Tourist Motivation as an Antecedent of Destination and Ecotourism Loyalty

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Abstract

Objective: This study evaluates the role of tourist motivation in the determination of destination and ecotourism loyalty using push and pull motivation theory and the theory of planned behavior. The paper also analyses the mediating effects of satisfaction and destination image in the relationships between motivation and the two types of loyalty. Method/analysis: Primary data has been gathered from surveys involving 522 Vietnamese tourists traveling to the Bohemian Switzerland National Park in the Czech Republic. Data analysis was conducted using structural equation modeling (SEM) techniques in R. Findings: The findings support both direct and indirect positive associations between tourist motivation and destination and ecotourism loyalty. In terms of ecotourism loyalty, the effect is mediated by destination image. In terms of destination loyalty, the effect is mediated by satisfaction and destination image. Novelty/improvement: This study has further expanded the theory of planned behavior in the context of ecotourism by linking it to travel career pattern theory and functionalist theory. These are complementary theories that can explain the behavior of ecotourists and help operators and marketers adjust their strategies to attract and retain visitors to ecotourist destinations.

Keywords: Ecotourism Loyalty; Destination Loyalty; Tourist Motivation; Tourist Experience; Tourist Satisfaction; Structural Equation Modelling.

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1- Introduction

Ecotourism has been gaining the attention of academic researchers since the 1980s when the dominant social paradigm (DSP) was replaced by the new ecological paradigm (NEP), and people started to realize that human actions have consequences for the environment [1]. While early studies struggled to find a common and universally agreed definition of ecotourism, by the 1990s, most publications had reached a consensus that ecotourism is distinguished from other types of tourism by three constructs: it is nature-based, educational in terms of the environment, and sustainably managed [2].

In this narrow niche of tourism, practitioners and marketers face similar issues that have been studied in the context of other service industries. These issues include targeting the right customers; creating and transmitting a favorable destination image; pursuing customer satisfaction; and, ultimately, achieving tourist loyalty that will result in repeated visits to the destination. While these issues gain sufficient intention in general tourism research, evidence from the ecotourism segment remains scarce [3–5]. Furthermore, previous studies exploring the concept of customer loyalty in the context of the tourism industry mostly link loyalty to a specific destination [6–8], but linking multi-brand or horizontal loyalty to multiple destinations is very scarce [9] and nearly non-existent in the context of ecotourism.

First, increasing destination loyalty is challenging [10], and its impact has been questioned [11], as destination decision-making is heavily influenced by novelty-seeking [12]. The desire to escape the monotony of daily life and...
immerse oneself in otherness pervades tourism [13]. Tourist satisfaction does not ensure loyalty, as even satisfied tourists only return to a site once [14], which is also true for ecotourists [11]. As a result, Chiu et al. (2014) advocate that tourism researchers use different measures to evaluate loyalty for different types of tourist products [15]. Therefore, in this research, we identify and examine a loyalty construct (ecotourism loyalty) that refers to tourists’ intention to visit other ecotourism destinations, which can be regarded as a product category given that they are tourist products. A high level of satisfaction, a favorable destination image, and a positive tourism experience are key influential factors in attracting tourists to destinations associated with ecotourism and in developing a sense of loyalty to this category of tourism. Second, motivation is a critical component in helping determine the extent to which a journey is satisfying as well as the primary reasons for traveling to a certain area [16]. Motivations impact visitors’ desire to return, considering that the enticement of new visitors is more costly than that of returning tourists [17, 18]. As a result, it is important to study why people visit a certain site and what effect this visit has on their intent to return and promote the site. However, at this time, studies investigating tourist motivation in an ecotourism context are limited [19–21]. Notably, no studies investigate the link between tourist motivation and ecotourism loyalty.

This study fills the literature gaps by hypothesizing that tourists’ motivation explains the differences between destination loyalty and ecotourism loyalty. Thus, the objective of the study is to examine the role of tourist motivation in forming destination and ecotourism loyalty, accounting for the mediating effects of tourist satisfaction and destination image. The study enhances the destination loyalty construct by including both intentions to visit and intentions to recommend. The study also controls for attitudinal loyalty, which represents intentions, and behavioral loyalty, which indicates repeated trips to the same destination or types of destinations. Finally, the mediating factor of the destination image is not limited to particular attributes but includes both cognitive and affective dimensions.

2- Literature Review

2-1- Destination Image and Loyalty

Destination image is a central issue in tourism research because it represents how tourists perceive the destinations they visit and how tour operators and marketers want these destinations to be perceived [22]. The two-sided nature of destination image explains why a large strand of literature focuses on the gaps in the perception of the destination image by tourists and other stakeholders, such as practitioners and local residents [23, 24]. Other researchers have developed and validated various scales and tools for measuring destination image [25–27], and explored factors that determine destination image, such as word of mouth [28], types of information sources [9, 29], and the individual traits and personalities of tourists [30, 31]. Finally, another avenue of research studies the effects of destination image on tourists’ behavior [32, 33], and this study belongs to this avenue.

The effects of destination image on tourist behavior, including their intention to revisit and/or recommend, are explained by cognitive-affective-conative theory [34], which states that there is a strict hierarchy between the three dimensions of the destination image [35]. The cognitive dimension represents what tourists know about the place they are visiting, including various attributes such as nature, environment, and services. This dimension determines the affective destination image or how tourists feel about a place, which, in turn, influences the conative destination image, namely, the intention to revisit and/or recommend [36]. However, more recent literature deviates from the concept of conative image and replaces it with destination loyalty, which also means the intention to revisit and/or recommend [37]. This shift in conceptualization occurred under the influence of marketing theories, such as brand equity dimensions, that were being applied to tourism research [38]. Brand equity dimensions include brand image, brand awareness, perceived quality, and brand loyalty [39]. Regardless of how previous researchers referred to the intentions to revisit and/or recommend a destination (i.e., conative image or destination loyalty), several studies argue that these two constructs are significantly determined by the other two dimensions of destination image, namely, cognitive and affective [40–42].

