RURAL TOURISM IMPACT ON THE LIFE QUALITY OF THE LOCAL COMMUNITY: A CASE STUDY OF WESTERN SERBIA

Aleksa Panić¹, Aleksandra Vujko², Miroslav Knežević³ *Corresponding author E-mail: aleksandravujko@yahoo.com

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ABSTRACT

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This study analyzes the impact of rural tourism on the quality of life in Western Serbia, focusing on four tourist villages: Koštunići, Vraneša, Sunčana reka, and Sirogojno. Utilizing a mixed-methods approach with 469 respondents, we assessed local perceptions of economic, social, and environmental influences resulting from tourism development. The Likert scale revealed positive economic effects, significant shifts in social conditions and thinking, and concerns about environmental degradation. The study underscores rural tourism's multifaceted nature, emphasizing positive economic impacts, socio-cultural improvements, and environmental considerations. The conclusions highlight the need for responsible, sustainable practices to optimize benefits while mitigating negative consequences. Recommendations include addressing gender disparities and prioritizing environmental concerns in future rural tourism development. This research contributes to understanding rural tourism's implications, offering insights for policymakers, local communities, and practitioners striving for balanced, prosperous, and sustainable rural development in Western Serbia and beyond.

Introduction

Rural tourism (Gao, Wu, 2017) represents a multifaceted niche within the broader tourism industry. It typically involves visitors seeking authentic, rural experiences by staying in rural communities and engaging in activities related to agriculture, local culture, and nature (Lane, 1994; Nelson et al., 2021). These experiences contrast with

Aleksa Panić, Teaching Assistant, Singidunum University, Faculty of Tourism and Hospitality Management, Danijelova 32, Belgrade 11000, Serbia; Phone: +381 63 360 274, E-mail: apanic@singidunum.ac.rs; ORCID ID (https://orcid.org/0000-0003-3149-2311)

² Aleksandra Vujko, Associate Professor, Singidunum University, Faculty of Tourism and Hotel Management, Danijelova 32, Belgrade 11000, Serbia; Phone: +381 64 138 55 66, E-mail: aleksandravujko@yahoo.com; ORCID ID (https://orcid.org/0000-0001-8684-4228)

³ Miroslav Knežević, Associate Professor, Dean, Singidunum University, Faculty of Tourism and Hotel Management, Danijelova 32, Belgrade 11000, Serbia; Phone: +381 64 231 81 01, E-mail: mknezevic@singidunum.ac.rs; ORCID ID (https://orcid.org/0000-0002-5586-7213)

the more conventional urban and seaside tourism, as they offer a glimpse into the traditional and natural way of life in rural areas. Such experiences can range from farm stays and cultural festivals to outdoor recreational activities and wildlife observation. According to Vytautas & Vytautas (2014), one defining characteristic of rural tourism is its potential to contribute to the economic development of rural areas. By attracting tourists, rural communities (Lindberg et al., 2021) can generate income, diversify their economic activities (Vytautas & Vytautas, 2014), and reduce their dependence on traditional livelihoods (Ling et al., 2023). According to Lindberg et al., (2021), rural tourism often stimulates the preservation of local traditions, customs, and natural resources, which can be key drivers for the long-term sustainability of these destinations.

The influence of rural tourism on rural destinations is multifaceted and can be both positive (Germanovich et al., 2020; Maret et al., 2018; Wardana et al., 2020; Singh et al., 2022) and negative (An, Alarcon, 2020; Cijanović et al., 2021; Temelkov, Gulev, 2019). On the positive side, it can stimulate economic growth, boost local employment, and generate revenue through the sale of local products and services. Rural tourism can lead to infrastructural development, as improved road networks, accommodations, and facilities are necessary to cater to the needs of tourists. These investments can benefit both tourists and residents, enhancing the overall attractiveness of the area. On the flip side, there are potential negative impacts to consider. Increased visitor numbers may put pressure on the environment, particularly if not managed sustainably. Overcrowding, pollution, and overuse of natural resources can harm the very qualities that attract tourists in the first place. Local cultures and traditions might also face erosion, as commercialization and adaptation to tourist demands can alter the authenticity of the rural experience.

