

## IMPACT OF CYCLE TOURISM DEVELOPMENT ON TOURIST DESTINATION – ATTITUDES OF LOCAL STAKEHOLDERS

**Kristina Brščić**  
**Katarina Lovrečić**  
**Tina Šugar**

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### **Abstract**

*Purpose* – The purpose of the research was to examine the attitudes of local cycle tourism stakeholders towards cycle tourism development in Istria County and its impact on the destination. Also, the goal was to determine local stakeholders' general opinions and suggestions regarding past and future cycle tourism development.

*Methodology* – The research target group was local cycle tourism stakeholders in Istria County. For the research purpose an online questionnaire was created. The research was carried out online from April 7, 2020, to July 5, 2020. In total, 201 questionnaires were collected.

*Findings* – As the research results show, local stakeholders have a generally positive attitude towards cycle tourism development in the destination. Most respondents evaluated that the local community benefits from cycle tourism development in the destination and that cycle tourism development additionally promotes the destination. Moreover, 30% of local stakeholders consider that they should be more involved in developing and planning cycle tourism in Istria County.

*Contribution* – The paper's practical value is that research results can be used as a relevant database in future planning of these tourism products. Also, insights obtained by conducting empirical research can contribute to a better understanding of how the local stakeholders can be involved in planning tourism in the destination.

**Keywords:** cycle tourism, local cycle tourism stakeholders, sustainable tourism, cycle tourism destination.

### **INTRODUCTION**

Sustainable tourism development is the direction that many tourist destinations strive to achieve. Sustainable tourism development tries to balance economic, environmental, and socio-cultural aspects of the destination (UNWTO 2021). The growth of the tourism industry while preserving the natural environment, local culture and existing heritage is the only correct way of development, given that these resources are the condition for the tourism existence at the destination (Vellecco and Manciono 2010).

In recent years, cycle tourism as a form of sustainable tourism has become a growing sector in the tourism industry. The bicycle is used in almost all countries of the world, and the difference is to what extent a particular city or country is cycle-friendly compared to others (Horton et al. 2007). Also, Horton et al. (2007) mentioned Northern Europe as one of the most adapted regions for cyclists. Cycle tourism is a good way to develop year-round tourism.

Cycle tourism is considered a sustainable form of tourism since cycle tourists do not produce harmful CO<sub>2</sub> emissions in traffic and during the transport and spend their income at the destination (Meschik 2012). Namely, the significant increase in CO<sub>2</sub> emissions is related to the tourism sector (Piket et al. 2013) due to its constant growth until the outbreak of the COVID-19 pandemic and travel restrictions (UNWTO 2020). Cycle tourism is one way to promote and implement sustainable tourism development in general, especially to create tourism activities outside the main tourist season. Precisely cycle tourism also contributes to the achievement of the European Union's goal of reducing greenhouse gases by 55% net (compared to 1990) by 2030 (EEA 2020). Besides this, the construction of cycle tourism infrastructure is determined as less harmful or is not harmful to the environment compared to other tourist infrastructure (Neun and Haubold 2016). Cycle tourists visit lesser-known tourist destinations (Gazzola et al. 2018) so the development of cycle tourism also provides an opportunity to expand the tourist offer on less known places.

Involving the local community in the development of tourism is important for several reasons. Many authors agree that the agreement and support of the local community towards tourism are of almost paramount importance for the success of tourism in the destination (Davis and Morais 2004; Hernandez et al. 1996). The local community may be the reason for the tourists' arrival at the destination (Richards and Hall 2000). If the attitudes of the local population about the development of tourism in the destination are positive, it can be expected that tourists will notice that and it can be an important element of a better experience destination for tourists. Otherwise, if residents have a negative attitude towards tourism, it will affect the satisfaction of tourists and the possibility of success of tourism programmes and policies, and in general, sustainability of tourism destinations (Gu et al. 2021). The support of as many stakeholders as possible in the destination is an essential element of the bike tourism product (Pröbstl-Haider 2018). Local stakeholders are the key actors in creating a tourist destination. Their perception of tourism impact on the destination can play an essential role in further developing tourism destinations. What their perception is towards tourism mostly depends on how tourism activities affect their quality of life. Also, community satisfaction toward tourism influences the attitudes about the future development of tourism (Ko and Stewart 2002). Greater involvement of the local community in sustainable tourism planning will probably result in greater control over the activities that take place in the community (Scheyvens 2002).

This paper aims to explore the attitudes of local cycle tourism stakeholders about the impact of cycle tourism on the destination of Istria County. Specifically, the researchers determined whether there are differences in the attitudes of local stakeholders about the impact of cycle tourism given the degree of cycle tourism development in the area.

