AGRITOURISM IMPACT TOWARD LOCALS' ATTITUDES — AN EVIDENCE FROM VOJVODINA PROVINCE (SERBIA)

Marko D. Petrović*[1], Ivana Blešić**, Anna Ivolga***, Aleksandra Vujko****
* Geographical Institute "Jovan Cvijić" SASA, Belgrade, Serbia
** Faculty of Sciences, University of Novi Sad, Novi Sad, Serbia
*** Faculty of Social and Cultural Service and Tourism, Stavropol State Agrarian University, Stavropol, Russia
**** Novi Sad Business School, Novi Sad, Serbia

Abstract: The paper deals with local residents' attitudes in Vojvodina Province (Northern Serbia) about effect of tourism in their surroundings, using Tourism Impact Attitude Scale (TIAS). So far, analysis of the tourism impact on the attitudes of the locals in rural areas of Vojvodina, as well as other parts of Serbia and surrounding countries is insufficiently researched. In this regard, factor analysis was applied for the analysis about interconnections of the sets of items. Eventually, the analyzed items of the TIAS were grouped into four factors, which explain 47.47% of the variance. All factors have a theoretic and scientific background and have shown insignificant deviations from the prevailing scientific results. In addition, in order to explore the tourism impact on the locals' attitudes, *t*-test, ANOVA and descriptive statistical analysis have been applied. In total of four research sub-hypotheses, two has been proved (*H1a, H1c*), one has been partially proved (*H1b*) and one has been refuted (*H1d*). The study conclusion emphasizes the finding that the higher the general opinion and attitude of an individuals and the community on tourist development in their local surroundings are, the higher is the care about their local community.

Key words: agritourism, TIAS Scale, local residents, rural area, Vojvodina Province

Introduction

This paper evaluates current issues surrounding the role and development of agritourism impact in Vojvodina Province (Northern Serbia). It examines many factors of agritourism development and change. Data problems beset most critical analyses of agritourism development, but they are particularly notable in this part of Europe, where few recorded data exist to provide a coherent overall picture of this phenomenon. Agritourism, as many other branches of tourism, has certain impact on rural environment. It brings numerous consequences on

---

[1] Correspondence to: m.petrovic@gi.sanu.ac.rs

the economic, environmental and social changes. The effect of (agri)tourism and tourist activities and events on attitudes and behavior of the local residents was explained in several modern studies (Andereck, Valentine, Knopf, & Vogt, 2005; Choi & Sirakaya, 2005; Nunkoo & Ramkisson, 2011; Yu, Chancellor, & Cole, 2011; Miljković & Živković, 2012; Blešić, Pivac, Besermenji, Ivkov–Džigurski, & Košić, 2014; Vujko & Gajić, 2014; Vujko & Plavša, 2014; Brankov, Jovičić, & Milijašević, 2015; Petrović, Radović, & Terzić, 2015; Petrović, Vujko, & Blešić, 2015; Srdanović & Pavić, 2015; Petrović, Bjeljac, & Demirović 2016). Previous research proved that agritourism, as well as other types of tourism might be an important ingredient in positive, as well as negative changes in the local area and that it might affect the locals.

Based on listed studies, a similar research was conducted in Vojvodina Province, in order to achieve the desired goal of the research. In the scientific literature in Serbia, analysis of the tourism impact on the attitudes of residents is researched at the level of urban, but only remotely at the level of the rural areas. In order to advance agritourism, which could be progressively developed and be part of the main economic priorities of Vojvodina, it is necessary to discover the coherence between tourism impacts and locals and work to improve them. In this respect, this kind of research is useful and necessary. The main subject of this paper is the examination of how tourist activities can affect rural surroundings. Are there statistically significant differences in attitudes depending on respondents' gender or age? Or, are there any possible statistically significant differences depending on their educational level and/or current profession? Therefore, the general aspects of agritourism impact, as well as its effect on the local residents, will be explained. The study has three objectives. The first objective, drawing on Lankford and Howard (1994), is to test the TIAS Scale, in order to examine the attitude of residents in the observed villages in Vojvodina (Figure 1). The second one is to examine if there are any differences in attitudes among residents, divided into groups according to results of the factor analysis. The third objective is to demonstrate statistically significant differences in respondents' attitudes by using an Independent samples *t*-test and Analysis of variance (ANOVA).