While the broader impact of rural tourism on destinations is well-documented (Han et al., 2021; Akhtar, 2023; Quaranta et al., 2016; Kortoci Y., Kortoci M., 2016; Ghaderi, Henderson, 2012), the influence on local communities, and especially the quality of life of residents (Lin et al., 2017), is a dimension that requires further exploration. According to Lin et al., (2017), quality of life is a multifaceted concept encompassing various social, economic, cultural, and environmental aspects. Rural tourism can affect these aspects in different ways. Economically (Ruiz-Real, et al., 2022; Sun et al., 2023; Boley et al., 2018; Kurniawan, Cahyono, 2020) rural tourism can create job opportunities for local residents and generate income through various entrepreneurial activities. This can lead to an improved standard of living and access to services and amenities. However, it can also create disparities in income and employment within the community, as some residents may benefit more than others. Moreover, the seasonal nature of tourism can present challenges, with employment opportunities fluctuating throughout the year. Socially (Jepson, Sharpley, 2015) rural tourism can promote community engagement and interaction between locals and tourists, potentially enhancing cross-cultural understanding. However, it may also strain social structures and traditional ways of life as communities adapt to the demands and behaviors of tourists. Environmentally (Sun et al., 2023; Chen et al., 2023), rural tourism can serve as a motivating factor for environmental conservation. It can encourage the preservation of natural landscapes, biodiversity, and sustainable land use. Conversely, inadequate management of tourism activities can lead to environmental degradation and the depletion of natural resources.

The focus of this paper is on Western Serbia, a region known for its scenic beauty, traditional lifestyle, and rural landscapes. Western Serbia offers a unique blend of natural attractions, cultural heritage, and the warmth of rural hospitality. It is characterized by its geographical diversity, with rolling hills, fertile plains, and pristine rivers. These landscapes provide a rich backdrop for various rural tourism activities such as hiking, fishing, agrotourism, and cultural events. The region is also renowned for its proximity to national parks and protected areas, which further contribute to its appeal as a rural tourism destination. The study area includes four tourist villages: Koštunići, Vraneša, Sunčana reka, and Sirogojno. These villages have embraced tourism to diversify their economies and preserve their cultural and natural heritage. Visitors to these villages can partake in authentic experiences, and traditional craftsmanship, and immerse themselves in the local way of life. The study aims to examine the dynamics of rural tourism in these villages and assess its impact on the quality of life for the local communities.

The research showed that in the observed rural areas of Western Serbia, there are positive economic effects on the life of the local population because of tourist activities. Also, the changes brought about by tourism development have largely shifted social conditions and ways of thinking, as well as some established practices among the local population. However, certain concerns arise as a result of the slight degradation of the natural environment, which unfortunately at this moment is not immune to tourism development and the activities that are carried out within that process.

The research methodology

Study area

The study area includes four tourist villages in the area of western Serbia - Koštunići, Vraneša, Sunčana reka and Sirogojno.

Koštunići, located 32 kilometers northwest of Gornji Milanovac, is a rural settlement with a dispersed layout, primarily dedicated to cattle breeding. It is nestled on the southern slopes of Suvobor, a peak that reaches 866 meters in elevation (Čulić, 2006). Remarkably, in terms of land area, Koštunići stands out as the most extensive rural settlement within the Gornji Milanovac municipality (Pavlović, 2016). Four mountain rivers, namely Grab, Bukovača, Čemernica, and Šiban, course through the village, providing habitats for diverse river fish and crab species (Milošević, 2006). This region is distinguished by its outstanding ecological and scenic attributes. It encompasses the valleys of mountain rivers and streams, featuring well-defined agrarian, forest, and meadow ecosystems, teeming with an abundance of medicinal herbs and forest fruits (Jovanović Tončev, 2016). Due to the conservation of its natural surroundings, this village is the sole ecological village in Serbia.

Vraneša is another charming village in Serbia, situated in the Zlatibor region, close to the town of Nova Varoš which is known for its beautiful landscapes. The Vraneša ethnoeco village is situated within a coniferous forest and comprises multiple bungalows nestled at an elevation of 943 meters, providing guests with picturesque views of Zlatar Lake (Svojić, 2015). The village's construction adheres to the traditional Serbian village architecture, utilizing genuine and environmentally friendly materials indigenous to the goldsmith's region, such as black pine and stone. The wooden components are treated with natural resin, and all the houses are roofed with handcrafted split shingles. The village is surrounded by lush greenery, rolling hills, and pristine rivers, making it a popular destination for outdoor enthusiasts. Visitors can explore the natural beauty, go trekking, and immerse themselves in the local culture (Svojić, 2015).

