DETERMINING THE ROLE OF ECO-TOURISM SERVICE QUALITY, TOURIST SATISFACTION, AND DESTINATION LOYALTY: A CASE STUDY OF KUAKATA BEACH

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ABSTRACT

The impact of eco-tourism service quality (ETSQ) and destination loyalty on beach tourism, particularly Kuakata Beach in Bangladesh, was examined. The present study builds upon the initial research on ETSQ to assess tourist satisfaction and destination loyalty at Kuakata Beach. Data for the analysis were obtained from 284 tourists who visited Kuakata Beach. The obtained data were processed with the use of SPSS 26 and smartPLS 3. The study demonstrated that ETSQ is significantly linked with tourist satisfaction and destination loyalty. The findings revealed a robust relationship between ETSQ, tourist satisfaction, and commitment to a specific destination. The study has practical implications for eco-tourism promotion by the government, semi-governmental, and non-governmental organizations in Kuakata, other tourist attractions in Bangladesh, and tour operators who could design ETSQ to provide tourist satisfaction tools and recommend tourist destinations.

Keywords: tourism, eco-tourism, eco-tourism service quality, destination loyalty, tourist satisfaction

INTRODUCTION

Kuakata sea beach is renowned nationally and internationally as the ocean’s daughter (Rahman et al., 2015). It contributes significantly to Bangladesh’s tradition, culture, history, society, economics, and environment (Ahammad et al., 2023). This beach is visited by approximately five million tourists annually, which might reach 13 million by 2023 (Karim, 2022). Before the Padma Bridge, Dhaka was 350 kilometers away; today, it is 294 kilometers. The southernmost tip of Bangladesh is home to the stunningly beautiful
Kuakata, also known as Sagar Kannya (Daughter of the Sea), by the locals. About 30 kilometers in length and 6 kilometers in width, Kuakata is in the Latachapli union and is policed by the Kalapara Police Station in the Patuakhali district. Dhaka and the Patuakhali district are both reachable by road and ship. Barisal can be reached by road, water, or air. From there, a road trip or a boat ride to Kuakata or Patuakhali. The Bangladesh Road and Transport Corporation (BRTC) now offers a direct bus route between Dhaka and Kuakata, bypassing the city of Barisal. In addition, guided package tours from Dhaka to Kuakata can be arranged upon request by the Bangladesh Parjatan Corporation, National Tourism Organization. Kuakata is one of the rare places where the crimson sun rises and sets over the Bay of Bengal without disturbing the quiet. For this reason, Kuakata could be considered one of the world’s most unique beaches. Kuakata’s expansive beach is set in a picturesque, natural setting. The sand beach gently dips into the Bay of Bengal, making for an enjoyable bathing experience that also lends itself to strolls and scuba dives.

Kuakata is a proper, untouched stretch of sand in Blue Bay that serves as a sanctuary for migrating birds during the winter. The forest, the colorful sails of boats roaming the Bay of Bengal, the fishing, the cliffs, and the waves all leave an indelible impression on every tourist here. Sources of great delight are the long-standing customs and cultural past revealed by the traditions and apparel of the “Rakhyne” tribal family and the approximately one-hundred-year-old Buddhist temple. Kuakata is a sacred location for the local Hindu and Buddhist communities. Many believers flock here for the annual “Rush Purnima” and “Maghi Purnima” celebrations. People partake in a holy bath on these two days, and festivals based on local traditions are organized. The beach is more appealing to visitors due to these enhancements to the area’s overall appeal. Government campaigns, cultural celebrations, and other events can boost annual tourist numbers.

As is common knowledge, the tourist business in the globe today creates services, goods, foreign money, jobs, and investments (Dwyer, 2022; Talukder, 2020a). Eco-tourism can become essential for sustainable tourism development if local communities are educated, trained, and motivated to adopt ETSQ as an alternative and additional activity that facilitates and promotes environmental conservation via its service quality (Talukder et al., 2023). Most research on ETSQ has used the SERVQUAL or SERFPERF instrument created for the eco-tourism sector (Ban & Guruge, 2021). However, few research concentrates on ETSQ and its implications on the comfort and loyalty of beach visitors in Bangladesh (Sahabuddin et al., 2021). These studies are primarily based on the SERVQUAL model or it is modified and expanded version, the ECOSERV model.