## **1. LITERATURE REVIEW**

The popularity of cycle tourism recently is on the rise (Bakogiannis et al. 2020; Chen and Lee 2017; Černá et al. 2014; Duran et al. 2018). Many destinations have started to develop cycle tourism as a tourist product (Maggi et al. 2021; Sharpley 2014). The reason for this is due to the desire of people to engage in activities that will relax them and

cycling leads to mental and physical relaxation (Duran et al. 2018). Likewise, many destinations want to plan the development of tourism in accordance with sustainable principles, and cycle tourism and sports tourism, in general, are one of the ways to turn the theoretical determinants of sustainable tourism into practical ones (Buning and Gibson 2016). According to Muiruri Njoroge et al. (2017), some county governments are developing sports tourism to decrease seasonality and develop new tourist destinations. The development of sports tourism through the organization of events brings benefits to the destination, and one of the most significant benefits is the involvement of the local community (Clark and Misener 2015). However, it is important to take care in the case of organizing more events that events complement each other to maximize the overall benefit of each event (Clark and Misener 2015). Also, to assure the longevity of such events, it is significant to organize them in accordance with the characteristics of the destination (Buning and Gibson 2016). Some previous studies of residents' perceptions of sporting events highlight positive impacts, and they list a range of negative impacts when organizing sports events in the destination (Bull and Lovell 2007; Ohmann et al. 2006).

Many authors agree that cycle tourism brings economic benefits to the local community (Cope et al. 2003; ECF 2013; Weston et al. 2012; Weed 2014; Neun and Haubold 2016). For example, Bakogiannis et al. (2020) explained the importance of small shops in non-tourist centres for cycle tourists because they represent a link between cyclists and the local community and its customs. The development of cycle tourism in the destination needs to be based on detailed planning, in accordance with the users' needs to achieve a satisfactorily positive level of the effect of this type of tourism on the destination (Malucelli et al. 2015; Downward and Lumsdon 2001). The attraction of the cycle route depends on available facilities along the route, such as catering facilities (local gastronomy), historic villages, and the beauty of the landscape (Černá et al. 2014).

The development of cycle tourism based on incidental activities and unplanned spending of surplus funds will not lead to the maximum benefit from cycle tourism (Bakogiannis et al. 2020). Once the basic actions for cycle tourism development are accomplished, the global promotion of the destinations is needed (Cox 2012; Chen and Lee 2017). Ritchie (1998) emphasized that cycle tourists, compared to conventional tourists, prefer to choose accommodation facilities located in rural and smaller places. The organization of international cycling events could be a possible solution for promoting cycle tourism in the destination. Promotion must also be directed towards the local community to create a suitable environment for cycle tourists who will come to the destination (Chen and Lee 2017). Additionally, the availability and amount of useful information are crucial for cycle tourists in choosing the destination (Kovačić 2015).

## **2. METHODOLOGY**

The paper presents local stakeholders' attitudes towards the impact of cycle tourism development on the destination. The local stakeholders in the research included private renters of accommodation facilities, bike club members, and/or bike guides. Local stakeholders were invited by email to participate in research by completing a created questionnaire for that purpose. The invitation to participate in the research was sent by

email to owners of specialized accommodation for cyclists in Istria – Istra Bike & Bed and to representatives of cycling clubs in Istria County. Also, all tourist boards in the county were contacted and asked to forward the questionnaire to private renters from their area. The questionnaire was created in Microsoft Office 365 program as part of the broader study about cycle tourism in Istria County.

The questions were adapted to the research topic based on the “resident survey” proposed by the European Tourism Indicators System (ETIS), and questions from the study by Bull and Lovell (2007) were used. The survey began on April 7, 2020, and lasted until July 5, 2020. A total of 201 questionnaires were collected. The questionnaire consists of 25 questions of different types. For the purposes of this paper, only a few questions were used, socio-demographic characteristics of stakeholders and attitudes and perception towards cycle tourism development in the destination. In the questionnaire, a 5-point Likert scale was used to measure local stakeholders’ satisfaction with the cycle tourism activities during a different season of the year. Also, respondents expressed their attitudes evaluating 13 statements related to the impact of cycle tourism in the destination using a 5-point Likert scale to evaluate their level of agreement or disagreement. The respondents’ answers were analysed in Microsoft Excel and SPSS. In addition to the analysis performed for the total sample, an analysis was performed that shows whether there are differences between the groups of local cycle tourism stakeholders with regard to the area of Istria County from which respondents’ come. For this purpose, secondary research also was done, and the necessary data was collected on the web portal Istra Bike and the official website of Istria County. The research included local stakeholders from the entire area of Istria County, so it was intended to determine whether there is a difference between the results of the collected data concerning the area from which the respondents come. According to the destination web portal Istra Bike, Istria is divided into seven areas. In order to determine a difference between areas from the aspect of cycle tourism development state, an analysis of the situation was made. The analysis includes the number of bicycle paths, the number of facilities specialized for cyclists, and the number of events. Similarly, authors Vellecco and Manciono (2010) conducted an empirical research study with local stakeholders to establish a difference in awareness between stakeholders which come from three different Italian destinations.