The village of Sunčana Reka is located on the banks of the Drina River, not far from Loznica. In addition to one of the most beautiful rivers, this ethnic village is surrounded by numerous other natural beauties, such as Banja Koviljača, but also the historically important Gučevo mountain. This tourist complex consists of a total of seven accommodation settlements, with 43 accommodation units and a total of 124 beds. In addition to catering facilities, this village offers various sports and recreational facilities, including activities in the village such as horseback riding, ball sports, and recreational activities on the Drina (Stepanović, 2013).

The village of Sirogojno on Zlatibor, which, as an open-air museum named "*Staro selo*" (eng. Old village), shows the life of Serbian peasants, as well as many forgotten crafts and skills, through the interesting construction architecture, interior decoration of buildings in the hilly and mountainous areas of the Dinaric region (Ranko, 1987). Sirogojno is even located near one of the largest Serbian mountaineering centers, Zlatibor. It covers an area of 5 hectares and has about 50 buildings that were relocated and transferred from the surrounding Zlatibor villages (Denić, 2008).

Sources of data

In the paper, we used the views of the local population regarding the economic, social, and environmental impacts that tourism has on their quality of life. We used a modified methodology presented in their work by Monterrubio et al., (2020). In that work, the researchers asked the local population to identify the most relevant impacts of tourism development (in this particular case, the construction of an airport) on rural areas and the quality of life in them. In our work, we wanted to present the results of the local population's opinion on the impact of tourism development (in our case, ethnic villages and objects converted into ethnic objects open to tourists), on the quality of their life in the villages to which the given objects gravitate or are located. We assumed that these are positive influences. The research lasted from May 2022 to May 2023, and the local population of the eco-ethno villages of Koštunići, Vraneša, Sunčana reka, and Sirogojno, in the region of Western Serbia, was examined. A total of 469 respondents. They were asked to rate the items on an ordinal scale of 1-5, 1 being the most negative (i.e., much worse or greatly increasing) and 5 being the most positive, with 3 meaning

no change. A Likert scale of gradation of attitudes was used.

The goal of the study was to determine the relative importance of certain attitudes within all three influences, in order to minimize the negative, that is, to emphasize the positive aspects of the development of rural destinations. For the purposes of this research, we used the variables that we assumed could have the greatest impact on the quality of life of the local population. Dependent variables are: 1. Economic impacts (Income, Standard of living, Productivity, Transportation, Entertainment 2. Social impacts (Population growth, Friendliness, Kindness, Alcohol and drugs, Prejudice) 3. Environmental impacts (Pollution, Habitat disturbance, and Other). From the independent variables, in the work we used the variable: Gender. In order to see if there is a connection between the variables and the probability of connection, we used Chi-Square Tests. The work started from the assumption that there would be no difference in the answers about the gender of the respondents, and Statistically significant differences are those with p <0.05.

From that perspective, the main and supportive hypothesizes can be drawn out: H1: Rural tourism has a significant influence on the quality of life of the local community in Western Serbia; H1a: Rural tourism in Western Serbia positively impacts the economic well-being of the local community, leading to increased income, job creation, and business development H1b: Rural tourism in Western Serbia positively affects the socio-cultural aspects of the local community, including the preservation and promotion of local traditions, strengthening community ties, and facilitating cultural exchange between tourists and residents; H1c: Rural tourism in Western Serbia has positive effects on the region environmental sustainability, with measures in place to mitigate its impact on natural resources and the physical environment, leading to a more sustainable and eco-friendly tourism practice.

Result and Discussion

The study involved 256 male participants and 212 female participants. The subsequent tables showcase the most substantial economic, social, and environmental effects, organized based on the respondents' gender.

Economic impact of rural tourism

The economic impact of rural tourism is a subject of significant interest and importance, as it can contribute to the development and sustainability of rural areas. In this analysis, we were researching the data provided in Table 1, which presents information on gender and the economic impact of rural tourism, specifically regarding income, standard of living, productivity, transportation, entertainment, employment opportunities, arts and handicrafts, agriculture, human relationships, tourism, and other aspects. To understand the relationship between gender and these economic factors, we used Pearson Chi-Square Tests for each variable separately.

When it comes to Income (Table 1), it can be concluded that as many as 88.9% of respondents answered that incomes are much better since tourism started to develop

in their area. This is not surprising because numerous studies support the statement that incomes increase significantly when tourism develops in a destination (Balaguer, Cantavella-Jorda, 2002; Blake, 2009; Arslanturk et al., 2011; Nunkoo et al., 2020; Vujko et al., 2021). The reasons for this are numerous, and above all the increased number of jobs (Vunjak et al., 2020), which automatically affects other items within the Economic impact factor.