In addition, most past research on eco-tourism has focused on its influence on the natural environment, the regional economy, and the quality of community life, as well as the driving forces and expertise of eco-tourists and the exploration of eco-tourism segmentation. Most field studies have used ECOSERV, which has emerged as an essential evaluation method for ETSQ characteristics (Aksu et al., 2022). SERVQUAL and ECOSERV models propose destination loyalty based on an implied relationship between service quality parameters and tourist satisfaction (Preziosi et al., 2022). This indicates that enjoyment is proportional to the performance of service dimensions and that tourists have a high degree of satisfaction (Talukder & Bhuiyan, 2021); hence, a destination is a recommended location where all service dimensions are well met. To gather information that would be valuable to future researchers for additional research, the researchers review a thorough investigation of the consequences of ETSQ on beach tourist satisfaction and destination loyalty on Kuakata Beach in Bangladesh. Based on service quality models like SERVQUAL or ECOSERV, it may also build the most efficient method for investigating the associations between service excellence and characteristics and customer satisfaction (Shapoval et al., 2018).
LITERATURE REVIEW

Eco-Tourism

There is no specific explanation for eco-tourism in scholarly writings. Combining ecology with tourism creates the literary word eco-tourism, which refers to ecologically responsible travel (Goodwin, 1996). It entails going to places not overrun by people or industry to take in the historical and contemporary landscapes with awe and wonder (Iskakova et al., 2021). Sustainable development and economically disadvantaged communities are two of the primary beneficiaries of eco-tourism (Rahman et al., 2022), which places a premium on the conservation of natural resources at eco-tourism sites and the environmental literacy of its tourists. This study expands upon the original concept of eco-tourism (Alauddin et al., 2021) by including eco-tourism incentives for natural, cultural, discoverable, daring, and responsible experiences. Most tourism management researchers agree with (Khan et al., 2022, pp. 109–124) that eco-tourism is “purposeful time spent in the environment to interact with nature, learn about and perceive other cultures, and economically support local communities that work toward the preservation of the ecosystem.” There may be a direct clash between the urge to exploit the rising tourist business and the needs of financially bankrupt communities in developing nations where eco-tourism has substantial practical significance (Ramaano, 2022). It seeks to create a successful and sustainable tourist industry while reducing the environmental impact of all these operations (Mair & Smith, 2022). The eco-tourism structure is shown in Figure 1.

ECO-TOURISM SERVICE QUALITY

ECOSERV evaluates eco-tourism service quality depending on the eco-tourist experience, which includes six experiential dimensions. Eco-tourism is defined as eco-tourist activities such as motivations for natural, adventurous, cultural, soft, discoverable, and responsible tourism activities and experiences (Rezaeinejad & Khaniwadekar, 2021). In the prior research, the quality of customer service in the tourist industry was evaluated using SERVQUAL, SERVPERF, LODGSRV, RECQUAL, DINESERV, HOLSAT, HOLSERV, ECOSERV, IPA, SERICSAT, RENTQUAL, RESERVE, and ECOPERF. The SERVPERF model was established to explain the change made to the SERVQUAL scale (Akdere et al., 2020). They redesigned the SERVQUAL measures by removing any elements based on predefined expectations and concentrating instead on the aspects of service quality solely based on performance (Ban & Guruge, 2021). In addition to the five characteristics of SERVQUAL, which are dependability, responsiveness, assurance, empathy, and tangibles, an additional component called eco-tangibles is included (i.e., Accommodation service, food service, and transport facilities related to the environment). This study has new tourism service attributes to eco-tangible (Aseres & Sira, 2020) to gain a more comprehensive view of ETSQ, such as beach

Fig. 1. The structure of eco-tourism
*Source: own preparation based on Eagles & Higgins (1998).*
tourist contentment and geographic commitment. Considering the limitations of Ecoserv, the authors of this study made these additions. According to the findings of Shafiq et al. (2019), the elements that offered tourists the highest level of satisfaction were the staff’s eagerness to assist, their promptness, their attention, and their ability to make the tourist feel better overall (Perovic et al., 2018). According to findings from earlier research on the quality of eco-tourism services, tourists reported feeling more content when they met other individuals who shared their interests. In conclusion, empirical data demonstrating the connection between eco-tourism quality, inferences on customer happiness, and continued destination loyalty were offered (Sahabuddin et al., 2021). In addition, researchers presented a chronological order of the