At the same time, several studies provide evidence that destination image could be indirectly related to destination loyalty through the mediating effect of tourist satisfaction [43, 44]. If a tourist is satisfied with their trip, a positive destination image will translate into their intention to revisit and/or recommend the destination [7], which has been empirically confirmed by many researchers [8, 45, 46]. Satisfaction was also found to be an antecedent of the intention to recommend a destination, which is also considered an element of destination loyalty [47–49]. However, others provide evidence that satisfied tourists do not always want to revisit the destination [11, 14], as some seek novelty and new experiences, even if they were satisfied in the past [50, 51]. This theoretical discussion leads to the following hypotheses:

**H1.** Destination image has a positive direct association with destination loyalty.

**H2.** Destination image has a positive indirect association with destination loyalty mediated by tourist satisfaction.

2-2- Tourism Experience and Satisfaction

The literature does not agree on how to conceptualize satisfaction. Some researchers refer to expectation confirmation theory (ECT) and suggest that satisfaction is an outcome of the mental matching of a perceived pre-trip destination
image, which represents the tourist’s expectations and their actual experience on the trip [52, 53]. This strand of literature argues that destination image is a dynamic construct that changes under the influence of tourist experience [54]. Hence, several studies distinguish between pre-trip and post-trip destination images using longitudinal surveys [55, 56]. However, other researchers propose that expectations play a minor or no role in tourist satisfaction, and the latter is determined only by actual experience [57]. Regardless of which avenue of research is correct, both strands of the literature suggest that experience affects satisfaction [58]. The only difference is that some argue that the effect is direct [59, 60], whereas others argue that experience is indirectly affected and mediated by the destination image [61, 62]. Therefore, the next hypotheses are:

**H3.** Tourist experience has a positive direct association with tourist satisfaction.

**H4.** Tourist experience has a positive indirect association with tourist satisfaction mediated by destination image.

### 2-3- Motivation, Destination and Ecotourism Loyalty

Customers can be loyal not only to a single brand or destination but to multiple brands. This type of loyalty arises when customers prefer a specific type of product or service and are indifferent to the providers of the service. Some studies adopt this concept of multi-brand loyalty to the tourism industry, labeling it horizontal loyalty, which implies loyalty to multiple destinations [63, 64]. This concept has also been introduced into ecotourism research by [65], who distinguished between destination loyalty and ecotourism loyalty, with the latter implying the intention to visit other ecotourism sites. They hypothesized that the same factors that determine destination loyalty, namely, image, experience, and satisfaction, would also affect ecotourism loyalty [65]. However, their research has not addressed the problem of omitted variable bias. If ecotourism loyalty and destination loyalty are different constructs, there should be at least one factor that affects one construct but not the other. In this study, tourist motivation is hypothesized to be the omitted factor.

This consideration of motivation as the omitted factor is inspired by the push and pull motivation theory [66], which states that destination attributes that form a cognitive destination image, pull or attract tourists to a particular place, but push factors, such as the desire to escape, nostalgia, or novelty-seeking, could push them in a different direction. This would explain why some tourists could be loyal to ecotourism but not to a specific destination. The theories of the travel career ladder and travel career pattern also attempt to explain the differences in loyalty to one or many destinations by proposing a hierarchy of different push and pull motivation factors, similar to how Maslow’s hierarchy of needs conceptualized human behavior and priorities [67]. For example, in line with the travel career pattern theory, beginner tourists’ core motivations include novelty, relaxation, escape from the daily routine, and building relationships. As tourists become more experienced, these motivation factors become less important, and they start traveling to fewer destinations as they are attracted by destination-specific characteristics and internal values they have developed through past experiences [68, 69]. The academic literature provides evidence that tourists’ motivation affects destination loyalty, both directly and indirectly, through the formation of the perceived destination image [70, 71] and subsequent satisfaction [72]. This leads to the following hypotheses:

**H5.** Motivation has a direct positive effect on destination loyalty.

**H6.** Motivation has an indirect positive effect on destination loyalty mediated by destination image.

Previous research also highlights that tourists’ motivation is strongly associated with their attitude and behavior toward the environment, which raises an issue that tourists with a particular motivation could be loyal not only to a specific destination but to sustainable ecotourism as a whole [73]. According to the functionalist theory, tourists’ motivations are broken down into five major categories: knowledge, value-expressive, ego-defensive, utilitarian, and social-adjustive functions [74]. If an individual is driven by knowledge or novelty-seeking, they are less likely to be loyal to the same destination but are more likely to be loyal to a particular type of tourism, e.g., ecotourism, which is congruent with the tourist’s internal values and beliefs [75]. Thus, knowledge and value-expressive motivations, rather than destination motivation, are expected to drive ecotourism loyalty among socially responsible tourists. This argument is also consistent with norm activation theory [76] and the theory of planned behavior [77]. Chiu et al. (2014) demonstrated that destination image plays a significant role in shaping the environmentally responsible actions of tourists, which could also indicate a potential mediating effect of destination image in the relationship between motivation and ecotourism loyalty [15]. Attitudes toward sustainability and previous ecotourism trips tend to motivate sustainable behavior and help develop future loyalty to ecotourism [78]. This allows the final hypotheses of this study to be formulated:

**H7.** Motivation has a direct positive effect on ecotourism loyalty.

**H8.** Motivation has an indirect positive effect on ecotourism loyalty mediated by destination image.

Following the proposed hypotheses and using the theories of push and pull motivation, travel career pattern, and the extended cognitive-affective-conative framework, the final conceptual model for this research is presented in Figure 1.
3- Methodology

3-1- Research Design

Each theoretical construct in the research model was measured using adapted scales from past publications in reputable peer-reviewed journal articles. The scales were adapted to fit the context of ecotourism, as they were originally developed in the context of general tourism.

