INTERACTION BETWEEN SATISFACTION AND LOYALTY OF LITHUANIAN TOURISTS: A MODERATING EFFECT OF NATURAL FEATURES

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The moderating effect of natural features on the effect of Lithuanian tourist satisfaction to loyalty is being analyzed in the article. Experience of foreign countries and scientific researches justify the positive effect of tourist satisfaction to loyalty. Nevertheless, this effect is considered as complex due to the possibility of the endogenous or exogenous latent variables’ moderating effect. Natural features of the country may be regarded as such variable. Taking into account that there is a lack of scientific researches about the moderating effect of natural features in the case of Lithuania, it is worth analyzing the interaction effect between tourist satisfaction and loyalty. The aim of the article is to determine the interaction effect between Lithuanian tourist satisfaction and loyalty regarding natural features as a moderator variable. While achieving the aim of the article, the analysis of scientific literature is provided. Furthermore, quantitative research and the analysis of the research results using structural equation modelling are applied. As a research results, the interaction effect of Lithuanian tourist satisfaction to loyalty is determined and the moderating effect of natural features is assessed.

Keywords: Lithuanian tourism, Natural features, Tourist satisfaction, Tourist loyalty.
JEL codes: M31, M39, Q26, Q51.

1. Introduction

Relevance of the research. The satisfaction-loyalty relation is widely analyzed in managerial, as well as in marketing literature. According to H. M. Gonçalves and P. Sampaio (2012), it is extremely important to understand the antecedents of customer loyalty. There is strong empirical evidence to suggest that customer satisfaction is an antecedent of customer loyalty, and that there is a positive link between these two constructs. However, some previous researches (Tuu, 2010) highlighted, that latter relationship in some cases might be expressed in nonlinear functional forms. Considering the complexity of the interaction between satisfaction and loyalty, several studies have attempted to take a deeper look at this relationship by considering the extent to which other variables might have a moderating effect on this relationship (Gonçalves, 2012).

It is well established in tourism literature that both: tourist satisfaction and tourist’s intention to return are partially determined by his / her assessment of the destination’s different attributes (Alegre, 2010). Natural features are being distin-
guished as the attribute of destination’s assessment and the results of the researches revealed that latter variable has the highest effect on tourists’ loyalty as well as on the evaluation of destination’s attractiveness (Krešić, 2011; Artuğer, 2013). It suggests that in considering the complexity of the relationship between tourist satisfaction and loyalty, not only the tourist satisfaction may directly affect tourists’ loyalty, but also natural features.

The problem solved in the article is: what is the interaction between Lithuanian tourist satisfaction and loyalty? and what is the moderating effect of natural features to this interaction?

The object of the research is the interaction effect between tourist satisfaction and loyalty regarding natural features as a moderator variable.

The aim of the research is to determine the interaction effect between Lithuanian tourist satisfaction and loyalty regarding natural features as a moderator variable.

Research methods. Achieving to determine the relations between satisfaction, loyalty, and natural features in tourism industry regarding Lithuanian tourists, the assumptions were made that both satisfaction and natural features affect loyalty, additionally natural features moderates the effect of satisfaction on loyalty. Questionnaire research was provided to obtain tourists’ valuations of latter variables. Structural equation modelling (SEM) using partial least squares (PLS) path modelling methodology was applied for statistical analysis.

2. Scientific substantiation

The tourism industry is important in terms of gross domestic product (GDP) and provides numerous employment opportunities in many nations (Deng, 2013). On the other hand, in addition to the changes and innovations in the demographic, socio-economic, and technological fields in tourism the competition among tourist destinations has increased significantly during recent years (Artuğer, 2013). Consequently, measuring and managing customer satisfaction has become crucial for the survival, development and success of service industries like tourism (Song, 2012). A good understanding of tourist satisfaction levels, as well as the dynamic changes in these levels, benefits not only the service industries that focus on inbound tourism, but also the government regulators and private investors that have a vested interest in the development of a high-quality tourism infrastructure. Improving tourist satisfaction levels is likely to contribute to an enhanced reputation for both: service providers and the destination as a whole. In addition, consumer studies indicate that an improvement in these satisfaction levels may contribute to increased consumer loyalty, reduced price elasticity, a lower cost of future transactions and improved productivity (Song, 2011).