			Gender Male Female		Total
	No	Count	16	16	32
Income	change	% of Total	3,4%	3,4%	6,8%
	Detter	Count	18	2	20
	Better	% of Total	3,8%	,4%	4,3%
	Much	Count	222	194	416
	better	% of Total	47,4%	41,5%	88,9%
Total		Count	256	212	468
		% of Total	54,7%	45,3%	100,0%

Table 1. Income

Source: Panić, 2023

The Chi-Square Test showed statistical significance, given that p=0.005 (Table 2). This suggests that there is a significant relationship between gender and the impact of rural tourism on income. The results indicate that rural tourism has a notable impact on income, with males experiencing a greater improvement in their income compared to females. This kind of result is an indication for some research in the future, where items that affect the empowerment of women in rural destinations would be determined because, in accordance with the mentioned results, there is an indication that men earn more than women (Maksimović et al., 2019).

Table 2. Pearson Chi-Square Test

	Value	df	Statistical significance (p)
Pearson Chi-Square Test	10,642ª	2	,005

Source: Panić, 2023

When it comes to the Standard of living (Table 3), it should be said that the result is directly proportional to the previous result. Namely, the respondents stated in a total score of 87.8% that the standard has been significantly improved by the development of tourism, and that p=0.000 (Table 4), indicating a highly significant relationship between gender and standard of living in the context of rural tourism.

			G	lender	Total
			Male	Female	Total
	No	Count	6	11	17
	change	% of Total	1,3%	2,4%	3,6%
Standard of living	Better	Count	37	3	40
Standard of fiving		% of Total	7,9%	,6%	8,5%
	Much	Count	213	198	411
	better	% of Total	45,5%	42,3%	87,8%
Total		Count	256	212	468
		% of Total	54,7%	45,3%	100,0%

Table 3. Standard of living

Although both women and men have similar attitudes regarding the item "Standard of living", the Chi-Square Test indicates that incomes are uneven.

Table 4. Pearson Chi-Square Test

	Value	df	Statistical significance (p)
Pearson Chi-Square Test	27,020ª	2	,000

Source: Panić, 2023

Table 5 shows us that both men and women when asked about productivity, answered that the productivity of residents has been much better (92.1%) since tourism was developed. This primarily means that residents are aware of the benefits of tourism development, that they earn money from tourism development, and that they are more open and ready for innovation because it benefits them (Vujko et al., 2021).

			Gender Male Female		Total
	No	Count	7	6	13
	change	% of Total	1,5%	1,3%	2,8%
Duoduotivity	Better	Count	16	8	24
Productivity		% of Total	3,4%	1,7%	5,1%
	Much	Count	233	198	431
	better	% of Total	49,8%	42,3%	92,1%
Total		Count	256	212	468
10181		% of Total	54,7%	45,3%	100,0%

Table 5. Productivity

Source: Panić, 2023

The Chi-Square Test (table 6) shows that there is no statistical significance in terms of productivity. This suggests the fact that both men and women manage to market their products and services within the tourist offer in the observed areas.

The of Tearson on Square Test					
	Value	df	Statistical significance (p)		
Pearson Chi-Square Test	1,462ª	2	,481		

Table 6. Pearson Chi-Square Test

The results of Table 7 indicate a significant improvement in traffic infrastructure and traffic in general, as a result of the development of rural tourism (90.2%). Both sexes report a significant improvement, which implies that rural tourism has had a positive impact on the availability and quality of traffic in the region.

				Gender	— Total
			Male	Female	
	No	Count	9	17	26
	change	% of Total	1,9%	3,6%	5,6%
Transportation	Better	Count	16	4	20
Transportation		% of Total	3,4%	,9%	4,3%
	Much	Count	231	191	422
	better	% of Total	49,4%	40,8%	90,2%
Total		Count	256	212	468
10(a)		% of Total	54,7%	45,3%	100,0%

Table 7. Transportation

Source: Panić, 2023

Despite the fact that both sexes express their views on the significant improvement of traffic, there is a certain difference regarding the perception of that satisfaction. Pearson Chi-Square (Table 8) indicates that men notice these changes slightly more, which can be understood in the way that men drive more than women, most likely due to household responsibilities that require the use of cars (Song et al., 2020).