Ecotourism experience (EXP) was measured using the scale developed by Oh et al. [79]. This scale was selected because it has a strong theoretical foundation and is based on experience economy theory, which distinguishes four realms of experience [80]. Furthermore, the scale has been cited over 1,800 times and has inspired the development of other scales, such as those found in Hosany and Witham [81] and Kim et al. [82]. Destination image (DI) was measured using Baloglu and McCleary’s four-point scale for affective DI [31]. This scale has been cited 1,817 times and was selected because it is a validated bipolar scale, which previous studies confirm is more informative compared to unipolar scales of affective DI [83]. Cognitive DI was measured using a scale by Chi et al. [43] and adapted to the context of ecotourism. Satisfaction with attributes (ASAT) was measured using a multi-item scale from Lee [44], and was preferred to the single-item overall satisfaction scale from Enrique Binge et al. [84]. Destination loyalty (DESL) was measured using the scale published by Bosnjak et al. [85]. It comprises two dimensions of destination loyalty, namely, the intention to recommend the destination and the intention to visit the destination again. As attitudinal ecotourism loyalty (ECOL) has not been studied in previous research, except for Li et al. [65], their two-item scale was used to measure this construct. The study also controlled for behavioral ecotourism loyalty, measured by the number of ecotourism trips made in the past, and behavioral destination loyalty, measured by the number of trips to the same destination. Finally, tourist motivation (MOT) was measured using a scale from Fodness [86]. This scale was selected because it is based on functionalist theory and has been validated. All observed variables on these scales were measured using a five-point Likert scale with values from 1 to 5, where 1 indicates strong disagreement and 5 indicates strong agreement.

3-2- Data Collection

The research was set in the context of the ecotourism destination Bohemian Switzerland National Park in the Czech Republic. This national park is a protected area and aims to preserve and fully restore local flora and fauna to an untouched state. It has one of the oldest rock formations in Europe as well as cultural sites, such as historical castles,
which allows tour operators to provide diverse educational information to tourists interested in ecology, the environment, and history. The setting is nature-based, educational, protected, and it promotes socially responsible behavior. All of these features make it a classic ecotourism site consistent with most academic definitions and conceptualizations of ecotourism available to date [87].

Primary data were collected using self-administered structured questionnaires distributed through tour operators to Vietnamese tourists traveling to the Czech Republic in 2020–2021. Vietnam has often been studied as a target destination for international tourists [88], but there is no research into the behavior of ecotourists from Vietnam traveling to other overseas destinations, even though the number of international tourists from Vietnam has grown by approximately 100% from 2014 to 2019, before the COVID-19 pandemic [89]. This amounts to, on average, a 20% annual growth in the number of Vietnamese tourists who visit overseas destinations. This also makes this demographic group interesting for marketers and operators in ecotourism, as higher growth in the number of tourists from the region will be translated into higher revenue growth, which will be important in the post-pandemic recovery period for the industry.

The link to the structured online questionnaire was shared with tour operators to facilitate data collection from Vietnamese tourists. Tour operators were asked to share the link with tourists who had purchased the trip. The online questionnaire was available in both Vietnamese and English. Tour managers were also instructed to ask tourists to fill in the questionnaire on their way back from the destination after having experienced the trip. Over approximately 18 months, 522 completed questionnaires were submitted online, which constituted the final sample for this research. Table 1 provides a frequencies table of with background information on the surveyed ecotourists.

<table>
<thead>
<tr>
<th>Control Variable</th>
<th>Categories</th>
<th>Frequency</th>
<th>Percent</th>
<th>Cumulative Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender</td>
<td>Male</td>
<td>225</td>
<td>43.1%</td>
<td>43.1%</td>
</tr>
<tr>
<td></td>
<td>Female</td>
<td>297</td>
<td>56.9%</td>
<td>100.0%</td>
</tr>
<tr>
<td>Age</td>
<td>18-29</td>
<td>154</td>
<td>29.5%</td>
<td>29.5%</td>
</tr>
<tr>
<td></td>
<td>30-39</td>
<td>141</td>
<td>27.0%</td>
<td>56.5%</td>
</tr>
<tr>
<td></td>
<td>40-49</td>
<td>113</td>
<td>21.6%</td>
<td>78.2%</td>
</tr>
<tr>
<td></td>
<td>50-59</td>
<td>82</td>
<td>15.7%</td>
<td>93.9%</td>
</tr>
<tr>
<td></td>
<td>60+</td>
<td>32</td>
<td>6.1%</td>
<td>100.0%</td>
</tr>
<tr>
<td>Education</td>
<td>No university degree</td>
<td>61</td>
<td>11.7%</td>
<td>11.7%</td>
</tr>
<tr>
<td></td>
<td>Bachelor’s</td>
<td>350</td>
<td>67.0%</td>
<td>78.7%</td>
</tr>
<tr>
<td></td>
<td>Master’s</td>
<td>109</td>
<td>20.9%</td>
<td>99.6%</td>
</tr>
<tr>
<td></td>
<td>Doctoral</td>
<td>2</td>
<td>0.4%</td>
<td>100.0%</td>
</tr>
<tr>
<td>Income</td>
<td>Low income</td>
<td>18</td>
<td>3.4%</td>
<td>3.4%</td>
</tr>
<tr>
<td></td>
<td>Medium Low</td>
<td>112</td>
<td>21.5%</td>
<td>24.9%</td>
</tr>
<tr>
<td></td>
<td>Medium income</td>
<td>213</td>
<td>40.8%</td>
<td>65.7%</td>
</tr>
<tr>
<td></td>
<td>Medium High</td>
<td>151</td>
<td>28.9%</td>
<td>94.6%</td>
</tr>
<tr>
<td></td>
<td>High income</td>
<td>28</td>
<td>5.4%</td>
<td>100.0%</td>
</tr>
<tr>
<td>Previous trips to destination</td>
<td>No</td>
<td>371</td>
<td>71.1%</td>
<td>71.1%</td>
</tr>
<tr>
<td></td>
<td>Yes</td>
<td>151</td>
<td>28.9%</td>
<td>100.0%</td>
</tr>
<tr>
<td>Previous ecotourism trips</td>
<td>No</td>
<td>127</td>
<td>24.3%</td>
<td>24.3%</td>
</tr>
<tr>
<td></td>
<td>Yes</td>
<td>395</td>
<td>75.7%</td>
<td>100.0%</td>
</tr>
</tbody>
</table>

The sample is slightly skewed toward female respondents and younger demographic groups. The sample is also dominated by people with medium and medium-to-high income. Most respondents were first-time visitors to the destination but had other experiences with ecotourism.