<table>
<thead>
<tr>
<th>Table 1. Tourism industry’s service competence</th>
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<tbody>
<tr>
<td>Author</td>
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<tr>
<td>--------</td>
</tr>
<tr>
<td>Knutson et al. (1990)</td>
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<tr>
<td>Crompton &amp; MacKay (1991)</td>
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<tr>
<td>Fick &amp; Brent Ritchie (1991)</td>
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<tr>
<td>Knutson et al. (1996), Talukder et al. (2023)</td>
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<tr>
<td>Tribe &amp; Snaith (1998)</td>
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<td>Wong et al. (1999)</td>
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<td>Cunningham et al. (2002)</td>
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<td>Dean et al. (2002)</td>
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<td>Khan (2003)</td>
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<tr>
<td>(Fedman et al., 2023)</td>
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<td>Hudson et al. (2004)</td>
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<td>Hudson et al. (2004)</td>
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<td>Nadiri &amp; Hussain (2005)</td>
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<td>George et al. (2007)</td>
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<td>Ramsaran-Fowdar (2007)</td>
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<td>Ekiz et al. (2009)</td>
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<td>Said et al. (2013)</td>
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<td>Su et al. (2015)</td>
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<td>Oh &amp; Kim (2017)</td>
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<td>Aseres &amp; Sira (2020)</td>
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<tr>
<td>Ban &amp; Guruge (2021)</td>
</tr>
<tr>
<td>Tissera &amp; De Silva (2021)</td>
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level service approaches in tourism, as indicated by the prior study literature. Table 1 describes many approaches to assessing service quality. Researchers have used it in the past in the tourist and hospitality business.

**TOURIST SATISFACTION**

According to the research, tourist satisfaction results from tourists’ evaluations and comparisons of how well products and services met their expectations (Mohammad et al., 2023). When the actual outcome exceeds what was anticipated, vacationers are happy. Tourists are unsatisfied when their expectations are higher than the level of service they receive (Anabila et al., 2021). Because it influences the decision-making process of a beach resort, tourist satisfaction is crucial to beach destination promotion. Tourist satisfaction can be measured by comparing what tourists expected from a destination and how they felt about it. Understanding tourist satisfaction is essential for judging the standard of goods and services offered at seaside locations (Sahabuddin et al., 2021). So, destination officials need to track how satisfied tourists are so they can get feedback and find the exact problems that make tourists dissatisfied, which could affect their next trip (Kumar et al., 2020). So, knowing the role of tourist satisfaction with kuakata, the standard of commodities and facilities offered by beach resorts improve tourist beach trips and develop a good marketing plan for a goal that will satisfy tourists and keep them coming back.

**DESTINATION LOYALTY**

In travel writing, “destination loyalty” means that tourists return to the same place and tell their friends and family about it (Sangpikul, 2018). Tourism researchers have looked into the idea of “destination loyalty” for a long time to find ways to get more people to visit destinations (Lv & McCabe, 2020). So, destination loyalty is essential in improving a goal’s competitive advantages and an effective marketing strategy (Liat et al., 2020). Tourists’ satisfaction with a place can be used to measure their loyalty to that place (Cossio-Silva et al., 2019). Tourists who have a pleasant experience are much more inclined to suggest a location to their close companions and come again. From these two measures, Sangpikul (2018) says that repeat visits strongly indicate future behavior. Destination loyalty is essential in eco-tourism because it affects tourist excitement and time spent, the destination’s reputation, the scenery, and the place’s climate (Baek et al., 2021; Slathia & Chauhan, 2022). This makes tourists return and encourages them to visit destinations and the areas around them by word of mouth (Ahmed Kamel, 2021). However, getting tourists to return is one of the hardest things to do, especially for shore sea destinations (Wang et al., 2021). Understanding what keeps people returning to a beach destination will aid developers of eco-tourism and make it more competitive (Amissah et al., 2022).

**FACTORS INFLUENCING ECO-TOURISM SERVICE QUALITY, TOURIST SATISFACTION, AND DESTINATION LOYALTY**

Based on the analysis conducted on the issue, several factors affect the quality of eco-tourism services at Kuakata Beach, tourists’ satisfaction, and their loyalty to the area (Hasan, 2014). Attributes that heavily influenced destination loyalty also included tourist satisfaction with the place (Sangpikul, 2018). In the case of Kuakata sea beach, it was found that the quality of eco-tourism service is associated with tourist satisfaction and loyalty to a place (Kalam & Hossen, 2018). The current research demonstrated that destination loyalty and satisfaction are essential, independent factors that affect the quality of eco-tourism services at Kuakata sea beach. The study of the Kukata area found that the quality of eco-tourism services significantly affects how satisfied tourists are, affecting how loyal they are to a place (Karim, 2018). The research also found that tourists’ satisfaction is a critical factor that affects how likely they are to recommend and return to a destination (Ramesh & Jaunky, 2021). The researchers looked at the
relationships and differences between the effects of ETSQ (Yoon & Cha, 2020) on security, timely service, willingness to help, personal attention, appropriate facilities, environmental safety, clean beach, better feeling, facilities of transportation, accommodation, food & beverage service, and keeping hygiene in all areas of the Kuakata sea beach. It was found that the tourists differed from the locals in what they expected, how satisfied they were, and how loyal they were to the destination (Deng & Pierskalla, 2011). The study also showed that the value that is believed to be present at a destination affects the loyalty of first-time tourists and those who have been there before (Sangpikul, 2018). Rahman et al. (2021) looked at the effects of ETSQ, ensuring the highest level of tourist satisfaction and beach destination loyalty at Kuakata. They found that choice of destination, enjoyment, satisfaction of needs, attractions, expectations, money and time, friendly equipment, and washrooms near the sea directly and indirectly affected destination loyalty.