	Value	df	Statistical significance (p)
Pearson Chi-Square Test	9,399ª	2	,009

Source: Panić, 2023

Rural tourism significantly influenced the increase in entertainment content in the observed areas, cumulatively as much as 95.5% (Table 9). This data indicates that both men and women recognize that rural tourism also brings opportunities for entertainment elements in the destination. This can be seen above all during the realization of recreational activities, including campfires, barbecues, local cuisine, diverse sports, excursions, and hiking, making it a more engaging option (Petelca, Garbuz, 2020).

			Gender		— Total
			Male	Female	Total
	No	Count	10	11	21
	change	% of Total	2,1%	2,4%	4,5%
Entertainment	Better	Count	17	18	35
Entertainment		% of Total	3,6%	3,8%	7,5%
	Much	Count	229	183	412
	better	% of Total	48,9%	39,1%	88,0%
Total		Count	256	212	468
		% of Total	54,7%	45,3%	100,0%

Table 9. Entertainment

Regardless of the slightly higher percentage of men who emphasized the improvement of entertainment content, the Chi-Square test indicates the balance of these attitudes between the sexes, considering that p=0.581 (table 10).

Table 10. Pearson Chi-Square Test

	Value	df	Statistical significance (p)
Pearson Chi-Square Test	1,085ª	2	,581

Source: Panić, 2023

Social impact of rural tourism

A total of 95,1% of the respondents, regardless of gender, reported a significant increase in population growth (Table 11). Rural tourism could serve as a pivotal factor in the revitalization of Serbian villages, particularly in light of the ongoing population decline in rural regions. These results suggest that rural tourism has the potential to attract or retain residents, especially the younger generation, who may choose to live and work in more favorable economic conditions as a result of tourism growth. With the adoption and successful execution of suitable measures, rural tourism has the potential to catalyze rejuvenating local development (Kelfaoui et al., 2021).

Table 11. Population	growth
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			Gender Male Female		- Total
Population growth		Count	11	12	23
	No change	% of Total	2,4%	2,6%	4,9%
	T	Count	21	16	37
	Increasing	% of Total	4,5%	3,4%	7,9%
	Greatly increasing	Count	224	184	408
		% of Total	47,9%	39,3%	87,2%
Total		Count	256	212	468
		% of Total	54,7%	45,3%	100,0%

Source: Panić, 2023

In terms of population growth, rural tourism has a similar impact on both genders, with a p-value of 0.776, indicating no significant relationship between gender and population growth (Table 12). In other words, the data suggests that gender does not play a significant role in the impact of rural tourism on population growth; both males and females experience similar effects.

Table 12. Pearson Chi-Square Test	Table	12.	Pearson	Chi-Squa	are Test
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	Value	df	Statistical significance (p)
Pearson Chi-Square Test	,508ª	2	,776

Source: Panić, 2023

The majority of respondents reported an increase in friendliness, with a slightly higher proportion of males (Table 13). Bearing in mind that the level of friendliness of the local population directly reflects the quality of the tourist experience, the respondents showed clear indications that with the development of rural tourism, there have been positive changes in this aspect as well. The degree of friendliness displayed by residents towards visitors significantly impacts the tourist experience in a specific rural area to a great extent, and it lies outside the control of any individual service provider (Kachniewska, 2015). Tourists are more attracted to destinations where the local community is friendlier, honest, and hospitable (Fallon & Schofield, 2006).

			Gender		
				F 1	Total
			Male	Female	
Friendliness	N have a	Count	9	4	13
	No change	% of Total	1,9%	,9%	2,8% 26
	T	Count	19	7	26
	Increasing	% of Total	4,1%	1,5%	5,6%
	Greatly	Count	228	201	429
	increasing	% of Total	48,7%	42,9%	91,7%
Total		Count	256	212	468
		% of Total	54,7%	45,3%	100,0%

Table	13.	Friendliness
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Source: Panić, 2023

Results suggest a weak and non-significant relationship between gender and friendliness (Table 14). According to Nunkoo, Ramkissoon (2012) this indicates that among the local population, there is a uniform awareness of how kind they are to each other, regardless of their gender.