### **3. CYCLE TOURISM IN ISTRIA COUNTY**

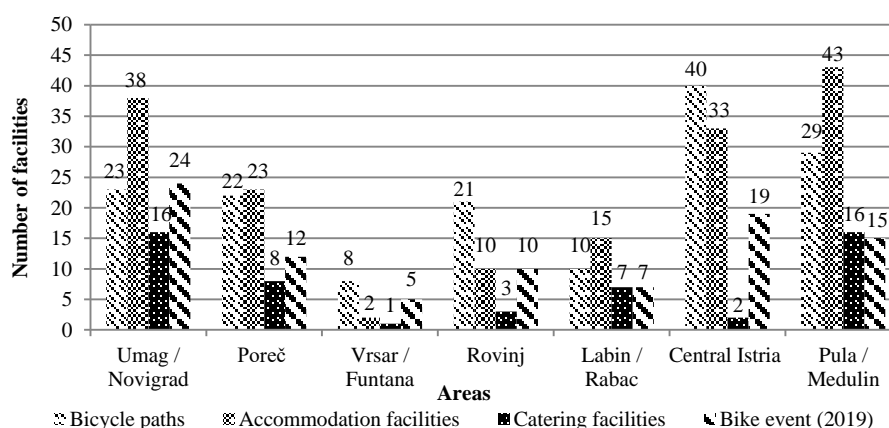
Istria County is a well-known tourist destination in the Republic of Croatia. As in most Mediterranean destinations (Suštar and Ažić 2020), the majority of tourist arrivals and overnight stays in Istria take place during the summer months. In 2019, more than 4,600,000 arrivals were realized in Istria County (Istria Tourist Board 2020). Thus, the largest number of tourist arrivals was realized from June to September (Istria Tourist Board 2020). Istria County has good conditions for the development of cycling tourism, such as climate and geographical position. The analysis and comparison of the cycle tourism state of the art in Istria County between 2018 (Operational Plan for cycle tourism development in Istria County for the period 2019–2025) and 2020 showed progress in the development of elements important for cycle tourism in the destination.

The destination web portal Istra Bike combines data that are important and useful for cycle tourists in Istria County, i.e. a list of bike trails and their characteristics, a list of accommodation adapted to cycle tourists, a list of events and other services important for cycling (Istra Bike 2021). According to Istra Bike, in 2018 there was a total of 147 bicycle paths, and in 2020 the number increased to 153 bicycle paths. In the year 2018, there was a total of 139 accommodation facilities categorized as Istra Boutique Bike Hotels, Istra Bike Hotels, Istra Bike & Bed (villas, holiday homes, apartments). In 2020, the number of facilities increased by 25, which ultimately makes 164 available accommodation facilities. Also, there are 53 catering facilities adapted to cyclists. Furthermore, in 2018, a total of 83 cycling events were organized in the entire Istria County, and in 2019 a total of 92 events. In 2020, planned cycling events were postponed or cancelled due to the outbreak of the COVID-19 pandemic.

For the purposes of conducting analysis, the County of Istria is divided into seven areas: Umag/Novigrad, Poreč, Vrsar/Funtana, Rovinj, Labin/Rabac, Central Istria and Pula/Medulin. The state of cycle tourism in each of these areas is analysed.

Figure 1 shows the state of the content of the cycle tourist offer in the areas of Istria County in 2020. The offer of bicycle paths, accommodation, and catering facilities, and the number of bike events organized in 2019 is shown, considering that the events in 2020 were postponed due to the COVID-19 pandemic. It is important to note that these areas do not consist of the same number of municipalities and cities. Hence, that may be a reason why some areas have a greater offer of cycling facilities compared to others. According to the analysis of the available data on the Istra Bike web page, the largest number of bike paths is in the area of Central Istria. The area of Pula/Medulin has the largest number of accommodation units suitable for cyclists. The most catering facilities adapted to cyclists are available in the area of Umag/Novigrad and Pula/Medulin. The largest number of bike events in 2019 were organized in the area of Umag/Novigrad.

Figure 1: The state of the art of cycle tourism offer in the areas of Istria County in 2020 and number of bike events in 2019



Source: Made by the authors according to the available data on Istra Bike, <http://www.istria-bike.com/hr/naslovna>, viewed April 5, 2021

#### 4. RESULTS

The socio-demographic profile of the respondents can be seen in Table 1. Most of the respondents were in the age group between 41–50 years (36.32%). The share of respondents by gender was almost the same, i.e. 48.76% of respondents were female, and 51.24% were male. According to the level of education, the largest number (69.12% of respondents obtained a master's degree (35.82%) or finished secondary school (33.33 % percent). Respondents were asked to indicate the area of the current residence in Istria County. The largest share of respondents was from Pula/Medulin (23.88%) and Labin/Rabac (18.91%). The share of respondents from other areas is listed in Table 1.

Table 1: **Socio-demographic profile of respondents**

Socio-demographic profile (N = 201)		Number	Share (%)
Age	18 - 30	15	7.46%
	31 - 40	44	21.89%
	41 - 50	73	36.32%
	51 - 60	44	21.89%
	61 - 70	23	11.44%
	> 70	2	1.00%
Gender	Female	98	48.76%
	Male	103	51.24%
Level of education	Primary school	1	0.50%
	Secondary school	67	33.33%
	Bachelor's degree	42	20.90%
	Master's degree	72	35.82%
	M.Sc./Ph.D.	19	9.45%
Area of residence of the respondents*	Area Umag/Novigrad	28	13.93%
	Area Poreč	19	9.45%
	Area Vrsar/Funtana	3	1.49%
	Area Rovinj	27	13.43%
	Area Labin/Rabac	39	18.91%
	Area Central Istria	33	16.42%
	Area Pula/Medulin	48	23.88%
Other	5	2.49%	

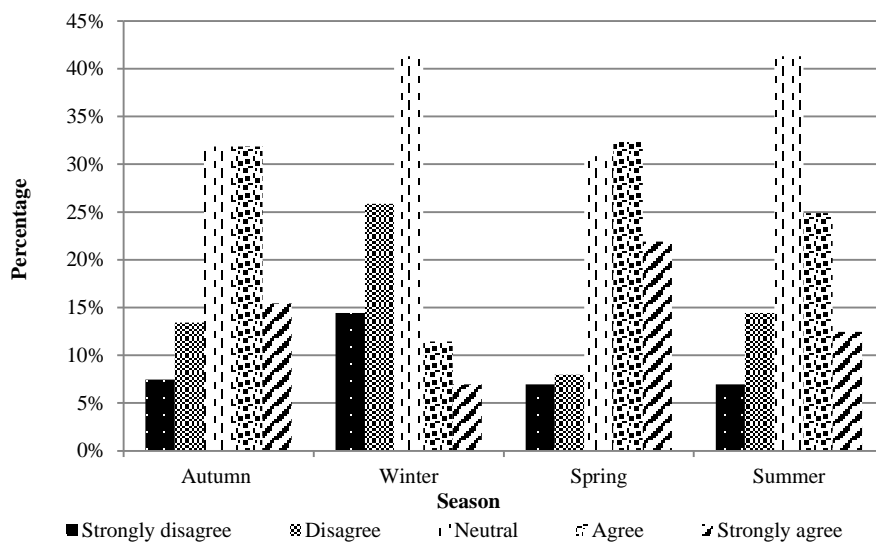
\*The areas are divided according to the official website of Istra Bike

##### 4.1. Respondents' satisfaction with cycle tourism in Istria County

The respondents were asked to rate their level of agreement from 1 to 5 with the following statement "Overall, I am very satisfied with the cycle tourism in the destination." for each season separately (autumn, winter, spring, and summer), which refers to the year 2019. A rate of 1 means that they completely disagree, and a rate of 5 that they completely agree with the statement. The question is designed based on the ETIS questionnaire for residents "Overall, I am very satisfied with tourism in my destination." The question was adapted to the research topic, so it was specified to refer to cycle tourism.

Figure 2 shows the level of agreement of local stakeholders with the satisfaction of cycle tourism in the destination, i.e. in Istria County regarding the four seasons. Respondents were most satisfied with cycle tourism in spring (54.23%) and autumn (47.26%). In winter, respondents rated the least satisfied with cycle tourism in the destination (40.30%). Furthermore, in summer, the respondents were mostly neutral in satisfaction with cycle tourism in the destination (41.29%).

**Figure 2: Respondents' satisfaction with cycle tourism in Istria County according to four seasons**



Source: Authors

#### 4.2. Respondents' attitudes of cycle tourism impact on tourism destination

Respondents were asked to express their attitudes of the impact of cycle tourism on the destination through 13 statements, which they rated from 1 – (strongly disagree) to 5 – (strongly agree) and the obtained results are shown in Table 2. Respondents strongly agree with the statement that cycle tourism has a positive effect on the promotion of sport/health with the highest average score (average=4.46, SD=0.79). Also, respondents agree with six statements that cycle tourism provides the opportunity to experience a unique/interesting experience in the destination (average=4.40; SD=0.82); development of cycle tourism contributes to the growth of the local economy (average=4.35; SD=0.97), cycle tourism increases tourism in the destination (average=4.27; SD=0.93), there are benefits for the local community from cycle tourism and cycle tourists who visit this destination (average=4.13; SD=0.92), cycle tourism promotes Istria County (average=4.06; SD=1.06), the destination web portal Istra Bike is important for the cycle tourism development in Istria County (average=4.04; SD=0.97).

Respondents had a neutral attitude according to the two following statements “Personally, I benefit from cycle tourism and cycle tourists who visit this destination”

(average=3.24, SD=1.29) and “Overall, I am very satisfied with local population involvement in the planning and development of cycle tourism in the County” (average=3.12; SD=1.22).

Respondents stated that they do not agree with the other four statements as follows cycle tourism affects road closures (average=2.20; SD=1.12), cycle tourism affects the creation of problems/disorders in the destination (average=2.17; SD=1.22), cycle tourism is a cost for the local population (average=1.92; SD=1.09) and cycle tourism is not in my interest and I have no opinion about it (average=1.82; SD=1.05), Table 2. Given the analysis of the obtained results generally can be determined a positive attitude of local stakeholders towards the impact of cycle tourism on the destination.