Studies have shown several things that affect tourists’ happiness with a place. These include how exciting the place is, how much time tourists spend there, its reputation, scenery, and weather (Lv & McCabe, 2020). The exact characteristics of the tourist experience (Hossain, 2013) that may contribute to better the degree of happiness reported by tourists and assure destination loyalty at beach locations have not been the subject of many studies outside of Kuakata beach attractions. More study is needed to determine how these explanatory factors influence the relationships between the three variables and Kuakata beach tourist loyalty (Hasan et al., 2019).

**HYPOTHESIS**

Previous literature has shown that high-quality eco-tourism services have a beneficial effect on tourist satisfaction and repeat visits. It confirmed that the quality of an eco-tourism business’s services has a beneficial impact on the satisfaction of its customers. The caliber of eco-tourism offerings in Bangladesh’s tourism sector is also hypothesized to impact tourist satisfaction significantly (Zhou et al., 2021). This research examined the factors influencing tourists’ decisions to return to Kuakata Beach, such as how well their eco-tourism services were provided. Pictured in Figure 2 is an example of the suggested model.

Based on the literature, we hypothesized the following:

H1: There is a significant relationship exists between ETSQ and tourist satisfaction.

H2: There is a significant relationship exists between tourist satisfaction and destination loyalty.

H3: There is a significant relationship between ETSQ and destination loyalty.

**RESEARCH METHODOLOGY**

**Research Philosophy**

This study was done in a country in South Asia called Kuakata beach in Bangladesh. It is on the Bay of Bengal (Haque et al., 2021). Kuakata is commonly referred to as “the daughter of the ocean,” and more and more tourists are coming to see it. Beach areas along the seashore are now the country’s most popular places to visit (Rakib et al., 2022). These beaches stand out because they have miles of fine sand, high cliffs, waves that can be surfed, views of the sunrise and sunset, rare conch shells, and tasty food. Eco-tourism has changed these places’ social and economic lives in a way that can be seen. The local community and other interested parties seem to have benefited financially and in kind (Thompson, 2022). So, the Kuakata beach area in Bangladesh is chosen as the study area because of its important social and economic roles in the country’s tourism industry (Amin, 2021).
Development of Questionnaire

A preliminary questionnaire was developed for information-gathering purposes. It had measurement items for ETSQ, tourist satisfaction with beach tourism, and destination loyalty. These were empirically validated measurement items based on previous research concepts (Bushra et al., 2021). Since this study was about eco-tourism, academic experts and pilot testing chose and improved many measures under each construct (Hossain & Islam, 2019). During this process, a few things were taken out, and the wording of others was changed to make them fit better with the new context. Then, a final questionnaire was made with clean measures and a 5-point Likert scale from 1 (strongly disagree) to 5 (strongly agree).

Measurement Items

Twelve items were modified for inclusion in the final survey from Carvache-Franco et al. (2019), Dagustani et al. (2018), Hassan (2021), and Perera et al. (2022) to measure ETSQ. Indicators of visitor experience were modified to eight (Li et al., 2021). Geographical preference was quantified with eight items developed by Li et al. (2021) and Joo et al. (2020).

Data Collection and Sampling Methods

This research gathered empirical data through a survey given by hand. Using a simple sampling method, tourists who went to Kuakata Beach between January 2022 and July 2022 were chosen.

Fig. 2. Conceptual model, Dimensions of different variables, and hypothesis diagram
for the sample population. Before the data collection, each respondent was given a sheet of paper with the study’s goals. At first, there were 411 responses. Of 411 questionnaires, 27 were thrown out because essential parts were missing, missing values were over 25%, or the answers were not thoughtful. The remaining 284 questionnaires were used as individual units in the final analysis. We have included the respondent’s information about gender, age, education, and monthly income in Table 2. As we collected data during and immediately after the pandemic, we consider taking responses from domestic tourists only.