The full graph of the respondents’ demographic characteristics is shown in Figure 3.
Figure 3. Sample demographics

### 3-3 Statistical Analysis

Factor loadings and how well the presented theoretical constructs expressed the observed variables were assessed using confirmative factor analysis (CFA) in R. This analysis was also used to introduce a CFA marker that detected common method variance (CMV), which was often ignored in previous studies on destination image, satisfaction, experience, and loyalty of ecotourists. CMV is a part of variance explained by the tools and methods of administering the survey rather than by actual factors and observed variables. High CMV can distort the results and make observations unreliable [90].

The statistical significance of the relationships between the theoretical constructs was then measured in the structural model by estimating path coefficients in R. The mediating effects were tested using hierarchical regressions.
4- Results

4-1- Confirmatory Factor Analysis

As the scales chosen for measuring latent variables were taken from featured articles, the observed variables from the survey were expected to demonstrate high factor loadings. This was evidenced in CFA. However, as several constructs, such as destination image, satisfaction, destination loyalty, and ecotourism loyalty, were broken down into several segments, it was important to test whether the measurement model with such a breakdown produced a better fit than alternative models where these dimensions were combined. The baseline model was estimated with constructs for ecotourism experience (EE), cognitive destination image (CDI), affective destination image (ADI), attribute satisfaction (ASAT), overall satisfaction (OSAT), intention to visit destination (IVD), intention to recommend destination (IRD), intention to visit other ecotourism sites (IVE), and intention to recommend ecotourism (IRE). The models' performance was compared using the Chi-square statistic, the root mean square error of approximation (RMSEA), the standardized root mean square residual (SRMR), the comparative fit index (CFI), and the Tucker-Lewis index (TLI) (Table 2).

<table>
<thead>
<tr>
<th>Model</th>
<th>chi-sq</th>
<th>df</th>
<th>CFI</th>
<th>TLI</th>
<th>RMSEA</th>
<th>SRMR</th>
</tr>
</thead>
<tbody>
<tr>
<td>(DESL, ECOL, SAT, DI, EXP, MOT)</td>
<td>3655.2</td>
<td>390</td>
<td>0.675</td>
<td>0.637</td>
<td>0.127</td>
<td>0.090</td>
</tr>
<tr>
<td>(DESL+ECOL, SAT, DI, EXP, MOT)</td>
<td>3867.8</td>
<td>395</td>
<td>0.654</td>
<td>0.619</td>
<td>0.130</td>
<td>0.096</td>
</tr>
<tr>
<td>(DESL+DI, ECOL, SAT, EXP, MOT)</td>
<td>4236.4</td>
<td>395</td>
<td>0.617</td>
<td>0.579</td>
<td>0.136</td>
<td>0.104</td>
</tr>
<tr>
<td>(DESL+SAT, ECOL, DI, EXP, MOT)</td>
<td>4158.0</td>
<td>395</td>
<td>0.625</td>
<td>0.587</td>
<td>0.135</td>
<td>0.103</td>
</tr>
<tr>
<td>(DESL+ECOL, SAT, DI+EXP, MOT)</td>
<td>4700.1</td>
<td>399</td>
<td>0.572</td>
<td>0.533</td>
<td>0.144</td>
<td>0.111</td>
</tr>
<tr>
<td>(DESL+ECOL, SAT, DI+MOT, EXP)</td>
<td>4376.1</td>
<td>399</td>
<td>0.604</td>
<td>0.568</td>
<td>0.138</td>
<td>0.100</td>
</tr>
<tr>
<td>(DESL+ECOL, SAT+DI, EXP, MOT)</td>
<td>4703.7</td>
<td>399</td>
<td>0.571</td>
<td>0.533</td>
<td>0.144</td>
<td>0.108</td>
</tr>
<tr>
<td>(DESL+ECOL, SAT+DI+EXP+MOT)</td>
<td>5883.9</td>
<td>404</td>
<td>0.454</td>
<td>0.412</td>
<td>0.161</td>
<td>0.116</td>
</tr>
<tr>
<td>(DESL+ECOL+SAT+DI+EXP+MOT)</td>
<td>6246.0</td>
<td>405</td>
<td>0.418</td>
<td>0.375</td>
<td>0.166</td>
<td>0.115</td>
</tr>
</tbody>
</table>

The baseline model shows a higher fit compared to the alternatives (chi-sq = 3,655.2, df = 390, CFI = 0.675, TLI = 0.637, RMSEA = 0.127, SRMR = .090). This implies that the theoretical constructs are distinguishable and should not be combined, as their combination could lead to a loss of information and poorer model performance.

At the stage of undertaking the survey, attempts were made to minimize respondents’ bias by reverse coding some of the questions and randomizing the order in which they were asked. However, as the questionnaire was self-administered and both dependent and independent variables were retrieved from the same source, it was subject to common method bias (CMB). The presence of CMV associated with CMB was checked by adding a marker variable to the baseline model in CFA. It was expected that if CMV was significant, there would be a substantial improvement in the model fit. However, the evidence showed only marginal improvement (Table 3).