A case study: selected rural settlements in Vojvodina Province

The Vojvodina Province (Northern Serbia) possesses exceptional resources for the development of numerous aspects of (continental) tourist activities, especially those which develop in rural areas, e.g. agritourism. Its picturesque plains landscape, traditional farms (*Salaši*), multiethnic and multicultural structure of residents, gastronomy, attractive and well-preserved wetlands along

the Danube, Sava, Tisza and other rivers, as well as a large number of and the growing interest of the market in rural lifestyle and motives, point towards great potential for the agritourism development. This should be an obvious alternative possibility for development in rather large parts spanning over this region of Europe. It is a way of utilizing comparative advantages of rural areas as well. For the need of this research, the 17 rural settlements in Vojvodina Province will be analyzed (Figure 1).
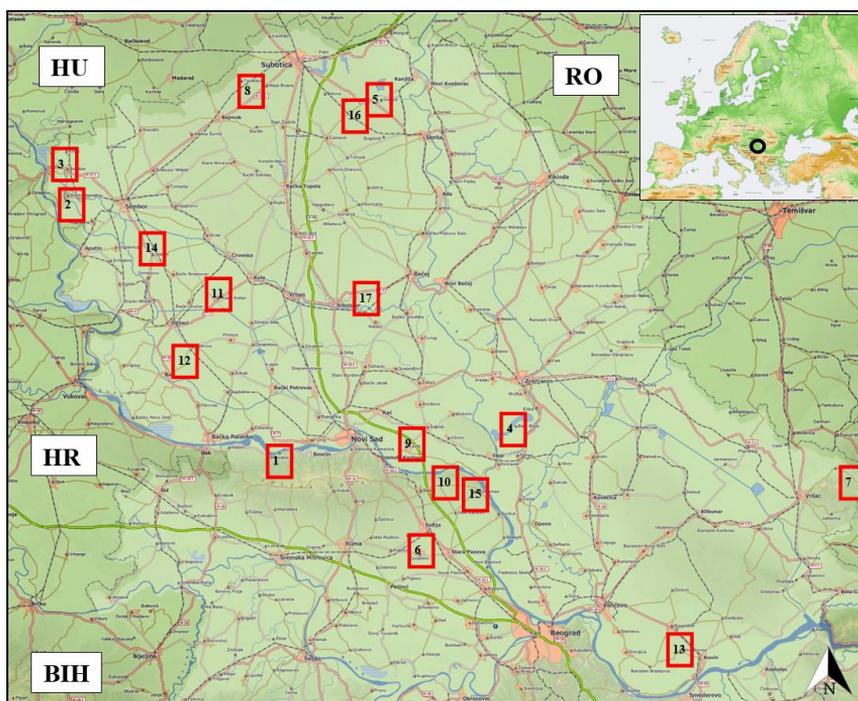

Figure 1. Case study locations in Vojvodina Province (Ratio: 1 cm ≈ 15 km; Note: The observed villages presented in this Figure are indicated with the same numbers in the Table 1 (Place of residence); Source: http://www.moto-berza.com/mapa-srbije.jpg)

The selection of the observed settlements has been done according to the recommendations of a "Wealth of Diversity" Project, by Danube Tourism Cluster of Serbia "Istar 21", supported by the Provincial Government of Vojvodina. The project had the aim to improve the cooperation and development of tourism in the Danube region of Vojvodina, as well as of the rest of Serbia. The observed settlements should be prepared in every way for the coming of tourist groups and to present their population, cultural heritage, customs, tradition, old crafts and authentic local products in an adequate way. The aim of

this presentation is the satisfaction of the motives of modern consumers in tourism who do not expect only to visit sacral edifices, monuments etc.

Methodology

The data obtained, by using the TIAS Scale, consist of original 27 dependent variables (Lankford & Howard, 1994, p. 130) and 15 independent variables (Lankford & Howard, 1994, p. 132). The questionnaire was based on a 5 point Likert scale (from 1 "strongly disagree" to 5 "strongly agree"). Its purpose is to measure the impact of agritourism development on the attitudes of the locals. All the interested respondents in the observed villages participated in the survey. The only condition was that their domicile address was in the researched villages. The examination of the target groups was done with the technique "face to face". Their socio-demographic characteristics are shown in details in the Table 1.

Of the 300 distributed questionnaires in total, 228 were answered correctly and used in the statistical procedure. This number represents 76% of the response rate. According to Babbie (1986), the response rate on the level of ≥70%, is considered to be a good indicator of the measurement scale acceptance. The sample in this research (N=228) is adequate for meaningful statistical assessments (Bagozzi, 1981). In order to explore the tourism impact on the locals' attitudes, factor analysis, descriptive statistical analysis, *t*-test and ANOVA were applied. The data were processed with the statistical program SPSS 18.0.