<table>
<thead>
<tr>
<th>Characteristics</th>
<th>n</th>
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<tbody>
<tr>
<td>Gender of the participants</td>
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<td></td>
</tr>
<tr>
<td>Female</td>
<td>127</td>
<td>44.7</td>
</tr>
<tr>
<td>Male</td>
<td>157</td>
<td>55.3</td>
</tr>
<tr>
<td>Age of the participants</td>
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<td></td>
</tr>
<tr>
<td>18–25</td>
<td>143</td>
<td>50.4</td>
</tr>
<tr>
<td>26–35</td>
<td>84</td>
<td>29.6</td>
</tr>
<tr>
<td>36–45</td>
<td>45</td>
<td>15.8</td>
</tr>
<tr>
<td>46 and upper</td>
<td>12</td>
<td>04.2</td>
</tr>
<tr>
<td>Education of the participants</td>
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<td></td>
</tr>
<tr>
<td>Vocational College</td>
<td>32</td>
<td>11.3</td>
</tr>
<tr>
<td>Bachelor’s degree</td>
<td>121</td>
<td>42.6</td>
</tr>
<tr>
<td>Postgraduate</td>
<td>130</td>
<td>45.8</td>
</tr>
<tr>
<td>PhD</td>
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<td>0.4</td>
</tr>
<tr>
<td>Monthly income (Taka)</td>
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<td></td>
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<tr>
<td>&lt; 20000</td>
<td>67</td>
<td>23.6</td>
</tr>
<tr>
<td>20000–30000</td>
<td>58</td>
<td>20.4</td>
</tr>
<tr>
<td>30000–40000</td>
<td>125</td>
<td>44.0</td>
</tr>
<tr>
<td>40000–50000</td>
<td>27</td>
<td>9.5</td>
</tr>
<tr>
<td>&gt;50000</td>
<td>7</td>
<td>2.5</td>
</tr>
<tr>
<td>Total</td>
<td>284</td>
<td>100</td>
</tr>
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RESULTS OF DATA ANALYSIS

Structural Equation Modeling using Partial Least Squares (PLS-SEM) technique was applied using the SmartPLS software version 3.2.9. According to Purwanto and Sudargini (2021), the PLS is an advanced and trustworthy statistical technique for estimating structural models that perform well in challenging circumstances. Two distinct varieties of models exist measurement models and structural models in the PLS-based SEM (Sarstedt et al., 2020). The respondent’s demographic profile was examined using SPSS version 26, Statistical Package for Social Sciences.

This section will show and analyze the empirical data based on the theoretical concepts.

Based on the respondent’s gender, males comprise 55.3%. With 44.7%, women are in second place. The people between the ages of 18 and 25 have the most people, with 50.4%. With 29.6%, those between the ages of 26 and 35 are the next highest age group. Those between 36 and 45 are in third place with 15.8%, and those over 46 have 4.2%. Most people who answered were postgraduates (45.8%), and individuals with a bachelor’s degree (42.6%) were in second place. The respondents with a vocational are the third most numerous demographics, with 11.3% of the total. Those with a PhD get the rest, which is 0.4%. The average monthly income is between Tk 30,000 and Tk 40,000, which is 44.0%.

Reliability Test

Cronbach’s alpha was applied to the survey to determine its level of reliability. Table 3 shows the findings of the reliability analyses conducted on the parameters. Since none of the dependability estimates was lower than 0.70, the results indicate the test’s reliability is satisfactory. Scale reliabilities varied from fair (0.7 ≤ α < 0.9) to outstanding (α ≥ 0.9) (Fernandez et al., 2018).

<table>
<thead>
<tr>
<th>Test Categories</th>
<th>No. of items</th>
<th>Cronbach’s Alpha</th>
</tr>
</thead>
<tbody>
<tr>
<td>Eco Tourism Service Quality</td>
<td>12</td>
<td>0.959</td>
</tr>
<tr>
<td>Tourist Satisfaction</td>
<td>8</td>
<td>0.947</td>
</tr>
<tr>
<td>Destination Loyalty</td>
<td>8</td>
<td>0.948</td>
</tr>
<tr>
<td>Total</td>
<td>28</td>
<td>0.940</td>
</tr>
</tbody>
</table>
Assessment of Measurement Model

The measurement model depicts a latent construct’s association with pertinent criteria (Al-Emran et al., 2019). When judging the PLS-SEM reflective measurement model, the first thing to consider is how reliable and valid the measures are (Hair et al., 2021). Concerning construct reliability, the measurement model results (Table 4) showed that Cronbach’s results were marginally over the desired level of 0.70, and the composite reliability (CR) scores for all items fell within the acceptable range, proving the validity of the items. Additionally, all constructs’ CR values were within the capacity of all other constructs (Lee & Kim, 2021). For convergent validity, each reflective indicator’s item loadings exceeded the advised 0.70 threshold (Hair et al., 2021). The AVE statistics for each construct vary from 0.693 to 0.736 (Table 4), superior to the proposed threshold of 0.5 (Hair et al., 2021).