<table>
<thead>
<tr>
<th>Model</th>
<th>chi-sq</th>
<th>df</th>
<th>CFI</th>
<th>TLI</th>
<th>RMSEA</th>
<th>SRMR</th>
</tr>
</thead>
<tbody>
<tr>
<td>(DESL, ECOL, SAT, DI, EXP, MOT)</td>
<td>3655.2</td>
<td>390</td>
<td>0.675</td>
<td>0.637</td>
<td>0.127</td>
<td>0.090</td>
</tr>
<tr>
<td>(DESL, ECOL, SAT, DI, EXP, MOT, CMV)</td>
<td>3752.5</td>
<td>474</td>
<td>0.685</td>
<td>0.649</td>
<td>0.115</td>
<td>0.084</td>
</tr>
</tbody>
</table>

This allows for concluding that there is no CMB in responses.

4-2- Descriptive Statistics and Correlations

The descriptive statistics of the variables along with the estimated correlation coefficients between the factors are provided in Table 4.

Analyzing the correlations revealed that repeated ecotourism trips to the same or different destinations were positively correlated with tourists’ income. Tourists’ education level was also positively correlated with repeated ecotourism trips to different destinations. This implies that more educated tourists seek more experiences or more novelty at ecotourism sites. Repeated ecotourism trips and tourists’ ages were also significant and positively correlated. Among the remaining control variables, education was positively correlated with income and age, and gender was negatively correlated with revisiting the same destination, indicating that women seek more novelty.
The assessment of correlation coefficients between factors can help make preliminary assessments of the relationships between these constructs, and these were further investigated using SEM. Tourist satisfaction showed a significant and positive correlation with destination loyalty ($r = 0.54$, $p<0.01$), tourism experience ($r = 0.44$, $p<0.01$), and destination image ($r = 0.51$, $p<0.01$). Tourists’ motivation was positively and significantly correlated with destination image ($r = 0.60$, $p<0.01$) and ecotourism loyalty ($r = 0.53$, $p<0.01$).

| Table 4. Descriptive statistics and correlations between constructs |
|------------------|--------|--------|--------|--------|--------|--------|--------|
| **Control Variables** | **Mean** | **SD** | **1**   | **2**   | **3**   | **4**   | **5**   |
| 1 AGE | 2.42 | 1.23 |        |        |        |        |        |
| 2 GENDER | 0.57 | 0.50 | 0.01   |        |        |        |        |
| 3 EDU | 2.10 | 0.58 | 0.14*** | 0.02   |        |        |        |
| 4 INCOME | 3.11 | 0.92 | 0.08*  | -0.02  | 0.23*** |        |        |
| 5 DESTVISIT | 0.18 | 0.38 | 0.01   | -0.09** | 0.02   | 0.08*  |        |
| 6 ECOVISIT | 0.52 | 0.50 | 0.09*** | -0.01  | 0.20*** | 0.30*** | 0.44*** |
| **Constructs** | **Mean** | **SD** | **7**   | **8**   | **9**   | **10**  | **11**  |
| 7 SAT | 3.35 | 0.65 |        |        |        |        |        |
| 8 DESL | 3.23 | 0.75 | 0.54*** |        |        |        |        |
| 9 ECOL | 3.72 | 0.53 | 0.55*** | 0.57*** |        |        |        |
| 10 DI | 3.49 | 0.29 | 0.51*** | 0.51*** | 0.44*** |        |        |
| 11 EXP | 3.44 | 0.76 | 0.44*** | 0.57*** | 0.46*** | 0.47*** |        |
| 12 MOT | 3.40 | 0.68 | 0.40*** | 0.49*** | 0.53*** | 0.60*** | 0.48*** |

Notes: * significant at 10%, ** significant at 5%, *** significant at 1%.

4-3- Structural Model

The path coefficients produced in estimating the structural model are demonstrated in Figure 4.

![Figure 4. Path coefficients](image)

The standard errors, p-values, and confidence intervals (CI) for the path coefficients are summarized in Table 5.
These path coefficients support the direct relationships between all theoretical constructs, which confirms H1, H3, H5, and H7. Testing the indirect effects between the constructs was conducted by running hierarchical regressions.

### 4-4 Hypothesis Testing: Direct Effects

Hierarchical regression models were run to test the research hypotheses. Control variables were entered into the models first, along with the two exogenous factors of tourist experience and tourist motivation. The control variables included age, gender, education, income, previous destination visits, and previous ecotourism visits. The choice of control variables was influenced by previous studies [65, 91]. The second stage of hierarchical regression modeling involved the addition of mediating factors that played the roles of both dependent and independent variables, depending on the model. The specification of each regression model and its output are provided in Table 6.

### Table 5. Path coefficients

<table>
<thead>
<tr>
<th>Effects</th>
<th>Coefficient</th>
<th>Std. Error</th>
<th>z</th>
<th>p-value</th>
<th>95% CI</th>
</tr>
</thead>
<tbody>
<tr>
<td>DI → DESL</td>
<td>0.490</td>
<td>0.117</td>
<td>4.192</td>
<td>0.000</td>
<td>[0.261,0.720]</td>
</tr>
<tr>
<td>SAT → DESL</td>
<td>0.211</td>
<td>0.044</td>
<td>4.842</td>
<td>0.000</td>
<td>[0.126,0.297]</td>
</tr>
<tr>
<td>EXP → DESL</td>
<td>0.278</td>
<td>0.037</td>
<td>7.434</td>
<td>0.000</td>
<td>[0.204,0.351]</td>
</tr>
<tr>
<td>MOT → DESL</td>
<td>0.177</td>
<td>0.046</td>
<td>3.827</td>
<td>0.000</td>
<td>[0.087,0.268]</td>
</tr>
<tr>
<td>MOT → DI</td>
<td>0.203</td>
<td>0.016</td>
<td>12.608</td>
<td>0.000</td>
<td>[0.171,0.235]</td>
</tr>
<tr>
<td>EXP → DI</td>
<td>0.089</td>
<td>0.014</td>
<td>6.172</td>
<td>0.000</td>
<td>[0.061,0.117]</td>
</tr>
<tr>
<td>DI → SAT</td>
<td>0.891</td>
<td>0.093</td>
<td>9.561</td>
<td>0.000</td>
<td>[0.709,0.074]</td>
</tr>
<tr>
<td>EXP → SAT</td>
<td>0.217</td>
<td>0.035</td>
<td>6.229</td>
<td>0.000</td>
<td>[0.149,0.285]</td>
</tr>
<tr>
<td>DI → ECOL</td>
<td>0.373</td>
<td>0.085</td>
<td>4.372</td>
<td>0.000</td>
<td>[0.206,0.540]</td>
</tr>
<tr>
<td>MOT → ECOL</td>
<td>0.320</td>
<td>0.036</td>
<td>8.970</td>
<td>0.000</td>
<td>[0.250,0.390]</td>
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</table>