**Table 2: Respondents’ attitudes of cycle tourism impact on tourism destination**

Impact of cycle tourism (N=201)	Average	SD
Cycle tourism has a positive effect on the promotion of sport/health.	4.46	0.79
Cycle tourism provides the opportunity to experience a unique/interesting experience in the destination.	4.40	0.82
The development of cycle tourism contributes to the growth of the local economy.	4.35	0.97
Cycle tourism increases tourism in the destination.	4.27	0.93
There are benefits for the local community from cycle tourism and cycle tourists who visit this destination.	4.13	0.92
Cycle tourism promotes Istria County.	4.06	1.06
The destination web portal Istra Bike is important for the cycle tourism development in Istria County.	4.04	0.97
Personally, I benefit from cycle tourism and cycle tourists who visit this destination.	3.24	1.29
Overall, I am very satisfied with local population involvement in the planning and development of cycle tourism in the County.	3.12	1.22
Cycle tourism affects road closures.	2.20	1.12
Cycle tourism affects the creation of problems/disorders in the destination.	2.17	1.22
Cycle tourism is a cost for the local population.	1.92	1.09
Cycle tourism is not in my interest and I have no opinion about it.	1.82	1.05

An independent sample t-test was performed to compare a difference in respondents’ attitudes towards gender regarding 13 statements related to the impact of cycle tourism on the destination. There was no significant difference between females and males regarding the 12 statements. Although, the only significant difference was found in the score for females (M = 4.173, SD = 0.8252) and males (M = 3.913, SD = 1.0856;  $t(199) = 1.911$ ,  $p = 0.009$ ) regarding the statement “The destination web portal Istra Bike is important for the cycle tourism development in Istria County”.

A one-way analysis of variance (ANOVA) was performed to determine the relationship between dependent and independent variables (Table appendix 1, 2 and 3). An ANOVA shows the effect of the independent variables: category of age groups (six levels: 18–30, 31–40, 41–50, 51–60, 61–70, >70); level of education (five levels: primary school,



secondary school, bachelor's degree, master's degree, M.Sc./Ph.D); areas of resident (eight options: Umag/Novigrad, Poreč, Vrsar/Funtana, Rovinj, Labin/Rabac, Central Istria, Other) in relation to 13 dependent variables related to the impact of cycle tourism in Istria County.

The obtained results show that the independent variable the age category is significant on three dependent variables (Table appendix 1). First is benefits for the local community from cycle tourism and cycle tourists who visit this destination  $F(5,195) = 2.881$ ,  $p = 0.016$ . Second one is general satisfaction with involvement of local population in the planning and developing of cycle tourism  $F(5,195) = 2.455$ ,  $p = 0.035$ . Then, cycle tourism provides the opportunity to experience a unique/interesting experience in the destination  $F(5,195) = 3.219$ ,  $p = 0.008$ .

ANOVA shows the influence of education levels on independent variable; however, no significant statistical difference was found (Table appendix 2). The effect of areas of residence, as an independent variable, has no influence on the dependent variables (Table appendix 3).

#### **4.3. Principal Components Analysis regarding respondents' attitudes of cycle tourism impact on tourism destination**

Respondents were asked to rate 13 dimensions related to the impact of cycle tourism in their destination. Responses were analysed with the Principal Component Analysis (PCA). The Kaiser-Meyer-Olkin Measure of Sampling Adequacy was used to demonstrate the adequacy of the use of factor analysis (PCA) in relation to the data collected. Given the obtained result ( $KMO = 0.873$ ), it was concluded that the share of variance in the variables is satisfactory. Also, the components are satisfactorily reliable (Bartlett's Test  $\chi^2$  sig. 0.000, Cronbach's alpha 0.759). Two components appeared with eigenvalues greater than 1, which satisfactorily explains 59.349% of cumulative variance. The Component Transformation Matrix shows that the relationship between the components is low (-0.256), so similar solutions can be expected using any type of rotation. A PCA was conducted which includes various claims that establish the attitudes of local cycle tourism stakeholders. Rotated Component Matrix shows a two-component solution, using a Varimax method. The first principal component consists of nine attributes which together can be named as "local cycle tourism stakeholders' attitudes towards the benefit of cycle tourism in destination". It consists of: cycle tourism increases tourism in destination, the contribution of cycle tourism to the growth of the local economy, cycle tourism provides the opportunity to experience a unique/interesting experience in the destination, there is positive effect of cycle tourism on promoting sports/health, cycle tourism promotes Istria County. The first component also includes the benefits for the local community from cycle tourism and cycle tourists who visit a destination, the importance of the destination web portal Istra Bike for cycle tourism development in Istria County, personal benefits from cycle tourism and cycle tourist who visit the destination, and the satisfaction with local people's involvement in the planning and development of cycle tourism. The second component can be described as "attitudes of local stakeholders about the negative impact of cycle tourism on the destination" and contains the following four items: cycle tourism is a cost for the local population, cycle

tourism affects road closes, cycle tourism affects the creation of problems/disorders in the destination and no opinion about cycle tourism.

