

doi: 10.52370/TISC26511SD

## **TOURISM DEVELOPMENT AND QUALITY OF LIFE: RESIDENTS' PERCEPTIONS FROM VRNJAČKA BANJA**

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### **Abstract**

*Modern tourism is increasingly examined in relation to its multidimensional impacts on residents' quality of life (RQL) and destinations' sustainable development (STD). This research investigates the relationships between perceived economic (EE), sociocultural (SCE), and negative environmental (NEE) impacts of tourism, residents' quality of life, and their support for further tourism development in Vrnjačka Banja. The results show that perceived economic and sociocultural impacts are significant positive predictors of residents' quality of life, as are perceived negative environmental impacts. However, residents tend to prioritize economic and social benefits over environmental concerns. The main finding is that support for tourism development does not have a statistically significant direct impact on the perceived impact of tourism or their quality of life, suggesting a more complex decision-making framework that goes beyond a simple cost-benefit assessment. The results challenge linear models in tourism research and emphasize the need for a holistic approach to residents' perceptions and attitudes towards tourism development.*

**Key Words:** *perceived impacts of tourism, residents' quality of life, support for tourism development, Vrnjačka Banja*

**JEL classification:** *R11, Q56, I31*

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## Introduction

The multidimensional impacts of tourism on local communities represent a significant area in contemporary tourism literature, given their close connection to economic well-being, social dynamics, and RQL. Due to the complexity of the tourism effects, contemporary literature increasingly emphasizes the need to analyze the economic, sociocultural, and ecological aspects of tourism in an integrated manner. RQL is recognized as an outcome of tourism development, as it reflects the extent to which tourism-related activities enhance or undermine local well-being. Although a considerable body of literature examines the individual impacts of tourism development in destinations (Zhang et al., 2026), most studies analyze the economic, sociocultural, and ecological dimensions separately. In contrast, an integrated approach that analyzes the connection between these impacts and their effect on RQL and STD is relatively underrepresented in the scientific literature. Addressing research gap, this study explores the connections among the multidimensional impacts of tourism, RQL, and STD.

## Literature review

The development of tourism is largely driven by its positive economic effects (Pantić et al., 2024). Empirical research shows that residents perceive these effects as improvements in material living conditions, which further reflects their assessment of overall well-being (Hübel et al., 2023). The literature also highlights the economic outcomes of tourism as the central determinant shaping positive awareness of RQL (Javdan, 2024).

*H<sub>1</sub>: Perceived economic effects positively influence RQL.*

The transformation of local social and cultural patterns under the influence of tourist interactions is analyzed in contemporary research as a complex and multidimensional phenomenon that reflects dynamic changes in the structure of local communities (Amoiradis et al., 2024). The literature shows that these effects have a dual character, because on the one hand, they contribute to the affirmation of cultural uniqueness and strengthening of social cohesion (Nur, 2024), and, on the other hand, they initiate processes of cultural homogenization and redefinition of authenticity (Mohyeddin, 2024). Despite the differences, most studies

support the thesis that SCE positively influences perceived RQL (Giovanis et al., 2024).

*H<sub>2</sub>: Perceived sociocultural benefits positively influence RQL.*

In the existing literature, the ecological effects of tourism are primarily examined through the lens of the relationship between the intensity of tourist activity and the sustainability of natural systems (Chang et al., 2025). The negative ecological impacts are associated in the literature with a reduction in the perceived RQL (Mariam et al., 2024).

*H<sub>3</sub>: Perceived negative environmental effects negatively affect RQL.*

In modern theories, not only are the individual effects of tourism analyzed (Olya, 2023), but their interaction forms the overall subjective assessment of living conditions in the destination (Stylidis, 2022). Awareness of quality of life as a key psychological and social factor shapes inhabitants' attitudes toward tourism growth (Munanura & Kline, 2023). When individuals assess their quality of life as high, they are more likely to perceive tourism as a development opportunity rather than a hazard (Hassan et al., 2022).

*H<sub>4</sub>: The perception of RQL has a positive effect on STD.*

### **Methodology**

Data collection was conducted from October 2025 to April 2026 at the territory of Vrnjačka Banja. A total of 182 respondents participated in the study, with permanent residence in Vrnjačka Banja set as the inclusion criterion. A structured questionnaire was used as a data collection instrument; the items in the questionnaire were taken, translated into Serbian, and adapted from relevant and validated scales that are used in research on the perception of the tourism influence, RQL, and STD (Uslu et al., 2020; Farooq & Haq, 2025). All constructs were operationalized through several indicators measured on a Likert scale (EE-8, SCE-12, NEE-9, RQL-9, and STD-4). The Cronbach alpha coefficients are: EE, 0.838; SCE, 0.789; NEE, 0.741; RQL, 0.914; STD, 0.826; total, 0.915. The results indicate a high level of reliability, as all values are over 0.70, confirming the measurement instrument's reliability. Descriptive statistics, correlation analysis, and regression analysis were applied.