Table 1. Socio-demographic characteristics of respondents (N=228)

	f	%
Gender		
Male	98	43.0
Female	130	57.0
Age		
15-24	24	10.5
25-34	47	20.6
35-44	45	19.7
45-54	51	22.4
55-64	42	18.4
>65	19	8.3
Educational level		
Elementary school	30	13.2
High school	116	50.9
College	31	13.6
Faculty	43	18.9
M.Sc./Ph.D. studies	8	3.5
Average monthly income		
<200€	79	34.6
201-500€	87	38.2
501-1000€	18	7.9
>1001€	2	0.9
Incomplete responses	42	18.4
Profession		
Student	24	10.5
Full time job	103	45.2
Part time job	25	11.0
Retired	27	11.8
Unemployed	49	21.5
Place of residence		
1. Banoštor	11	4.8
2. Bački Monoštor	18	7.9
3. Bezdan	11	4.8
4. Belo Blato	19	8.3
5. Velebit	8	3.5
6. Golubinci	20	8.8
7. Gudurica	11	4.8
8. Donji Tavankut	21	9.2
9. Kovilj	3	1.3
10. Krčedin	23	10.1
11. Ruski Krstur	12	5.3
12. Selenča	4	1.8
13. Skorenovac	8	3.5
14. Stapar	5	2.2
15. Stari Slankamen	20	8.8
16. Totovo Selo	10	4.4
17. Turija	24	10.5

A hypothesis (*H1*) of the paper research states: *Attitudes of local population towards agritourism development in Vojvodina Province show statistically significant difference depending on their socio-demographic characteristics.* Explanation: This hypothesis is formed according to the supposition that the attitudes of the observed local population towards agritourism development in Vojvodina are statistically significantly different depending on the age, education, profession and gender. In the results of the paper, the hypothesis will be proved or refuted by using one-factor variance analysis and *t*-test. The *H1* includes four sub-hypotheses:

1. H1a: Attitudes of residents towards agritourism development are statistically significantly different depending on their age.

2. H1b: Attitudes of residents towards agritourism development in Vojvodina are statistically significantly different depending on their education level.

3. H1c: Attitudes of residents towards agritourism development in Vojvodina are statistically significantly different depending on their profession.

4. H1d: Attitudes of residents towards agritourism development in Vojvodina are statistically significantly different depending on their gender.

Results and discussion

Factor analysis findings

The exploratory factor analysis is used for the overview of the gathered data about interconnections of the sets of variables. According to the previous findings (Lankford & Howard, 1994; Lankford, J. S. Y. Chen, & W. Chen, 1994; Rollins, 1997; Schneider et al., 1997; Harrill & Potts, 2003; Wang et al., 2006; Wang & Pfister, 2008; Woosnam, 2012, etc.) and for the need of the main components analysis in this paper, all the 27 original questions were taken. Kaiser-Meyer-Olkin measure value was 0.74, which exceeds the recommended value of 0.60 (Kaiser, 1974). In addition, Bartlett's test of sphericity has achieved the needed statistical significance (p=0.000), which confirms the justification of the application of exploratory factor analysis. The main components analysis has discovered the presence of four components with characteristic values above one (1), which is explained by 17.17% (*F1*), 11.58% (*F2*), 9.70% (*F3*) and 9.01% (*F4*) of the variance (Table 2). After the forming of factors, the rotation was done by using the method of *Varimax rotation*.

The reliability of the measurement instrument was checked by using *Cronbach's Alpha Reliability Coefficient*. This instrument is among the most commonly used for inner closeness of the items, which the scale consists of (Pallant, 2011). In an ideal case, Cronbach's coefficient should be above 0.70 (DeVellis, 2003), but the values of this instrument are very sensitive to the number of items on the scale. As Pallant (2011) stated, short scales (fewer than 10 items) usually have quite small Cronbach's coefficient (below 0.50), so in that case it is more appropriate to calculate the mean inter-item correlation. In this case, the recommended values are from 0.20 to 0.40, as optimal scope of inter-item correlation (Briggs & Cheek, 1986). Even though the reliability coefficients below 0.70 are generally considered unacceptable, sometimes the coefficients above 0.60 are accepted. According to Lehman, O'Rourke, Hatcker, and Stepanski (2005), the ideal value of internal consistency value is in the interval from 0.80 to 0.90.