M. Kozak (2001) argued that there are existing differences in the behavior, values, and satisfaction levels of tourists representing different nationalities. Furthermore, considering dissimilarities among people, their values, habits, beliefs, cultural heritage and way of life in the different countries, various authors from all over the world have revealed different determinants and indexes of Tourist Satisfaction (Quin-
Accordingly, tourists with the same nationality might perceive destinations similarly; despite this, tourists with the other nationalities might perceive the same destination highly different. Therefore, there are different Tourist Satisfaction Indexes with the diverse determinants, as well as relations among them created in different countries, but not for the different destinations.

In the largest part of customer satisfaction research methodologies, e.g. American Customer Satisfaction index, European Customer Satisfaction index, Norwegian Customer Satisfaction barometer, Swedish Customer Satisfaction barometer, etc. (Johnson, 2001), as well as in the tourists satisfaction researches (Som, 2011; Salleh, 2013), the main consequence of satisfaction is considered to be loyalty to the destination. This substantiates the importance of tourists’ loyalty to the destinations and confirms the significance of the tourists’ satisfaction measures. Therefore, suggestion was made that the reason of trying to better satisfy tourists is the attempt to enhance tourists’ loyalty. Consequently, most of tourist satisfaction models contain two essential variables: satisfaction and loyalty.

It is well established in tourism literature that both: overall tourist satisfaction and a tourist’s intention to return are partially determined by his/her assessment of the destination’s different attributes (Alegre, 2010). Many authors (Krešic, 2011; Song, 2012; Artuğer, 2013 et al.) distinguish variable ‘natural features’ (natural attractions) as the attribute of destination’s assessment and the results of the researches (Krešic, 2011; Artuğer, 2013) revealed that latter variable has the highest effect on tourists’ loyalty as well as on the evaluation of destination’s attractiveness. It suggests that in many cases not only the tourist satisfaction may directly affect tourists’ loyalty, but also natural features. Furthermore, there is existing possibility of variable’s ‘natural features’ moderating impact on the effect of satisfaction on loyalty. This indicates that the relation between satisfaction, loyalty, and natural features in tourism industry needs to be studied more.

3. Research methodology

Endeavouring to make deep analysis of the relations between satisfaction, loyalty, and natural features in tourism industry regarding Lithuanian tourists, the assumptions were made that both satisfaction and natural features affect loyalty; additionally natural features moderate the effect of satisfaction on loyalty. Consequently, the structural model, linking tourist satisfaction and loyalty with natural features moderating this relationship, could be written in the standardized form (1):

\[ \text{Loyalty} = \beta_1 \text{Satisfaction} + \beta_2 \text{Natural Features} + \beta_3 \text{Satisfaction} \times \text{Natural Features} \quad (1) \]

The determinants of the satisfaction are excluded from the analysis regarding the aim of the research.

Consequently, by partially differentiating latter equation with respect to satisfaction, the impact of satisfaction on loyalty could be attained (2):
The manifest variables of the corresponding latent variables formed a questionnaire for respondents’ evaluations (the questionnaire is available from the authors upon request). 10-point evaluation scale was applied for the questionnaire. Authors (Coelho, 2006) underlined that the precision of the satisfaction researches results is greater when the 10-point scale is used for the research.

Total sample size (based on the recommendations for customer satisfaction researches) was 251. The survey was conducted on the summer of 2013. Achieving to increase the variety of respondents, the survey was handled both, in person and via the Internet. 27 percent of male and 73 percent of female participated in the survey.

Structural equation modelling (SEM) using partial least squares (PLS) path modelling methodology is applied for statistical analysis.

4. Analysis of the research results

The sufficient degree of convergent validity of reflective constructs indicated by AVE values is high above 0.5. Values of Composite Reliability and Cronbach’s Alpha are obtained higher than 0.7 and this displays the internal consistency reliability of reflective constructs. Values of communality are greater than 0.5; hence the quality of the measurement model for each block is sufficient. R square values of endogenous latent variables in the structural model are substantial (Table 1).