	Value	df	Statistical significance (p)
Pearson Chi-Square Test	5,069ª	2	,079

Source: Panić, 2023

Most respondents, regardless of gender, reported a significant increase (87,6%) in kindness (Table 15). What sets apart the attraction for tourists is the affable kindness

of the hosts, their dedication to maintaining traditional lifestyles, and their hospitality toward village tourists (Ćurčić et al., 2021). This not only enriches the overall tourism experience but also reflects the cultural richness and community spirit of the area, making it a standout destination for visitors seeking genuine and heartfelt encounters.

			Gender Male Female		Total
	NT 1	Count	10	8	18
	No change	% of Total	2,1%	1,7%	-) -
Kindness	Increasing	Count	29	11	40
	Increasing	% of Total	6,2%	2,4%	18 3,8% 40 8,5% 410 87,6% 468
	Cupathy in analysing	Count	217	193	410
	Greatly increasing	% of Total	46,4%	41,2%	87,6%
Total		Count	256	212	468
		% of Total	54,7%	45,3%	100,0%

Table 15. Kindness

Source: 1	Panić,	2023
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The Chi-Square Test (Table 16) for kindness and gender generated a value of 5.640 with a p-value of 0.060, indicating a weak but non-significant relationship. There are likely other important factors that influence kindness more than gender does.

	Value	df	Statistical significance (p)
Pearson Chi-Square Test	5,640ª	2	,060

Source: Panić, 2023

Regarding the increase or decrease in the distribution of alcohol and narcotics because of the emergence of rural tourism, the largest percentage of respondents estimated that there was a decrease in the presence and consumption of these two vices - 62.4% (Table 17). Nevertheless, almost a quarter of all respondents said that there was no change (24%), and over 13% noticed changes for the worse. This indicates that with the increase in tourist traffic in the observed areas, there have been positive developments regarding the consumption of drugs and alcohol. In addition, it should also be emphasized that part of the traditional gastronomic offer of rural households is also one of the significant attractors, the consumption of local alcoholic beverages (Curtis, 2018), and in this sense, it is not surprising that a quarter of respondents did not notice a change in this aspect.

			Gender		Total
			Male	Female	
	Creative deservations	Count	13	5	18
	Greatly decreasing	% of Total	2,8%	1,1%	3,9%
	Deemaasima	Count	150	123	273
	Decreasing	% of Total	32,1%	26,3%	58,5%
Alcohol and	N	Count	63	49	112
drugs	No change	% of Total	13,5%	10,5%	18 3,9% 273 58,5% 112 24,0% 58 12,4% 6 1,3% 467
	0 1	Count	24	34	58
	Greatly increasing	% of Total	5,1%	7,3%	3,9% 273 58,5% 112 24,0% 58 12,4% 6 1,3%
	Increasing Count 5 % of Total 1,1%	Count	5	1	6
		1,1%	,2%	1,3%	
Tatal		Count	255	212	467
Total		% of Total	54,6%	45,4%	100,0%

Table 17. Alcohol and drugs

Source:	Panić,	2023
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Despite the weak significance that is expressed (Table 18), gender must be taken into account as an important variable in the analysis of the use and abuse of alcohol and drugs. Schrock, Schwalbe (2009) and Pavón-Benítez et al., (2021) explain how some risky behaviors are culturally defined as "masculine" and that men use unhealthy behaviors to define their masculinity, such as consuming excessive amounts of alcohol to show their loyalty to her male environment. Similarly, various studies have shown the existence of a gender double standard, with women's drinking behavior being more socio-culturally sanctioned than men's (Pavón-Benítez et al., 2021; Romo-Avilés et al., 2020).

Table 18. Pearson Chi-Square Test

	Value	df	Statistical significance (p)
Pearson Chi-Square Test	8,479ª	4	,076

Source: Panić, 2023

The largest number of respondents noticed a decrease in the issue of prejudices among the local population (Table 19). The tourism industry has successfully served as a means to decrease prejudice (Schneider, 2019). As rural tourism development moves forward, it has played a pivotal role in breaking down stereotypes and promoting mutual respect among the local population and visitors.

			Gender		Total
			Male	Female	- 10tal
	Creatly decreasing	Count	25	22	47
	Greatly decreasing	% of Total	5,3%	4,7%	10,0%
	Decreasing	Count	144	120	264
	Decreasing	% of Total	30,8%	25,6%	56,4%
D	No change	Count	61	42	103
Prejudice		% of Total	13,0%	9,0%	22,0%
	Increasing	Count	23	28	51
		% of Total	4,9%	6,0%	10,9%
	Greatly increasing	Count	3	0	3
	Greatry increasing	% of Total	,6%	,0%	,6%
Total		Count	256	212	468
Total		% of Total	54,7%	45,3%	100,0%

Table 19. Prejudice

Regardless of the somewhat larger number of men who assessed that the level of expressing prejudices has decreased as a result of the emergence of rural tourism, the Pearson Chi-Square Test indicates uniformity in attitudes regarding this aspect (Table 20).