Table 2. The results of the factor analysis

Factors	Eigenvalue	Variance explained	Cronbach's coefficient α
F1	6.130	17.175	.885
F2	2.719	11.582	.693
F3	2.248	9.698	.709
F4	1.719	9.012	.710

The coefficient value for the first, third and fourth factor exceeds the recommended value of *0.70, (F1=0.88, F3=0.71, F4=0.71)*, while the value of the second factor is close to the recommended value (*F2=0.69*) (Table 2). Cronbach's coefficient for the whole scale of 23 items is *F1-F4=0.86*. The presented data point to the fact that the set model is reliable (Nunnally, 1978) and the obtained results are scientifically supportable. After the conveyed factor analysis, the pure factor structure has been obtained, with high coefficients. Four items have been excluded from the model, due to their low values of factor loading coefficients (below 0.40). Thus, a model with 23 items grouped into four factors, which explain the 47.47% of the variance has been obtained and the factors are titled in the following way:

1. F1 — Personal and community benefits (Lankford & Howard, 1994; Lankford et al., 1994; Schneider et al., 1997);

2. F2 — Negative impacts (Rollins, 1997; Harrill & Potts, 2003; Schneider et al., 1997);

3. F3 — Concern/support for local tourism development (Lankford & Howard, 1994); and

4. F4 — General opinion (Rollins, 1997).

Descriptive statistical analysis findings

Beside factor analysis, for the needs of the results testing, the descriptive statistical measurements have also been used (Table 3). More precisely, the *Mean (M), Standard deviation (σ), Median (Mdn)* or *Central value* and *Mode (X)* or *Dominant value* have been utilized.

Table 3. Mean ratings of the *F1–F4* factors

	M	**σ**	**Mdn**	**X**
F1 – Personal and community benefits	3.2116	1.04076	5	5
F2 – Negative impacts of tourism development	4.6172	.42230	5	5
F3 – Concern/support for local tourism development	4.6096	.51214	5	5
F4 – General opinion about tourism development	4.4342	.80931	5	5

Based on the results presented in the Table 3, the values of arithmetic means on the level of total values within the defined factors range from 3.21 (*F1)*, as a lowest value to 4.62 *(F2)*, as a highest value. The lowest arithmetic mean is the closest to score 3, while the highest arithmetic mean is the closest to score 5. According to these results, it can be concluded that the values in the defined factors are relatively high. This means that local population perceived negative impacts and concern for agritourism development and that they are aware of the potential challenge and risks that may have from it. In the overall factor set of questions, the biggest marks were given to the following: "Against new tourism development", "Encourage tourism in community" and "Community should become destination". The lowest mark was given to the question "Like to see tourism be main industry", which points out that tourism is still developing in these areas and that locals give advantage to tourism to be economically important industry and major income earner in future (in addition to the traditional farming).

Together with these, it is also proved by the mode (the most frequent score), which is 5 in all the cases on the level *F1–F4*. For the individual questions, in 75% (18) of cases it is 5, while in 15% (5) of the questions is 4. Median (central values of a series) on the level *F1–4* is 5 in all the cases, while among the individual questions in 17 out of 23 questions have a value of 5, while in the remaining six questions it has value 4. Since all the three values are closely the same in questions, it can be said that it is a symmetrical frequency distribution. Standard deviation, which shows the mean value of the deviation of individual scores from the arithmetic mean, in seven questions exceeds the value 1, while in the remaining 16 questions it ranges in the interval from 0.57 to 0.99.

Analysis of variance (ANOVA) findings

The analysis of the results obtained by using one-factor analysis of variance (ANOVA) is used for the comparison of the average results in three or more groups. It means that there is only one independent variable (factor), which is divided into several levels or groups, i.e. conditions. The aim is to determine whether there is a statistically significant difference in the average result in measuring a feature in three or more groups (Turjačanin & Čekrlija, 2006).

$$s^2 = \frac{1}{n-1} \sum (y_i - \bar{y})^2 \tag{1}$$

According to data in the Table 4, it can be noted that the size of the statistical significance of $p<0.05$ is recorded in all cases: *F1* (p=0.011)*, F2* (p=0.000), *F3* (p=0.000) and *F4* (p=0.000). All the factors show an extremely high statistical significance among the mean scores of the respondents' attitudes. In order to get an insight among which age groups there are significant differences, the post-hoc *LSD* test has been done. The results of this test on the significance level of *p<0.05,* show that the greatest differences in answers are noticed between the respondents from the age category 35–44, in comparison with the oldest respondents, above 65 in *F1* (0.98) and *F3* (0.70), in comparison with the youngest respondents, category 15–24 in *F2* (-0.49) and in comparison with the age category 55–64 in *F4* (0.67).

Table 4. The results of ANOVA compared to the age of the respondents

	Age	N	M	σ	F	Sig.
F1	15–24	24	3.0938	.92537	**3.072**	**.011**
	25–34	47	3.1223	1.23124		
	35–44	45	3.6194	.78333		
	45–54	51	3.3211	1.19118		
	55–64	42	3.0685	.91031		
	Over 65	19	2.6382	.69209		
F2	15–24	24	4.3452	.48931	**5.429**	**.000**
	25–34	47	4.6322	.40378		
	35–44	45	4.8317	.25169		
	45–54	51	4.6246	.36918		
	55–64	42	4.5918	.38068		
	Over 65	19	4.4511	.64640		
F3	15–24	24	4.4667	.58582	**7.459**	**.000**
	25–34	47	4.6894	.41032		
	35–44	45	4.7467	.26423		
	45–54	51	4.7294	.36183		
	55–64	42	4.5667	.40223		
	Over 65	19	4.0421	1.02973		
F4	15–24	24	4.3472	.74522	**5.543**	**.000**
	25–34	47	4.6525	.48133		
	35–44	45	4.6593	.61746		
	45–54	51	4.5752	.67025		
	55–64	42	3.9841	1.14988		
	Over 65	19	4.0877	.92190		

Note: Sig. — the level of statistical significance ($p < 0.01$); F — variance quotient ($F \geq 2.37$)

Namely, the answers of the respondents in the category 35–44 show the biggest statistically significant differences in the answers in all the four factors. The obtained results in the Table 4 point to the conclusion that the respondents from this age category notice the most the benefits that the community and they themselves have from tourist development in their settlement. Together with this, they consider, in a larger amount, tourism to have a positive impact on the local surroundings, are more inclined to the concern for local tourist development and have the highest general opinion about tourist development in their settlements.

This result does not differ from previous findings (Rojek, Clemente, & Summers, 1975; Murdock & Shriner, 1979), where the large difference in attitudes towards tourism has been noticed among respondents of different ages. According to the obtained results, it can be concluded that statistically significant differences in attitudes of local population towards agritourism development in Vojvodina according to their age, exist in all the four factors (on the significance level $p < 0.05$; $F \geq 2.37$). This means that the sub-hypothesis *H1a* (+) has been proved.

The results in the Table 5 show that the size of statistical significance smaller than or equal to 0.05 is recorded in two out of four factors: *F2* (p=0.000) and *F3* (p=0.003). Both of the factors show an extremely large statistical significance between the mean scores of the respondents. By using the post-hoc *LSD* test, we obtained the insight between educational groups, which there are significant differences in answers, on the significance level of *p<0.05*.

Table 5. The results of ANOVA compared to the education of the respondents

	Educational level	N	M	σ	F	Sig.
F1	Elementary school	30	3.2667	.76051	1.995	.096
	High school	116	3.2543	1.11693		
	College	31	3.3629	1.11727		
	Faculty	43	3.1250	.96671		
	Master studies	8	2,2656	.25388		
	Doctoral studies	0	0.0000	.00000		
F2	Elementary school	30	4.2762	.58474	**13.079**	**.000**
	High school	116	4.6958	.38125		
	College	31	4.6452	.30611		
	Faculty	43	4.7342	.26375		
	Master studies	8	4.0179	.24670		
	Doctoral studies	0	0.0000	.00000		
F3	Elementary school	30	4.5467	.50085	**4.122**	**.003**
	High school	116	4.5966	.60317		
	College	31	4.7548	.33351		
	Faculty	43	4.6977	.25212		
	Master studies	8	4.0000	.21381		
	Doctoral studies	0	0.0000	.00000		
F4	Elementary school	30	4.4556	.72968	0.552	.698
	High school	116	4.4943	.91206		
	College	31	4.4194	.60227		
	Faculty	43	4.3023	.76225		
	Master studies	8	4.2500	.34503		
	Doctoral studies	0	0.0000	.00000		

Note: Sig. — the level of statistical significance (p<0.01); F — variance quotient (F ