, while 87 (32.46%) of the respondents were dissatisfied or very dissatisfied, and 6 (2.4%) of the respondents were neither satisfied nor dissatisfied about their tourist experience in SMNP (Figure 3). These data imply that SMNP provides a satisfactory experience for the majority of visitors. The satisfaction came from both product and service quality deliveries (Endalkachew and Endalew, 2018).

However, 32.46% of dissatisfaction level evaluating low level of satisfaction that is likely to reflect a real problem the Simien Mountains National Park as tourist destination. This dissatisfaction may be linked to the other aspects (i.e. poor signposting of roads and/or places of interest, lack of sports facilities and infrastructure, poor road conditions, lack of professionalism and cordiality of service staff outside of the hotels, and the existence of pollution).

Relationship between overall tourist satisfaction and independent variable

The relationship between the outcome variable and the independent variables was evaluated using Pearson Correlation Coefficient. The result of correlation analysis in (Table 2) indicates that all the independent variables are positively and significantly correlated with overall tourist satisfaction at (P < 0.01). Product quality has the highest correlation with overall tourist satisfaction with the value of (r = .763).
The findings are supported by a prior 2018 study carried out by the researchers, which explains the unique features that make the SMNP a quality tourism product and leads to overall tourist satisfaction. Satisfied tourists may also inform their friends and relatives, contribute free advertisement and help to promote increased travel to the destination (Kau and Lim, 2005). Product quality is followed in correlation by accommodation (.716) and service quality (.694). The study shows that these two variables are poor and lead to tourist dissatisfaction. The results also reveal that there is a positive and significant correlation of hospitality (r = .607), infrastructure (r = .423) and information (r = .345) with overall tourist satisfaction at (P<0.01) (Table 2). Therefore we reject the null hypothesis and accept the alternative hypothesis: all independent variables have a positive association on overall tourist satisfaction in SMNP.

**Determinant factors for tourist satisfaction in SMNP**

The researchers employed a multiple regression analysis so as to test relationship among variables. Coefficient of determination explains the extent to which changes in the dependent variable can be explained by the change in independent variables. In the terms of this study, the percentage of variation in overall tourist satisfaction in SMNP explained by the six independent variables: product quality, service quality, accommodation, hospitality, infrastructure, and information.

\[ Y = f (\beta_0 + \beta_1\text{PRO} + \beta_2\text{SERV} + \beta_3\text{ACC} + \beta_4\text{HOS} + \beta_5\text{INFRA} + \beta_6\text{INFO}) + \varepsilon \]

Overall tourist satisfaction = -.817 + (.379X1) + (.315X2) + (.211X3) + (.196X4) + (.232X5) + (.012X6) + \varepsilon
Table 3: Testing the model through ANOVA (Goodness of fit statistics)

<table>
<thead>
<tr>
<th>Model</th>
<th>Sum of Squares</th>
<th>Df</th>
<th>Mean Square</th>
<th>F</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Regression</td>
<td>385.037</td>
<td>6</td>
<td>64.173</td>
<td>126.071</td>
<td>.000b</td>
</tr>
<tr>
<td>Residual</td>
<td>132.855</td>
<td>261</td>
<td>.509</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>517.892</td>
<td>267</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Source: Own survey data (2017)

From Table 3, it is identified that the value of F-stat is 126.072 and is significant at the level (p<0.01). This indicates that the model used for the study is significantly good enough in explaining the variation of the dependent variable, overall tourist satisfaction.

Table 4. Model summary of the goodness of fit

<table>
<thead>
<tr>
<th>Model</th>
<th>R</th>
<th>R Square</th>
<th>Adjusted R Square</th>
<th>Std. Error of the Estimate</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>.862a</td>
<td>.743</td>
<td>.738</td>
<td>.71346</td>
</tr>
</tbody>
</table>

Source: Own survey data (2017)

A. Predictors: (constant), PRO, SERV, ACC, HOS, INFRA, INFO,

B. Dependent variable: Overall tourist satisfaction

From Table 4, it is seen that the R-value is .862a. Therefore, R-value (.862a) for independent variables (product quality, service quality, accommodation, hospitality, infrastructure and information) suggests that there is a strong impact on overall tourist satisfaction. Table 4, also shows that the coefficient of determination, the R-square ($R^2$) value, is (.743), which represents that (74.3%) variation of overall tourist satisfaction, is due to the independent variables. The independent variables and their components contribute directly to the satisfaction of tourists, their intention to return and potential development of the tourism industry in the region leading to sustainability.