## Results

The socio-demographic characteristics of the respondents are presented in Table 1.

Table 1: *Sociodemographic structure of respondents*

| Characteristics |                 | N   | %     |
|-----------------|-----------------|-----|-------|
| Gender          | Female          | 131 | 71.98 |
|                 | Male            | 51  | 28.02 |
| Age             | 18-24           | 10  | 5.49  |
|                 | 25-34           | 24  | 13.19 |
|                 | 35-44           | 55  | 30.22 |
|                 | 45-54           | 64  | 35.16 |
|                 | 55 and over     | 29  | 15.93 |
| Education       | High school     | 59  | 32.42 |
|                 | Applied studies | 14  | 7.69  |
|                 | Faculty         | 69  | 37.91 |
|                 | Master studies  | 35  | 19.23 |
|                 | PhD studies     | 5   | 2.75  |
| Work in tourism | Yes             | 89  | 48.90 |
|                 | No              | 93  | 51.10 |

Source: *Authors' calculations*

The sample structure shows a dominant representation of female respondents (71.98%), compared to male respondents (28.02%). In terms of age, the majority of respondents belong to the 45-54 (35.16%) and 35-44 (30.22%) age groups, while the smallest proportion is found in the 18-24 age group (5.49%). Regarding education, the largest share of respondents has completed college (37.91%) and high school (32.4%), while a smaller percentage belongs to higher levels of education. With respect to involvement in tourism, the sample is relatively balanced, as 48.90% of respondents are employed in or connected to the tourism sector, while 51.10% are not, which enables comparative analysis of perceptions across different groups. To ensure metric consistency across scales, certain items were reverse-coded before analysis.

A correlation analysis was conducted with the aim of examining the intensity and direction of the connection between the observed variables within the research model.

The results of correlation analysis show that between the variables EE, SCE, NEE, and RQL there are statistically significant positive

correlations, where the strongest connections were observed between EE and SCE (0.7260), as well as EE and RQL (0.7051), so these results indicate significant positive correlations among the variables.

Table 2: *Correlation analysis*

|            | <b>EE</b> | <b>SKE</b> | <b>NEE</b> | <b>RQL</b> | <b>STD</b> |
|------------|-----------|------------|------------|------------|------------|
| <b>EE</b>  | 1         |            |            |            |            |
| <b>SKE</b> | 0.7260    | 1          |            |            |            |
| <b>NEE</b> | 0.3898    | 0.5573     | 1          |            |            |
| <b>RQL</b> | 0.7051    | 0.6399     | 0.3308     | 1          |            |
| <b>STD</b> | -0.1399   | -0.0607    | -0.0978    | 0.0256     | 1          |

Source: *Authors' calculations*

Regression analysis was applied to examine the predictive power of the perceived EE, SCE and NEE of tourism in relation to the RQL and STD. The results are shown in the following table.

Table 3: *Regression analysis*

|            | <b>RQL</b>           |          |          |          |          | <b>STD</b>           |          |          |          |          |
|------------|----------------------|----------|----------|----------|----------|----------------------|----------|----------|----------|----------|
|            | <b>R<sup>2</sup></b> | <b>F</b> | <b>p</b> | <b>β</b> | <b>R</b> | <b>R<sup>2</sup></b> | <b>F</b> | <b>p</b> | <b>β</b> | <b>R</b> |
| <b>EE</b>  | 0.4971               | 117.94   | 0.001    | 0.81     | 0.7051   | -0.1399              | 3.59     | 0.060    | -0.79    | -0.1399  |
| <b>SKE</b> | 0.4095               | 124.83   | 0.001    | 0.60     | 0.6399   | 0.0037               | 0.67     | 0.416    | -0.028   | -0.0607  |
| <b>NEE</b> | 0.1094               | 22.12    | 0.001    | 0.42     | 0.3308   | 0.0096               | 1.74     | 0.189    | -0.061   | -0.0978  |
| <b>RQL</b> | -                    | -        | -        | -        | -        | 0.00066              | 0.12     | 0.731    | 0.013    | 0.2561   |