### Table 6. Hierarchical regressions

<table>
<thead>
<tr>
<th>Dependent Variable:</th>
<th>DESL</th>
<th>SAT</th>
<th>DESL</th>
<th>SAT</th>
<th>DI</th>
<th>SAT</th>
<th>DESL</th>
<th>DI</th>
<th>DESL</th>
<th>ECOL</th>
<th>ECOL</th>
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<tr>
<td>Model</td>
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<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
<td>8</td>
<td>9</td>
<td>10</td>
<td>11</td>
</tr>
<tr>
<td>Control Variables</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<td></td>
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</tr>
<tr>
<td>Age</td>
<td>0.02</td>
<td>-0.01</td>
<td>0.02</td>
<td>-0.02</td>
<td>-0.01</td>
<td>-0.01</td>
<td>0.01</td>
<td>-0.01</td>
<td>0.01</td>
<td>-0.02</td>
<td>-0.02</td>
</tr>
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<td>Gender</td>
<td>0.07</td>
<td>0.04</td>
<td>0.05</td>
<td>-0.02</td>
<td>-0.06**</td>
<td>0.03</td>
<td>0.05</td>
<td>-0.03</td>
<td>0.08</td>
<td>0.01</td>
<td>0.02</td>
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<td>0.01</td>
<td>0.01</td>
<td>0.00</td>
<td>-0.00</td>
<td>0.01</td>
<td>0.02</td>
<td>0.00</td>
<td>0.02</td>
<td>0.05</td>
<td>0.05</td>
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<tr>
<td>Income</td>
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<td>-0.03</td>
<td>0.00</td>
<td>-0.03</td>
<td>-0.01</td>
<td>-0.02</td>
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<td>-0.04</td>
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<tr>
<td>Destination Visits</td>
<td>0.12</td>
<td>0.01</td>
<td>0.12</td>
<td>-0.03</td>
<td>-0.05</td>
<td>0.02</td>
<td>0.07</td>
<td>-0.05</td>
<td>0.12</td>
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<td>0.01</td>
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<tr>
<td>Ecotourism Visits</td>
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<td>-0.12</td>
<td>-0.05</td>
<td>-0.02</td>
<td>-0.03</td>
<td>-0.14**</td>
<td>-0.01</td>
<td>-0.13**</td>
<td>-0.03</td>
<td>-0.03</td>
</tr>
<tr>
<td>Independent Variables</td>
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<td></td>
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<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>DI</td>
<td>1.35***</td>
<td>1.16***</td>
<td>0.84***</td>
<td>0.37***</td>
<td>0.17***</td>
<td>0.22***</td>
<td>0.55***</td>
<td>0.25***</td>
<td>0.33***</td>
<td>0.41***</td>
<td>0.32***</td>
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<tr>
<td>SAT</td>
<td></td>
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<td>Moderating Variables</td>
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<tr>
<td>SAT</td>
<td>0.44***</td>
<td>0.89***</td>
<td>0.88***</td>
<td>0.36***</td>
<td>0.27</td>
<td>0.27</td>
<td>0.37</td>
<td>0.20</td>
<td>0.24</td>
<td>0.32</td>
<td>0.25</td>
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<tr>
<td>DI</td>
<td></td>
<td>0.26</td>
<td>0.26</td>
<td>0.36</td>
<td>0.19</td>
<td>0.23</td>
<td>0.31</td>
<td>0.24</td>
<td>0.36</td>
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<td></td>
<td></td>
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</tr>
<tr>
<td>F-stat</td>
<td>26.49***</td>
<td>26.66***</td>
<td>37.73***</td>
<td>18.46***</td>
<td>23.34***</td>
<td>29.77***</td>
<td>24.81***</td>
<td>43.12***</td>
<td>30.45***</td>
<td>29.75***</td>
<td>29.12***</td>
</tr>
</tbody>
</table>

Notes: * significant at 10%, ** significant at 5%, *** significant at 1%.

Four dependent variables (DI, SAT, DESL, and ECOL), four exogenous variables (DI, SAT, EXP, and MOT), and two mediating variables (DI and SAT) appeared in the models. Overall, eleven regression models were estimated. All of them showed a moderately high fit, represented by R-squared and adjusted R-squared in a range of 0.20 to 0.37. This implies that the models explain a significant percentage of variance in the dependent variables, and, at the same time, no evidence of multicollinearity and non-stationarity.
In terms of H1, the results confirm a statistically significant direct positive effect of destination image on destination loyalty (Model 1, $\beta = 1.35$, p<0.01). H3 predicted that tourist experience would have a statistically significant direct positive association with tourist satisfaction. Based on the results of regression modeling, this hypothesis was supported as the direct effect was positive and significant (Model 4, $\beta = 0.37$, p<0.01). According to H5, tourist motivation was expected to directly influence destination loyalty, and the results confirmed this hypothesis, demonstrating a positive and statistically significant coefficient for tourist motivation (Model 7, $\beta = 0.55$, p<0.01). The results of hierarchical regressions also supported H7, which suggests that motivation directly influences ecotourism loyalty (Model 10, $\beta = 0.41$, p<0.01). Thus, all hypothesized direct associations between the studied constructs were confirmed.