This means that all of the constructs have adequate convergent validity. Most researchers have used the Fornell–Larcker criterion to check for discriminant validity (Hair et al., 2021). However, newer research has questioned whether the Fornell–Larcker criterion is an excellent way to find discriminant validity (Radomir & Moisescu, 2019). Muharam et al. (2021) suggested the Heterotrait–Monotrait ratio (HTMT) of the correlations as a solution. This is the ratio of the correlations between traits to the correlations within features.

Hair et al. (2017) the HTMT criterion is the best way to measure discriminant validity in the PLS-SEM (Table 5). All of the HTMT values of latent constructs in Table 5 were between 0.276 and 0.332, less than the 0.90 threshold value (Henseler et al., 2015). So, based on the Heterotrait–Monotrait ratio (HTMT) criterion, the constructs do not have any problems with their ability to distinguish between groups.

Table 5. Outcomes of Heterotrait–Monotrait ratio (HTMT)

<table>
<thead>
<tr>
<th>Constructs</th>
<th>(1)</th>
<th>(2)</th>
<th>(3)</th>
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<tbody>
<tr>
<td>Eco-tourism service quality</td>
<td>–</td>
<td>–</td>
<td>–</td>
</tr>
<tr>
<td>Destination loyalty</td>
<td>0.276</td>
<td>–</td>
<td>–</td>
</tr>
<tr>
<td>Tourist satisfaction</td>
<td>0.332</td>
<td>0.276</td>
<td>–</td>
</tr>
</tbody>
</table>

In Table 6, all of the HTMT values of latent constructs were between 0.201 and 0.324, less than the threshold value of 0.90 (Rita et al., 2019). So, based on the Heterotrait–Monotrait ratio (HTMT) criterion, the constructs do not have any problems with their ability to distinguish between groups. The path coefficient will be significant if the T-statistic is more than 1.96 (Yang et al., 2022). So, all the variables have been shown to work by statistics. Even so, we can see that all paths work for the p-value in every way p0.01 (Kusumawati & Saputra, 2022).

No statistically insignificant result for any of the route coefficients indicates that the assumptions are correct. In addition, the PLS Algorithm was used

Table 6. Path coefficient results for hypotheses testing

| Hypothesis path directions | Original Sample (O) | Sample Mean (M) | Standard Deviation (STDEV) | T Statistics (|O/STDEV|) | P Values |
|-----------------------------|---------------------|-----------------|---------------------------|---------------------|-------|
| Eco-tourism service quality > Destination loyalty | 0.202 | 0.205 | 0.061 | 3.303 | 0.001 |
| Eco-tourism service quality > Tourist satisfaction | 0.324 | 0.327 | 0.060 | 5.400 | 0.000 |
| Tourist satisfaction > Destination loyalty | 0.201 | 0.204 | 0.070 | 2.874 | 0.004 |
to compute the effect size of 2, which states that f² values of 0.041, 0.041, and 0.117, respectively, are modest, medium, or substantial impacts of independent factors on dependent variables. These values were determined based on the PLS Algorithm (Kusumawati & Saputra, 2022). F² values less than 0.02 are too tiny to be considered, nevertheless. The effect size of ETSQ on tourist satisfaction is shown in Table 7 (f²), and the effect of ETSQ on loyalty to a destination was medium (f² = 0.117). Moreover, the effect of eco-tourism services’ level of quality on how satisfied tourists are with a place is not significant enough to keep them coming back. On the other hand, other exogenous variables have a negligible effect on their endogenous variables.

**Highlights:** Endogenous variable – Eco-tourism service quality, Exogenous variables – Tourist satisfaction and Destination loyalty.