**Table 3: Principal Components Analysis, respondents' attitudes of cycle tourism impact on tourism destination**

Pattern Matrix <sup>a</sup>	Component	
	1	2
Cycle tourism increases tourism in the destination.	.936	
Development of cycle tourism contributes to the growth of the local economy.	.851	
Cycle tourism provides the opportunity to experience a unique/interesting experience in the destination.	.847	
Cycle tourism has a positive effect on the promotion of sport/health.	.842	
Cycle tourism promotes Istria County.	.816	
There are benefits for the local community from cycle tourism and cycle tourists who visit this destination.	.757	
The destination web portal Istra Bike is important for the cycle tourism development in Istria County.	.614	
Personally, I benefit from cycle tourism and cycle tourists who visit this destination.	.571	
Overall, I am very satisfied with local population involvement in the planning and development of cycle tourism in the County.	.555	
Cycle tourism is a cost for the local population.		.795
Cycle tourism affects road closures.		.785
Cycle tourism affects the creation of problems/disorders in the destination.		.747
Cycle tourism is not in my interest and I have no opinion about it.		.653
<b>Factor statistics</b>		
Eigenvalues	5.33	2.385
Variance %	41.003	18.347
Cumulative variance %	41.003	59.349
Cronbach's alpha	.896	.745
Mean	3.982	2.026

Extraction Method: Principal Component Analysis.  
 Rotation Method: Varimax with Kaiser Normalization.  
 a. Rotation converged in 3 iterations.

## 5. DISCUSSION

The obtained results gave an insight into local stakeholders' attitudes towards the impact of cycle tourism on the destination.

Local stakeholders strongly agree with the highest average score that cycle tourism has a positive effect on the promotion of sport/health. Also, today's tourists give much more attention to their health doing sports near nature (Duran et al. 2018) which confirms the justification for the development of cycle tourism in the destination and that cycling in nature is a great option, especially in the current situation of the COVID-19 pandemic when social distancing is recommended. In this way, cycle tourists contribute to their own well-being without harming the environment.

Moreover, respondents agree that cycle tourism provides the opportunity to experience a unique/interesting experience in the destination. Shipway et al. (2016) findings suggest that "providing tourists with authentic and memorable experiences lies at the heart of what constitutes sport tourism." Tourists pay more attention to the intangible good in the destination, with a focus on the ambience, aesthetics and atmosphere, which will provoke emotional reactions and from the money they have invested in their vacation they expect a return in the form of feelings, not products (Opaschowski 2001; Trauer 2006). Also, lesser-known destinations have the opportunity and conditions to provide extraordinary experiences for cycle tourists (Gazzola 2018). Respondents also agree that cycle tourism contributes to the growth of the local economy, increases tourism in the destination and provides benefits for the local community, as already confirmed by several authors (Cope et al. 2003; Weston et al. 2012; Weed 2014; Neun and Haubold 2016). Respondents agreed that the destination web portal Istra Bike is important for the cycle tourism development in Istria County. It provides a good amount of reliable and useful information for cyclists. As Kovačić (2015) already emphasized, good information is essential for cyclists when choosing a destination.

According to the obtained results, respondents in Istria County were most satisfied with cycle tourism in spring and autumn. Encouraging the development of cycle tourism outside the main summer seasons is a good solution to alleviate seasonality.

## CONCLUSION

There are several positive impacts in developing cycle tourism, according to local stakeholders in Istria County. According to the obtained results, we can conclude that cycle tourism has a positive effect on the promotion of sport/health, provides the opportunity to experience a unique/interesting experience in the destination, contributes to the growth of the local economy, increases tourism in the destination, provides benefits for the local community and promotes Istria County.

Respondents disagree with the statements indicating negative effects of cycle tourism: cycling affects road closures, it creates problems/disorders in the destination such that cycle tourism is a cost for the local population, and that cycle tourism is not in their interest. So we can say that local stakeholders in Istria County have a positive attitude towards the development of cycle tourism in Istria County. Cycle tourism should be considered a driver of local development which could bring potential economic, social, and environmental benefits to local communities and the destination (Gazzola et al. 2018; Ritchie et al. 2010).

Besides this, it is important to emphasize that respondents were neutral in terms of overall satisfaction with the local population involved in the planning and development of cycle tourism in the County. Considering the importance of local stakeholders in creating tourism in the destination, it is wise to involve local stakeholders in the decision-making process for planning the future development of cycling tourism. Involving local stakeholders in the planning process could be useful for local managers to organize cycle tourism activities better to encourage positive influences of cycle tourism and reduce negative ones. Local stakeholders opinion polling can determine the interests of local

stakeholders and a segment in which they need to be included by decision-makers during the development of cycle tourism products. Given that they have a positive attitude towards cycle tourism, it should be assumed that they would be cooperative in further development planning. In conclusion, this can be an example of how destination managers could influence the change of opinion towards the positive one.