4-5- Hypothesis Testing: Mediating Effects

The rest of the hypotheses assumed indirect relationships, and they were all supported in this study. Destination image had a significant positive indirect effect on destination loyalty mediated by tourist satisfaction (H2, Model 3, $\beta = 0.84$, p<0.01), and tourist experience was positively and indirectly associated with tourist satisfaction through the mediating effect of destination image (H4, Model 6, $\beta = 0.22$, p<0.01). Motivation was proved to be indirectly and positively related to destination loyalty through the mediating effect of destination image (H4, Model 6, $\beta = 0.22$, p<0.01). Finally, the evidence supported the hypothesis that motivation indirectly and positively influences ecotourism loyalty mediated by destination image (H8, Model 11, $\beta = 0.32$, p<0.01).

5- Discussion

The findings indicate that tourism experience influences destination image, which is consistent with earlier research [92, 93]. The study also discovered that destination image and tourism experience influence satisfaction. The tourism experience had a direct effect on satisfaction and an indirect effect on destination image, corroborating previous studies [20, 94]. Tourists visiting the Czech Republic make decisions based on the destination’s image, ecotourism experience, tourist motivation, and ecotourism satisfaction, according to the findings. Indeed, these visitors appear to be aware of and have specific reasons for selecting the destination [95]. The findings reveal that visitors to the Czech Republic are concerned and specific about what they want from their vacations. The cognitive image of the Czech Republic requires more strategies for increasing tourist satisfaction. Therefore, commercial advertising campaigns should fulfill all promises and expectations, leading to increased repeat visits and loyalty to all destinations. The marketing share of destination image and tourist satisfaction should increase revenues as a result of the retention of loyal visitors who return to these destinations [14].

Respondents tended to be more attracted to the ecotourism category (mean = 3.72) than to a particular ecotourism site (mean = 3.35), which could be explained by travelers seeking novel experiences. Given the time and expense required, it is quite unlikely that outbound Vietnamese visitors will visit the Czech Republic again in the near future. The results corroborate earlier studies that question the validity of the idea of destination loyalty and propose loyalty as a form of travel that can replace destination loyalty [96, 97].

Tourism experience influences ecotourism loyalty the most, followed by destination satisfaction and destination image as a whole. This is supported by the theory of consumer behavior, which predicts that favorable customer assessments of a brand can lead to future purchases in the same category [17, 98]. The findings of this study provide a better understanding of the influences on ecotourism loyalty and tourist consumer behavior by attempting to determine which constructs are most influential in the likelihood of returning to and recommending a destination. Destination managers and marketers in the Czech Republic should work to improve the destination’s image in terms of the quality of the travel environment, attractions, infrastructure, events, and sports, thereby improving the destination’s ecotourist experience and satisfaction, and ensuring tourists are highly satisfied. The importance of image and value in stimulating tourist satisfaction and loyalty, which leads to tourists returning to the destination and recommending it to others, should not be underestimated by Czech Republic destination managers. High levels of destination satisfaction must be established to create a positive ecotourism experience in the Czech Republic. This will boost and maintain the destination’s competitiveness. As a result, destinations must develop more efficient and effective marketing and service delivery strategies to meet tourists’ expectations and needs, thus, improving their travel experiences.

6- Conclusion

The findings from this study demonstrate that aesthetic, escapist, and educational dimensions significantly contribute to ecotourists’ perceptions of a destination’s image as pleasant and exciting. Furthermore, this effect is mediated by the cognitive attributes of the destination image, such as nature and outdoor activities. Thus, to attract more ecotourists to this destination, it is recommended that marketers emphasize not only the nature and beautiful scenery but also stress that the destination is perfect for outdoor activities such as hiking. The destination image was found to produce a positive effect on OSAT and ASAT. However, the intention to revisit and/or recommend the destination was more strongly affected by satisfaction with the quality of services, which had a higher loading compared to other manifest variables.
This implies that tour operators and marketers at the destination should work on improving service quality to win customers’ loyalty, not only to ecotourism in general but also to the specific destination. Although emphasizing a destination’s eco-features can also lead to tourist loyalty, according to the findings, this loyalty is more related to ecotourism loyalty than destination loyalty. Hence, practitioners should find a balance between creating a pleasant and green image of the destination and emphasizing an exciting image associated with outdoor activities and high-quality services.

7- Declarations

7.1 Author Contributions

Conceptualization, S.D.H.; methodology: S.D.H.; software, S.D.H.; validation, S.D.H.; formal analysis, T.P.P.; investigation, T.P.P.; resources, T.P.P.; data curation, S.D.H., and T.P.P.; writing—original draft preparation, S.D.H., and T.P.P.; visualization, T.P.P.; writing—review and editing, Z.T.; supervision: Z.T. All authors have read and agreed to the published version of the manuscript.

7.2 Data Availability Statement

The data presented in this study are available on request from the corresponding author.

7.3 Funding

This work was supported by the Internal Grant Agency of FaME (IGA/FaME/2022/012).

7.4 Institutional Review Board Statement

Not applicable.

7.5 Informed Consent Statement

Participants gave their written consent to use their anonymous data for statistical purposes. All of them were over 18 years old and voluntarily collaborated without receiving any financial compensation.

7.6 Conflicts of Interest

The authors declare that there is no conflict of interest regarding the publication of this manuscript. In addition, the ethical issues, including plagiarism, informed consent, misconduct, data fabrication and/or falsification, double publication and/or submission, and redundancies have been completely observed by the authors.

8 References


Appendix: Questionnaire for Quantitative Research

We are conducting research entitled “Tourist Motivation as an Antecedent of Destination and Ecotourism Loyalty” to identify the role of tourist motivation in the determination of destination loyalty and ecotourism loyalty. According to The International Ecotourism Society (TIES), ecotourism can be defined as “responsible travel to natural areas that conserve the environment, sustains the well-being of the local people, and involves interpretation and education”. Everyone who is above 18 years old is more than welcome to participate in this survey. The whole process will take you approximately 8 to 10 minutes to complete. All the information provided will be completely confidential. The results will be analyzed for academic purposes only.