Table 1. Values of AVE, Composite Reliability, R Square, Cronbach’s Alpha, Communality

<table>
<thead>
<tr>
<th>Variables</th>
<th>AVE</th>
<th>Composite Reliability</th>
<th>R Square</th>
<th>Cronbach’s Alpha</th>
<th>Communality</th>
</tr>
</thead>
<tbody>
<tr>
<td>Loyalty</td>
<td>0.911</td>
<td>0.9534</td>
<td>0.673</td>
<td>0.9024</td>
<td>0.911</td>
</tr>
<tr>
<td>Natural features</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0.5714</td>
</tr>
<tr>
<td>Satisfaction</td>
<td>0.787</td>
<td>0.917</td>
<td>0.693</td>
<td>0.8631</td>
<td>0.787</td>
</tr>
<tr>
<td>Satisfaction * Natural features</td>
<td>0.6227</td>
<td>0.935</td>
<td>0</td>
<td>0.9188</td>
<td>0.6227</td>
</tr>
</tbody>
</table>

Three path coefficients, shown in Table 2, are statistically significant. Natural features directly positively affect loyalty. Satisfaction directly positively affects loyalty as well, and this effect is substantial. The moderating effect on the impact of satisfaction on loyalty is statistically significant, direct and negative. This substantiates the assumption that natural features moderate the effect of satisfaction on loyalty. The value of $\beta_3$ is negative (-0.126) and significant ($p < 0.01$), implying that with higher levels of natural features the impact of satisfaction on loyalty is lower.
Table 2. Paths Coefficients and their significances

<table>
<thead>
<tr>
<th>Paths (Total effects)</th>
<th>Original Sample</th>
<th>Sample Mean</th>
<th>Standard Deviation</th>
<th>Standard Error</th>
<th>T Statistics</th>
</tr>
</thead>
<tbody>
<tr>
<td>Natural features -&gt; Loyalty</td>
<td>0.156 (0.335)</td>
<td>0.1561</td>
<td>0.0591</td>
<td>0.0591</td>
<td>2.6396 (5.207)</td>
</tr>
<tr>
<td>Satisfaction -&gt; Loyalty</td>
<td>0.6239</td>
<td>0.6239</td>
<td>0.0583</td>
<td>0.0583</td>
<td>10.6994</td>
</tr>
<tr>
<td>Satisfaction * Natural features -&gt; Loyalty</td>
<td>-0.126</td>
<td>-0.1292</td>
<td>0.0469</td>
<td>0.0469</td>
<td>2.6882</td>
</tr>
</tbody>
</table>

Evaluating cross-validated redundancy measure for the endogenous latent variable loyalty, the chosen omission distance $d$ was $7$ ($251 / 7 \neq integer$). Cross-validated redundancy values ($Q^2$) for endogenous latent variable is above zero (see Table 3). Consequently, structural model is assessed as displaying predictive relevance.

Table 3. Stone-Geisser’s $Q^2$

<table>
<thead>
<tr>
<th>Total</th>
<th>SSO</th>
<th>SSE</th>
<th>1-SSE/SSO</th>
</tr>
</thead>
<tbody>
<tr>
<td>Loyalty</td>
<td>502</td>
<td>194.2796</td>
<td>0.613</td>
</tr>
</tbody>
</table>

Exogenous latent variables ‘natural features’ and ‘Satisfaction * Natural features’ have a moderate effect sizes on endogenous latent variable ‘loyalty’ (Table 4), indicating the importance of the effects of these variables on tourists’ loyalty.

Table 4. Effect sizes $f^2$

<table>
<thead>
<tr>
<th>Variable</th>
<th>Effect size</th>
</tr>
</thead>
<tbody>
<tr>
<td>Natural features</td>
<td>0.09</td>
</tr>
<tr>
<td>Satisfaction * Natural features</td>
<td>0.05</td>
</tr>
</tbody>
</table>

Analyzing the dissemination of the respondents, it is observed that 92.4 percent of them substantiate the revealed results: for the great part of respondents positive evaluations of loyalty, natural features and satisfaction are accompanied with the negative interaction effect among satisfaction and natural features, while 7.6 percent of respondents with extremely low evaluations of loyalty, natural features and satisfaction are accompanied with the positive interaction effect among satisfaction and natural features (the standardized values of clusters’ centroids are provided in Table 5).