The research can serve as a model for other regions that develop cycle tourism. Furthermore, the methodology used in this study could be useful as an indicator for monitoring the future development of cycle tourism quality in the destination. Also, it can be used in other regions in Croatia to compare the results between the regions.

The PCA results show that for future monitoring, the number of questions can be reduced to the basic ones, like positive or negative attitudes towards the cycle tourism development and overall satisfaction with cycle tourism. Simplified like this, questionnaires can be a helpful monitoring tool and can give local destination managers useful information for planning future activities in the region regarding the cycle tourism development.

The limitation of the research is in the sample size, i.e. in the number of respondents in each particular area of Istria County. Also, the research refers only to the area of Istria County, so the specificities of the destination need to be considered.

For future research, it would be interesting to determine why the opinions of respondents differ in certain areas of Istria County according to the impact of cycle tourism on the destination. Also, it would be interesting to know the opinion of cycle tourists about their host, local stakeholders.

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## APPENDIX

Table Appendix 1: **One-way ANOVA - relationship between statements and independent variable age**

Dependent variable		Sum of Squares	df	Mean Square	F	Sig.
<i>Age</i>						
There are benefits for local community from cycle tourism and cycle tourists who visit this destination.	Between Groups	11,599	5	2,320	2,881	,016*
	Within Groups	157,038	195	,805		
	Total	168,637	200			
Personally, I benefit from cycle tourism and cycle tourists who visit this destination.	Between Groups	12,317	5	2,463	1,491	,194
	Within Groups	322,221	195	1,652		
	Total	334,537	200			
Overall, I am very satisfied with local population involvement in the planning and development of cycle tourism in County.	Between Groups	17,598	5	3,520	2,455	,035*
	Within Groups	279,537	195	1,434		
	Total	297,134	200			
Cycle tourism promotes Istria County.	Between Groups	9,560	5	1,912	1,721	,131
	Within Groups	216,600	195	1,111		
	Total	226,159	200			
Cycle tourism increases tourism in the destination.	Between Groups	8,190	5	1,638	1,951	,088
	Within Groups	163,760	195	,840		
	Total	171,950	200			
Development of cycle tourism contributes to the growth of the local economy.	Between Groups	9,565	5	1,913	2,105	,066
	Within Groups	177,241	195	,909		
	Total	186,806	200			
Cycle tourism provides the opportunity to experience a unique / interesting experience in the destination.	Between Groups	10,244	5	2,049	3,219	,008*
	Within Groups	124,114	195	,636		
	Total	134,358	200			
Cycle tourism has a positive effect on the promotion of sport / health.	Between Groups	6,785	5	1,357	2,220	,054
	Within Groups	119,185	195	,611		
	Total	125,970	200			
Cycle tourism affects the creation of problems / disorders in the destination.	Between Groups	10,455	5	2,091	1,423	,217
	Within Groups	286,450	195	1,469		
	Total	296,905	200			
Cycle tourism is a cost for the local population.	Between Groups	6,144	5	1,229	1,027	,403
	Within Groups	233,418	195	1,197		
	Total	239,562	200			
Cycle tourism affects road closures.	Between Groups	8,707	5	1,741	1,407	,223
	Within Groups	241,332	195	1,238		
	Total	250,040	200			
The destination web portal Istra Bike is important for the cycle tourism development in Istria County.	Between Groups	3,358	5	,672	,703	,622
	Within Groups	186,324	195	,956		
	Total	189,682	200			
Cycle tourism is not in my interest and I have no opinion about it.	Between Groups	5,179	5	1,036	,931	,462
	Within Groups	217,010	195	1,113		
	Total	222,189	200			

\*Coefficient are significant at the level of 0.05.

Source: Research results

Table Appendix 2: **One-way ANOVA - relationship between statements and independent variable level of education**