Thank you very much for your participation.

Section 1: Demographic information

Please provide your personal information by choosing the available answers.

1. Your age is
   ☐ 18-29 ☐ 30-39 ☐ 40-49 ☐ 50-59 ☐ 60+

2. Gender: ☐ Male ☐ Female

3. Education: ☐ No university degree ☐ Bachelor ☐ Master ☐ Doctoral

4. Income:
   ☐ Low income (less than $15,000)
   ☐ Medium low ($15,000-$29,999)
   ☐ Medium income ($30,000-$54,999)
   ☐ Medium high ($55,000 – $79,999)
   ☐ High income ($80,000 or above)

5. Have you ever been to this holiday destination?
   ☐ Yes ☐ No

6. Have you ever been to ecotourism trips before?
   ☐ Yes ☐ No

Section 2: Tourist motivation

7. It’s important for me to experience different cultures and different way of life
   ☐ Strongly disagree
   ☐ Disagree
   ☐ Neutral
   ☐ Agree
   ☐ Strongly agree

8. I would like to rest and relax in pleasant setting.
   ☐ Strongly disagree
   ☐ Disagree
   ☐ Neutral
   ☐ Agree
   ☐ Strongly agree

9. I would like to pursue special interest and skills.
   ☐ Strongly disagree
   ☐ Disagree
   ☐ Neutral
   ☐ Agree
   ☐ Strongly agree

10. I would like to be healthy and fit.
    ☐ Strongly disagree
    ☐ Disagree
    ☐ Neutral
    ☐ Agree
    ☐ Strongly agree
11. It's important for me to go someplace fashionable on vacation.
☐ Strongly disagree
☐ Disagree
☐ Neutral
☐ Agree
☐ Strongly agree

12. When I go home, I talk to everybody about my experiment.
☐ Strongly disagree
☐ Disagree
☐ Neutral
☐ Agree
☐ Strongly agree

13. I just like to travel, to go somewhere and to do something.
☐ Strongly disagree
☐ Disagree
☐ Neutral
☐ Agree
☐ Strongly agree

Section 3: Ecotourism Experience

14. The experience has made me more knowledgeable
☐ Strongly disagree
☐ Disagree
☐ Neutral
☐ Agree
☐ Strongly agree

15. I felt a real sense of harmony
☐ Strongly disagree
☐ Disagree
☐ Neutral
☐ Agree
☐ Strongly agree

16. Activities of others were amusing to watch
☐ Strongly disagree
☐ Disagree
☐ Neutral
☐ Agree
☐ Strongly agree

17. I felt I played a different character here
☐ Strongly disagree
☐ Disagree
☐ Neutral
☐ Agree
☐ Strongly agree

18. My experience on this trip was visually interesting
☐ Strongly disagree
☐ Disagree
☐ Neutral
☐ Agree
☐ Strongly agree

19. I will have wonderful memories about this trip
☐ Strongly disagree
☐ Disagree
☐ Neutral
☐ Agree
☐ Strongly agree
20. Overall perceived quality
☐ Extremely poor
☐ Bad
☐ Average
☐ Good
☐ Excellent

21. Overall trip satisfaction
☐ Not at all satisfied
☐ Slightly satisfied
☐ Moderately satisfied
☐ Very satisfied
☐ Completely satisfied

Section 4: Destination Image
22. Bohemian Switzerland National Park is safe and secure
☐ Strongly disagree
☐ Disagree
☐ Neutral
☐ Agree
☐ Strongly agree

23. Bohemian Switzerland National Park offers exciting and interesting places to visit
☐ Strongly disagree
☐ Disagree
☐ Neutral
☐ Agree
☐ Strongly agree

24. Bohemian Switzerland National Park has a beautiful scenery and natural attractions
☐ Strongly disagree
☐ Disagree
☐ Neutral
☐ Agree
☐ Strongly agree

25. Bohemian Switzerland National Park has a pleasant climate
☐ Strongly disagree
☐ Disagree
☐ Neutral
☐ Agree
☐ Strongly agree

Section 5: Tourist satisfaction
26. I'm satisfied with species diversity
☐ Strongly disagree
☐ Disagree
☐ Neutral
☐ Agree
☐ Strongly agree

27. I'm satisfied with ecological diversity
☐ Strongly disagree
☐ Disagree
☐ Neutral
☐ Agree
☐ Strongly agree

28. I'm satisfied with cultural landscape
☐ Strongly disagree
☐ Disagree
☐ Neutral
☐ Agree
☐ Strongly agree
29. I’m satisfied with service quality
☐ Strongly disagree
☐ Disagree
☐ Neutral
☐ Agree
☐ Strongly agree

30. I’m satisfied with interpretation services
☐ Strongly disagree
☐ Disagree
☐ Neutral
☐ Agree
☐ Strongly agree

31. Overall, I am satisfied with the trip.
☐ Strongly disagree
☐ Disagree
☐ Neutral
☐ Agree
☐ Strongly agree

Section 6: Destination Loyalty

32. I intend to recommend this destination to my friends
☐ Strongly disagree
☐ Disagree
☐ Neutral
☐ Agree
☐ Strongly agree

33. I would like to visit the destination again
☐ Strongly disagree
☐ Disagree
☐ Neutral
☐ Agree
☐ Strongly agree

34. I see myself as a fan of the visited destination
☐ Strongly disagree
☐ Disagree
☐ Neutral
☐ Agree
☐ Strongly agree

Section 7: Ecotourism loyalty

35. I would like to visit other ecotourism sites in Czech Republic
☐ Strongly disagree
☐ Disagree
☐ Neutral
☐ Agree
☐ Strongly agree

36. I plan to visit other ecotourism sites in Czech Republic
☐ Strongly disagree
☐ Disagree
☐ Neutral
☐ Agree
☐ Strongly agree