**DISCUSSION**

Analysis of ETSQ’s impacts is the primary goal of this study, tourist satisfaction, and destination loyalty on a particular beach in Kuakata. The study shows the quality of eco-tourism services and how satisfied tourists are affected by how likely they are to return to Kuakata Beach. Giving tourists reasonable assistance can make them more comfortable and more likely to return to a place. Furthermore, in the Kuakata beach tourism context and the study’s objectives,
findings demonstrate that satisfied tourists are strong predictors of destination loyalty. Same as ETSQ, it has a substantial impact on destination loyalty. These results align with what Tasci et al. (2022) found: how spectators felt about the quality of eco-tourism service and how to satisfy tourists were essential predictors of destination loyalty. Also, (Azis et al., 2020) found that tourists’ satisfaction greatly affected their commitment to a place. On the other hand, Sangpikul (2018) said that place-based ETSQ significantly affects how loyal people are to a destination.

These results show that how people feel about the quality of eco-tourism services makes them more likely to want to visit the destinations. This makes them feel more confident about returning to the place or telling others to go there (Jin et al., 2020). These findings corroborate the favorable correlation between the two established in earlier studies. One significant impact is that security for tourists is more important than service quality (Mary et al., 2020) when it comes to making people want to go to beach destinations, even though previous research found a link between tourists’ attention values and attitudes (Ashraf et al., 2020). Evidence supports the link between service-based perceived expectation value and traveler’s perspectives (Vishwakarma et al., 2020), confirming revisit in this study.

In addition, ETSQ significantly influenced vacationers’ overall satisfaction in seaside hotspots which accords with the findings of other investigations done before that found a link between ETSQ, satisfaction of visitors and devotion to their location (Kumar et al., 2020). So, these results strengthen the connection between how satisfied tourists are with the quality of service in eco-tourism and how satisfied tourists are with beach tourism. Furthermore, this study demonstrated a substantial direct effect on how loyal people are to the beach as a destination. These findings are consistent with other research, which found that satisfied visitors tend to repeat to a destination. These results support the prior empirical findings in a new context, beach tourism, where travelers’ enjoyment is directly linked to their loyalty to a destination (return, recommend).

Even though destination loyalty is one of the main reasons why people go back to the same place (Kumar et al., 2020), there are still questions about how tourists see beaches in developing countries like Bangladesh and how they feel about going there (Hasan et al., 2019a). So, these results show that policymakers should consider creating a positive image and philosophy before making plans to make tourists happier with beach destinations. This study also found that attitudes about security and commitment greatly affected how satisfied tourists were.

**CONCLUSIONS AND RESEARCH IMPLICATIONS**

The impacts of ETSQ, destination loyalty, and tourist satisfaction were investigated in this research. The study focused on the relationship between these factors. The findings of this research indicate that a tourist’s satisfaction level with the eco-tourism services provided by a location and their level of loyalty to that location significantly impact the likelihood that the visitor would revisit that location and suggest it to others. According to the findings, the following beneficial contributions to management techniques have been made because of this research:

1. The outcome of this study indicates that the whole scale employed in the study is trustworthy (Cronbach’s Alpha is more than 0.7). It might be used in subsequent investigations;
2. The above factors impact how satisfied vacationers are with the service they receive in Kuakata. In particular, the study found 12 factors that affect how satisfied tourists are: safety, prompt service, willingness to help, personal attention, facilities that fit the environment, making sure facilities are safe for the environment, a clean beach, making tourists feel better, transportation, lodging, food and drink, and cleanliness and sanitation;
3. The current findings have important implications for future research that will help to learn more about the destination loyalty process, focusing on beach tourism destinations in Kuakata.
Theoretical and Practical Implications

The Implication of ETSQ Dimensions

This paper examines how Kuakata beach’s service quality is affected by ETSQ and general service dimensions. Sarker (2023) says this study will help determine if ETSQ dimensions alone are an excellent way to measure Kuakata Beach’s service quality. This paper examines whether ETSQ dimensions are a perfect way to measure service quality in Kuakata. To learn about this further, tourists staying in various areas of Kuakata were requested to complete a web survey. Most participants indicated willingness to participate in this study’s questionnaire. According to Silva et al. (2023), this study’s main goal was to develop a short version of the ECOESERV scale, which we did. This study looked at essential parts of ECOESERV (eco tangibles). Based on our results, the ETSQ of ECOESERV alone is an accurate and meaningful way to measure the difference in how satisfied tourists are.

Also, adding the general service dimension does not make the service quality measure much better at predicting the future. Future studies would contemplate using the abbreviation ECOESERV to measure the quality of offerings and services for eco-tourism (Silva et al., 2023). The results give important information about how to judge the quality of offerings and services in the eco-tourism industry, including Kuakata beach. Also, our results are vital to understanding how destination loyalty changes over time. We found that the Eco-friendly practice factor scored the highest compared to other factors. This shows that tourists care about and expect good practices for the environment. The results give eco-tourism business owners a key marketing direction that will help them bring more tourists to Kuakata (Sarker, 2023). As our data shows, security, prompt service, willingness to help, personal attention, facilities that fit the environment, facilities are safe for the environment, a clean beach, tourists feel comfortable with the services, transportation, lodging, food and drink, and cleanliness and sanitation are all essential.