Dependent variable		Sum of Squares	df	Mean Square	F	Sig.
<i>Level of education</i>						
There are benefits for local community from cycle tourism and cycle tourists who visit this destination.	Between Groups	2,224	4	,556	,655	,624
	Within Groups	166,413	196	,849		
	Total	168,637	200			
Personally, I benefit from cycle tourism and cycle tourists who visit this destination.	Between Groups	3,509	4	,877	,519	,722
	Within Groups	331,028	196	1,689		
	Total	334,537	200			
Overall, I am very satisfied with local population involvement in the planning and development of cycle tourism in County.	Between Groups	4,669	4	1,167	,782	,538
	Within Groups	292,465	196	1,492		
	Total	297,134	200			
Cycle tourism promotes Istria County.	Between Groups	,327	4	,082	,071	,991
	Within Groups	225,832	196	1,152		
	Total	226,159	200			
Cycle tourism increases tourism in the destination.	Between Groups	,639	4	,160	,183	,947
	Within Groups	171,312	196	,874		
	Total	171,950	200			
Development of cycle tourism contributes to the growth of the local economy.	Between Groups	2,427	4	,607	,645	,631
	Within Groups	184,379	196	,941		
	Total	186,806	200			
Cycle tourism provides the opportunity to experience a unique / interesting experience in the destination.	Between Groups	1,596	4	,399	,589	,671
	Within Groups	132,762	196	,677		
	Total	134,358	200			
Cycle tourism has a positive effect on the promotion of sport / health.	Between Groups	,565	4	,141	,221	,927
	Within Groups	125,406	196	,640		
	Total	125,970	200			
Cycle tourism affects the creation of problems / disorders in the destination.	Between Groups	1,587	4	,397	,263	,901
	Within Groups	295,318	196	1,507		
	Total	296,905	200			
Cycle tourism is a cost for the local population.	Between Groups	2,855	4	,714	,591	,669
	Within Groups	236,707	196	1,208		
	Total	239,562	200			
Cycle tourism affects road closures.	Between Groups	3,789	4	,947	,754	,557
	Within Groups	246,251	196	1,256		
	Total	250,040	200			
The destination web portal Istra Bike is important for the cycle tourism development in Istria County.	Between Groups	1,498	4	,374	,390	,816
	Within Groups	188,184	196	,960		
	Total	189,682	200			
Cycle tourism is not in my interest and I have no opinion about it.	Between Groups	6,422	4	1,606	1,459	,216
	Within Groups	215,767	196	1,101		
	Total	222,189	200			

\*Coefficient are significant at the level of 0.05.

Source: Research results



Table Appendix 3: **One-way ANOVA - relationship between statements and independent variable areas of residence**

Dependent variable		Sum of Squares	df	Mean Square	F	Sig.
<i>Areas of resident</i>						
There are benefits for local community from cycle tourism and cycle tourists who visit this destination.	Between Groups	7,676	7	1,097	1,308	,249
	Within Groups	160,183	191	,839		
	Total	167,859	198			
Personally, I benefit from cycle tourism and cycle tourists who visit this destination.	Between Groups	17,435	7	2,491	1,506	,167
	Within Groups	315,931	191	1,654		
	Total	333,367	198			
Overall, I am very satisfied with local population involvement in the planning and development of cycle tourism in County.	Between Groups	13,591	7	1,942	1,325	,241
	Within Groups	279,977	191	1,466		
	Total	293,568	198			
Cycle tourism promotes Istria County.	Between Groups	15,405	7	2,201	2,003	,057
	Within Groups	209,871	191	1,099		
	Total	225,276	198			
Cycle tourism increases tourism in the destination.	Between Groups	6,958	7	,994	1,155	,331
	Within Groups	164,388	191	,861		
	Total	171,347	198			
Development of cycle tourism contributes to the growth of the local economy.	Between Groups	4,766	7	,681	,718	,657
	Within Groups	181,224	191	,949		
	Total	185,990	198			
Cycle tourism provides the opportunity to experience a unique / interesting experience in the destination.	Between Groups	3,633	7	,519	,761	,620
	Within Groups	130,206	191	,682		
	Total	133,839	198			
Cycle tourism has a positive effect on the promotion of sport / health.	Between Groups	3,704	7	,529	,830	,564
	Within Groups	121,764	191	,638		
	Total	125,467	198			
Cycle tourism affects the creation of problems / disorders in the destination.	Between Groups	3,215	7	,459	,301	,953
	Within Groups	291,629	191	1,527		
	Total	294,844	198			
Cycle tourism is a cost for the local population.	Between Groups	7,349	7	1,050	,906	,503
	Within Groups	221,434	191	1,159		
	Total	228,784	198			
Cycle tourism affects road closures.	Between Groups	4,118	7	,588	,458	,864
	Within Groups	245,239	191	1,284		
	Total	249,357	198			
The destination web portal Istra Bike is important for the cycle tourism development in Istria County.	Between Groups	4,722	7	,675	,701	,671
	Within Groups	183,871	191	,963		
	Total	188,593	198			
Cycle tourism is not in my interest and I have no opinion about it.	Between Groups	5,809	7	,830	,733	,644
	Within Groups	216,311	191	1,133		
	Total	222,121	198			

\*Coefficient are significant at the level of 0.05.

Source: Research results

**Kristina Brščić**, PhD

Head of Department, Department of Tourism  
Institute of Agriculture and Tourism  
Karla Huguesa 8, Poreč, Croatia  
+385 52 408 303  
kristina@iptpo.hr

**Katarina Lovrečić**, PhD Student,  
Faculty of Tourism and Hospitality Management,  
University of Rijeka, Opatija, Croatia

Assistant, Institute of Agriculture and Tourism  
Department of Tourism  
Karla Huguesa 8, Poreč, Croatia  
+385 52 408 308  
katarina@iptpo.hr

**Tina Šugar**, PhD Student, Assistant  
Institute of Agriculture and Tourism  
Department of Tourism  
Karla Huguesa 8, Poreč, Croatia  
+385 52 408 308  
tina@iptpo.hr