Source: Authors' calculations

Regression results show that EE, SCE, and NEE are statistically significant predictors of RQL. Among them, EE demonstrates the strongest effect, and explains almost half of the variance of this variable ( $R^2 = 0.4971$ ;  $F = 117.94$ ;  $p = 0.001$ ;  $\beta = 0.81$ ). SCE also has a significant and strong influence ( $R^2 = 0.4095$ ;  $F = 124.83$ ;  $p = 0.001$ ;  $\beta = 0.60$ ), while the contribution of NEE is weaker ( $R^2 = 0.1094$ ;  $F = 22.12$ ;  $p = 0.001$ ;  $\beta = 0.42$ ), but still statistically significant. The results show that none of the investigated predictors confirmed a significant contribution to STD. The models have a very low value of determination coefficient and impacts are not statistically significant, which indicates that STD represents a construct that is not related to the analyzed variables -  $R^2$  values of 0.0196 for EE ( $F = 3.59$ ;  $p = 0.060$ ;  $\beta = -0.079$ ), 0.0037 for SCE ( $F = 0.67$ ;  $p = 0.416$ ;  $\beta = -0.028$ ), and 0.0096 for NEE ( $F = 1.74$ ;  $p = 0.189$ ;  $\beta = -0.061$ ). RQL is also not a statistically significant predictor of STD ( $R^2 = 0.00066$ ;  $F = 0.12$ ;  $p = 0.731$ ;  $\beta = 0.013$ ). Although a weak

positive relationship is observed, the results validate that the relationship is not strong enough, so it is concluded that support for tourism depends on other factors, and not, for example, on the RLQ perception. These findings indicate that the included predictors account for a substantial proportion of variance in RQL, whereas STD appears to be relatively independent of the analyzed construct.

### **Discussion**

The results show that the economic and sociocultural effects of tourism exert a significant positive impact on RQL, thus confirming hypotheses H1 and H2. Those findings are consistent with prior studies showing that the perceived EE and SCE of tourism contribute to the employment, infrastructure improvement, and social and cultural enrichment (Đorđević, 2023). SCE significantly contributes to RQL, but to a lesser extent than EE, which may indicate that respondents recognize the importance of cultural and social changes, but do not perceive them as a primary factor of well-being when compared with EE. The interpretation is consistent with Ramkissoon (2023), who emphasize the positive contributions of SCE to RQL, while also noting that in many tourism destinations, economic considerations remain the dominant lens through which residents evaluate tourism development. Contrary to expectations, hypothesis H3 was not supported. Although NEE significantly predicts RQL, the effect is positive, indicating a relationship opposite to the initially hypothesized negative direction. The findings suggest that respondents primarily evaluate tourism through the benefits it generates, and may perceive negative environmental consequences, but they perceive it as an acceptable price for development. Consistent with this interpretation, Nathaniel & Adedoyin (2022) argue that negative environmental effects are more noticeable in destinations with developed tourism, which offer a higher level of infrastructure, services, and living standards. A positive perception of tourism's overall effects contributes to higher levels of subjective well-being, which is consistent with the findings of Gračan and Lučić (2022). Hypothesis H4 was not confirmed because no statistically significant connection was established between the tourism effects awareness and endorsement for further tourism growth. This result shows the complexity of residents' attitudes; tourism acceptance does not depend solely on perceptions of tourism's impact or on individuals' RQL assessments. In that case, support may be influenced by additional factors such as personal interest, direct involvement in tourism, trust in institutions, or concern for the sustainability of

development, which were analyzed in works by Gautam & Bhalla (2024). The results of this research indicate that such a relationship is not unambiguous, but that STD represents a complex construct that goes beyond a simple rational assessment of benefits and costs. Perceptions of tourism impact and RQL are not adequate predictors of residents' attitudes, suggesting that additional mediating presence or moderating factors shape this relationship. This approach implies the need to redefine existing models of support for tourism development, in which, in addition to the perception of impact and quality of life, factors such as trust in institutions, personal economic interest, involvement in the tourism sector, and perception of sustainability of development would be integrated. These findings pave the way for future research based on the application of structural models, which would allow testing more complex relationships between variables.

### **Conclusion**

The findings of this study offer a clearer understanding of the interconnection between the tourism perception and RQL. It was found that tourism EE and SCE are significant predictors of subjective well-being and RQL in Vrnjačka Banja. In particular, the economic effects with the most noticeable impact are highlighted, which indicates their dominant role in shaping the overall RQL perception in Vrnjačka Banja. The most significant research finding is that no statistically significant direct effect of perceived tourism impact or RQL on STD was found. This result indicates that residents' attitudes are not a simple function of perceived benefits and costs, but rather a complex cognitive and social construct. From a practical perspective, tourism management in Vrnjačka Banja should primarily focus on enhancing the tourism economic benefits, given its dominant influence on RQL. Proper management of environmental factors remains important, as these effects may create long-term risks to destinations' sustainability. Forthcoming research can contain additional variables: trust in institutions, personal economic interest, and perceptions of tourism sustainability, to obtain a more complete picture of the factors shaping the population's attitudes. The application of more complex statistical models, such as structural equation modeling, could further enhance understanding of the relationship among the observed variables. When interpreting the results, it is necessary to take into account certain research limitations. The empirical investigation was limited to Vrnjačka Banja; the possibility of generalization to other tourist destinations is limited. Also, reliance on

self-reported data introduces subjective biases into the answers. The model did not include potentially relevant factors that may influence STD, which can partially define the lower level of explained variance for this variable.

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