Table 5. Clusters’ centroids

<table>
<thead>
<tr>
<th>Cluster</th>
<th>Loyalty</th>
<th>Natural features</th>
<th>Satisfaction</th>
<th>Satisfaction * Natural features</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 (232 Observations)</td>
<td>0.330</td>
<td>0.255</td>
<td>0.302</td>
<td>-0.226</td>
</tr>
<tr>
<td>2 (19 Observations)</td>
<td>-1.907</td>
<td>-1.477</td>
<td>-1.746</td>
<td>1.305</td>
</tr>
</tbody>
</table>

As it can be seen in Figure 1 below, negative interaction effect among satisfaction and natural features is associated with higher level of loyalty. Considering that both variables satisfaction and natural features directly positively affect loyalty, it
could be stated that with high levels of natural features and/or high levels of satisfaction, the loyalty of tourists grows; only the impacts of these variables on loyalty disperse. On the other hand, with very low levels of satisfaction and/or natural features, even with the positive interaction effect among satisfaction and natural features, the loyalty of Lithuanian tourists could be hardly attained.

Fig. 1. Relationship between loyalty and moderating impact on the effect of satisfaction on loyalty

The elaborated model with the moderating effect of natural features is provided in Figure 2. The determinants of tourists’ satisfaction positively affect it. Latter variable positively affects tourists’ loyalty. Natural features positively affect tourists’ loyalty and have a negative effect on the impact of tourists’ satisfaction on loyalty.

Fig. 2. The moderating effect of natural features
The research results imply that for the Lithuanian tourist high level of destination’s natural features makes the level of satisfaction less important, meaning that natural features may compensate the perceived disadvantages in the factors that affect tourist satisfaction. On the other hand, if natural features in the destination are not striking, then the factors that affect tourist satisfaction must be managed in order to make Lithuanian tourists loyal to the destination.

5. Conclusions

1. The government regulators, private investors that have a vested interest in the development of a high-quality tourism infrastructure, service companies that focus on inbound tourism need to develop a good understanding of tourist satisfaction levels, as well as the dynamic changes in these levels. Improving tourist satisfaction levels is likely to contribute to an enhanced reputation for both: service providers and the destination as a whole. The main consequence of satisfaction is considered to be loyalty to the destination. The reason of trying to better satisfy tourists is the attempt to enhance tourists’ loyalty. Consequently, most of tourist satisfaction models contain two essential variables: satisfaction and loyalty.

2. Natural features of a destination were found to have the highest effect on tourists’ loyalty as well as on the evaluation of destination’s attractiveness. In many cases, not only the tourist satisfaction may directly affect tourists’ loyalty, but also natural features. This indicates that the relation between satisfaction, loyalty, and natural features in tourism industry needs to be studied more.

3. Research results proved that natural features directly positively affect tourist loyalty. Satisfaction was found to directly positively affect loyalty as well, and this effect was substantial. The moderating effect on the impact of satisfaction on loyalty was statistically significant, direct and negative. Therefore, the assumption that natural features moderate the effect of satisfaction on loyalty was substantiated. For positive evaluations of loyalty, natural features and satisfaction are mostly accompanied with the negative interaction effect among satisfaction and natural features; as opposite, low evaluations of loyalty, natural features and satisfaction are accompanied with the positive interaction effect among satisfaction and natural features.

4. For the Lithuanian tourist, high level of destination’s natural features diminishes the importance of the level of satisfaction; natural features of a destination may countervail the perceived disadvantages in the factors that affect tourist satisfaction. If natural features in the destination are not striking, then the factors that affect tourist satisfaction must be managed in order to enhance Lithuanian tourists’ loyalty to the destination.

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SĄVEIKAI TARP LIETUVOS TURISTŲ PASITENKinimo IR LOJALUMO: GAMTINĖS APLINKOS ĮTAKA

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