Table 5. Regression result of determinate factor of tourist satisfaction

<table>
<thead>
<tr>
<th>Model</th>
<th>Unstandardized Coefficients</th>
<th>Standardized Coefficients</th>
<th>T</th>
<th>Sig.</th>
<th>Collinearity Statistics</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>B</td>
<td>Std. Error</td>
<td>Beta</td>
<td></td>
<td>Tolerance</td>
</tr>
<tr>
<td>1</td>
<td>(Constant)</td>
<td>-.817</td>
<td>.183</td>
<td>-4.453</td>
<td>.000</td>
</tr>
<tr>
<td>PRO</td>
<td>.379</td>
<td>.052</td>
<td>.338</td>
<td>7.262</td>
<td>.000</td>
</tr>
<tr>
<td>SERV</td>
<td>.315</td>
<td>.055</td>
<td>.264</td>
<td>5.747</td>
<td>.000</td>
</tr>
<tr>
<td>ACC</td>
<td>.211</td>
<td>.057</td>
<td>.184</td>
<td>3.725</td>
<td>.000</td>
</tr>
<tr>
<td>HOS</td>
<td>.196</td>
<td>.056</td>
<td>.140</td>
<td>3.504</td>
<td>.001</td>
</tr>
<tr>
<td>INFRA</td>
<td>.232</td>
<td>.052</td>
<td>.196</td>
<td>4.497</td>
<td>.000</td>
</tr>
<tr>
<td>INFO</td>
<td>.012</td>
<td>.054</td>
<td>.010</td>
<td>.222</td>
<td>.824</td>
</tr>
</tbody>
</table>

Source: Own Survey data (2017)

In Table 5, the beta coefficients can be used to explain the relative importance of each independent variable in contributing to the variance in overall tourist satisfaction. Product quality ($\beta_1 = .379$, Sig = 0.000) carried the most weight for tourists’ overall satisfaction. This implies that 37.9% of tourist satisfaction is accounted for by product quality. These quality products, deep ravines and gorges, towering pinnacles and rock spires, spectacular mountain scenery and fascinating wildlife, are found nowhere else on Earth (Endalkachew and Endalew, 2018;
Endalkachew, 1999; Hurni, 1986). Service quality has (β2 = .315, Sig = 0.000); infrastructure (β5 = .232, Sig = 0.000), accommodation (β3 = .211, Sig = 0.000); hospitality (β4 = .196, Sig = 0.001). Of the six variables the researchers evaluated, service quality, accommodation, infrastructure and information did not satisfy park visitors. In the SMNP there are community lodges that provide rudimentary accommodations and options for luxury at the Simien Lodge and Limalimo Ecolodge, but these did not satisfy visitors. According to the results from beta coefficient all variables have their own contribution to overall tourist satisfaction. However, information (β6 = .012, Sig = 0.824) is insignificant for the overall tourist satisfaction in SMNP.

Conclusions

Assessing tourist satisfaction is important to identify gaps, as satisfaction contributes to tourism business opportunities, better financial performance, and greater competitiveness. The tourists’ evaluation of destination products was the most important indicator of overall tourists’ satisfaction. Satisfied tourists tend to tell their friends and relatives about a good experience, and thus provide free advertisement and help to promote increased travel to the Simien Mountains National Park. Tourists at SMNP had divergent opinions on various service indicators selected for this study.

Tourists were satisfied by the product quality and hospitality of local people and employees who provided service to the tourists. However, the lowest level of satisfaction was observed with respect to attributes infrastructures. With regard to accommodations and information, tourists were unsure about their satisfaction levels. Nevertheless, overall satisfaction with visits to SMNP was high. The results of the Pearson correlation and multiple regression analysis used for the study reveal that variables including product quality, service quality, accommodation, hospitality and infrastructure have a significant effect on overall tourist satisfaction in Simien Mountain National Park. Based on the result we can conclude that all variables have more or less equal contribution to the overall tourist satisfaction. On the other hand, the relationship between tourist information and overall tourist satisfaction was statistically insignificant at (p = 0.824).

Recommendations

Simien Mountains National Park Tourism Product is the most important attraction for Amhara Regional State in Ethiopia, and contributes to high tourist satisfaction levels. Conserving the spectacular landscape of the Simien Mountain massif and the globally significant biodiversity that attract tourists is crucial for the success of the Park. Service quality is one of the basic expectations of tourists. Therefore, the capacity of service providers such as guides, cooks, scouts, hotels, lodges, restaurants, and car and field equipment rentals should be improved. Improving the infrastructures in and around the park is another important task of park management and the local government. Quality of services, accessibility, ease of communication, safety, range and number of the accommodations must be available during tourists’ experience in SMNP.

Significant financial support is needed for the management of the park visitors and the improvement of service quality and other attributes to satisfy park visitors. Improving and increasing ecotourism facilities, without impairing the park’s natural and scenic values, has great potential to create additional revenue from the space. The park management office and the Ethiopian Tourism Organization should be able to provide reliable information, speed of service, and interpretative information about SMNP in order to increase satisfaction of tourists and thus enhance prospects for sustainable tourism to the area and country in general.
References