The Implication of Tourist Satisfaction Dimensions

Eco-tourism products and experiences, on the other hand, are a mix of goods and services (Biju, 2006). So, tourist satisfaction with eco-tourism products, or in this case, beach tourism experiences, is made up of tourist satisfaction (Bimonte, 2023), with the individual dimensions or all of the sizes that make up the experience during the tourist’s trip to Kuakata. Over the years, there have been many ways to categorize how satisfied tourists are. Previous research highlighted tourist satisfaction into four main groups (Li & Yang, 2022). Core services are the main products or services that a service provider offers. The results showed the most critical aspects of tourist satisfaction and other factors of destination loyalty (Elbaz et al., 2023). This study also helps business owners working with tourists figure out what requires being fixed and how to take advantage of what tourists like. However, on a more detailed level, these results show eco-tourism hotel managers how eco-initiatives and programs affect how satisfied their guests are. Theoretically, this study explains how tourist satisfaction models and eco-tourism service providers relate to beach tourism in Kuakata. This place was chosen because Kuakata is known to have beautiful beaches.

The Implication of Destination Loyalty Dimensions

The results showed that Kuakata Beach is still the most critical factor (Uddin et al., 2023). This finding backs up research that shows how vital destination loyalty is for bringing tourists back to beach destinations (Hasan et al., 2020). Nayak et al. (2023) said that the beach’s reputation directly influenced why tourists decided to go back or make a recommendation. Also, the quality of natural attractions and their surroundings can create more value and directly affect how loyal people are to them (Kim & Brown, 2012; Talukder, 2020a). In this way, the splendor of nature of beach destinations
remains the top priority that keeps tourists returning (Bhattacharya et al., 2023). More importantly, the previous study done by Lv and McCabe (2020) suggests the study has shown that tourist satisfaction is essential in keeping people returning to the same place.

The finding supports what other studies have found: a close link between tourists’ happiness and their loyalty to a place. Uddin et al. (2023) said that ensuring standard service and quality satisfies tourists, possibly making them return to a particular destination. According to Kahraman & Cifci (2022), the loyalty coefficient to a destination compares favorably to the cost of other beach activities. This shows that the quality of eco-tourism services and how satisfied tourists are with them are still important and influential factors that significantly affect how loyal tourists are to many places. Another key finding from the research is that visitors’ satisfaction levels are mainly related to the standard of eco-tourism facilities available there. There is a strong correlation between tourist satisfaction and destination loyalty in the case of Kuakata as a beach destination, and the findings of the three constructs contribute to the field of tourism and shed light on the relationships between quality of service and loyalty to a destination (Kahraman & Cifci, 2022; Talukder & Hossain, 2021).

This study examined how ETSQ dimensions affect tourist satisfaction and commitment to a destination (Gabriel-Campos et al., 2021). Kuakata Beach was used as a place to study. The current findings could help the kuakata tourism industry develop a better way to manage and market goals. Experiences at beaches stood out as the single most crucial factor in determining return visits. The scenery and natural attractions of the beach, the beach’s reputation with tourists, it being a fun and exciting place to visit, the beach’s climate and weather, spending time and money to go back to the beach, planning to go back to the beach, encouraging others to visit this beach, and going to other eco-tourism sites in kuakata are some things to mention. This finding revealed that destination managers need to keep the beaches and natural environment of Kuakata Beach to keep the significance of this trip’s central experience that makes the destination competitive (Uddin et al., 2023).

Future Research Directions

This study gives important information about Kuakata beach’s natural environment and ETSQ. So, besides the one study mentioned, more could be done on the quality of services in eco-tourism. From a beach tourism point of view, studies could be done on more than just how satisfied and loyal they are to their destinations. Tourism and hospitality could be measured by looking at the quality of food service, how satisfied guests are, and how likely they are to return. In this same context, the next step in the research is to look at the data using mediating and moderating variables in another model like ECOPERF. Our results will help researchers figure out how to run and evaluate the ECOSERVE in a way that predicts ETSQ, tourist satisfaction, and loyalty to a destination. We suggest some general considerations when using this measure in different eco-tourism settings. We hope that the ECOSERVE’s short length will encourage practitioners to research eco-tourism and evaluate the quality of services. We also hope this paper will show how important it is to consider an environmentally friendly practice service attribute in the local and global tourism industry.

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