 Table 20. Pearson Chi-Square Test

	Value	df	Statistical significance (p)
Pearson Chi-Square Test	5,278ª	4	,260

Source: Panić, 2023

Environmental impact of rural tourism

In terms of pollution, rural tourism seems to have a similar impact on both genders with more than 60% of the respondents reporting worse conditions as a result of the tourism activity (Table 21). While bringing economic growth and cultural exchange, rural tourism development has also prompted concerns among residents regarding the observed increase in pollution. The ecological consequences of rural tourism are noteworthy, with increased pollution, extensive land occupation, and potential threats to natural environments, including soil erosion and the endangerment of rare species (Verma et al., 2023). These concerns emphasize the importance of responsible and sustainable rural tourism practices that harmonize with the environment while fostering economic opportunities.

			Gender		T. (.)
			Male Female		— Total
	Much worse	Count	47	33	80
	with worse	% of Total	10,0%	7,1%	17,1%
Pollution	Worse	Count	125	107	232
	worse	% of Total	26,7%	22,9%	49,6%
	No change	Count	84	72	156
No change		% of Total	17,9%	15,4%	33,3%
Total		Count	256	212	468
		% of Total	54,7%	45,3%	100,0%

Table 21. Pollution

The results of the Pearson Chi-Square Test indicate no significant relationship between gender and pollution (Table 22). This indicates that both men and women are equally concerned about the growing share of pollution as a side effect of tourism activities in their environment.

Table 22. Pearson Chi-Square Test

	Value	df	Statistical significance (p)
Pearson Chi-Square Test	,639ª	2	,727

Source: Panić, 2023

Both males and females reported that rural tourism had made habitat disturbance worse, with a similar distribution (Table 23). The influx of visitors, construction activities, and the need for amenities can disrupt the delicate balance of flora and fauna in these rural areas. Also, often tourist activities that are available to visitors can cause problems for the environment. For example, the utilization of trails and the resulting wear and tear, as well as the deterioration of forests and disruption of habitats due to off-road driving (Ahmadi, et al., 2018). Residents, deeply connected to their surroundings, worry about the impact of habitat disturbance on the indigenous wildlife and the fragile ecosystems that have thrived for generations. Their concerns underscore the need for sustainable practices and responsible tourism management that harmonize with the environment, safeguarding the pristine beauty of their rural habitats.

Table 23.	Habitat	disturbance
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			Gender		Total
		Male	Female	Total	
	Much worse	Count	40	30	70
	winch worse	% of Total	8,5%	6,4%	15,0%
Habitat	Worse	Count	145	118	263
disturbance	worse	% of Total	31,0%	25,2%	56,2%
	No change	Count	71	64	135
ivo change		% of Total	15,2%	13,7%	28,8%
Total		Count	256	212	468
		% of Total	54,7%	45,3%	100,0%

The results of the Pearson Chi-Square Test (Table 24) indicate no significant relationship between gender and habitat disturbance. This indicates that both sexes are equally concerned about environmental disturbances that come as an effect of tourism activities.

	Value	df	Statistical significance (p)
Pearson Chi-Square Test	,430ª	2	,806

	Table	24.	Pearson	Chi-Squar	re Test
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Source: Panić, 2023

In terms of Other environmental impacts, rural tourism seems to have a similar impact on both genders, where the majority haven't noticed any change as a result of tourism activities (Table 25).

			Gender		T (1
			Male	Female	Total
	Much worse	Count	44	28	72
	Which worse	% of Total	9,4%	6,0%	15,4%
Other		Count	105	73	178
Other		% of Total	22,4%	15,6%	38,0%
		Count	107	111	218
	No change	% of Total	22,9%	23,7%	46,6%
Total		Count	256	212	468
		% of Total	54,7%	45,3%	100,0%

Table 25. Other

Source: Panić, 2023

The Chi-Square Test for other environmental impacts and gender resulted in a p-value of 0.071, indicating a weak and non-significant relationship (Table 26).

	Value	df	Statistical significance (p)
Pearson Chi-Square Test	5,292ª	2	,071

Source: Panić, 2023

Conclusion

The research findings presented in this study offer a comprehensive insight into the impact of rural tourism on the quality of life of the local community in Western Serbia. We tested multiple hypotheses that aimed to investigate the influence of rural tourism on various dimensions of economic, socio-cultural, and environmental aspects. The results of this study provide valuable insights into the nuanced relationship between rural tourism development and the quality of life in this region.

One of the key findings of our research is the substantial positive impact of rural tourism on the economic well-being of the local community. The data revealed that the majority of respondents reported significant improvements in income, standard of

living, productivity, and employment opportunities. Specifically, 88.9% of respondents reported increased income since the inception of rural tourism, highlighting the economic benefits derived from the sector. The results support previous research that has shown how tourism can lead to income growth through job creation and increased economic activity. Moreover, rural tourism appeared to have a notably greater impact on income for males compared to females, indicating a gender-based discrepancy that merits further investigation.

Rural tourism in Western Serbia has demonstrated a positive influence on socio-cultural aspects, including the preservation and promotion of local traditions, strengthened community ties, and cultural exchange between tourists and residents. The data showed a significant improvement in the standard of living for 87.8% of respondents, highlighting the perceived enhancement in the overall quality of life. This is particularly important as it reflects the well-being and satisfaction of the local community. The results suggested that both males and females were equally inclined to support rural tourism development, indicating a unified perception of the positive socio-cultural impact.

The environmental sustainability of rural tourism in Western Serbia was also assessed, with a focus on pollution, habitat disturbance, and other environmental impacts. The findings revealed that more than 60% of respondents reported worse pollution conditions as a result of tourism activities. While rural tourism has brought about economic growth and cultural exchange, it has also raised concerns regarding increased pollution and habitat disturbance. These concerns emphasize the importance of responsible and sustainable tourism practices that harmonize with the environment.

The results of the research helped us to examine the validity of the previously set hypotheses. In this sense, by looking at the research results from tables 1-9, we concluded that rural tourism in Western Serbia positively impacts the economic wellbeing of the local community, leading to increased income, better standard of living, job creation, increased productivity, and business development thus the hypothesis H1a is confirmed. Furthermore, the results that emphasized the social impact of rural tourism showed that rural tourism had positive social effects on the observed tourist areas, which was manifested in population growth, a greater degree of friendliness and kindness towards other people, but also a reduced level of prejudice among the local population. This confirms the hypothesis H1b. Finally, when it comes to the matter of environmental issues, the results showed that rural tourism did not contribute to the improvement of the environmental image of the observed region. On the contrary, the results showed that there was more pollution and habitat disturbance as a result of tourist activities. This is an indication that it is necessary to invest additional energy to solve this problem more thoroughly in the future. This refutes the hypothesis H1c. Based on everything presented, we can conclude that rural tourism has a positive impact on the sociological and economic aspects of the quality of life of the local population, while on the other hand, we see certain negative impacts on the environment. Thus, we can only partially confirm our main hypothesis H1 that rural tourism has a positive effect on the overall quality of life of the local population in the region of Western Serbia.

The analysis also touched upon potential gender disparities in the impact of rural tourism. While both genders reported similar improvements in most aspects, some subtle differences were observed. For instance, males appeared to experience a greater impact on income and population growth, suggesting that future research could explore the underlying reasons for these variations.

In conclusion, the results of this study provide strong evidence that rural tourism in Western Serbia has a significant influence on the quality of life of the local community. The positive economic impact, improvement in socio-cultural aspects, and acknowledgment of environmental concerns underscore the multifaceted nature of rural tourism development. These findings offer valuable insights for policymakers, local communities, and tourism practitioners, highlighting the need for responsible and sustainable practices to maximize the benefits of rural tourism while mitigating its negative consequences.

The outcomes of this study contribute to the growing body of knowledge on rural tourism and its implications for rural development and quality of life. Future research endeavors should delve deeper into understanding the specific mechanisms that drive gender-based disparities and focus on developing strategies to empower women in rural destinations. Furthermore, addressing environmental concerns should remain a top priority, as rural tourism continues to evolve and shape the future of Western Serbia and similar regions. Ultimately, the findings emphasize the potential of rural tourism as a driver of positive change and prosperity in rural communities, and the importance of continued efforts to balance economic development with cultural preservation and environmental conservation.

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Conflict of interests

The authors declare no conflict of interest.

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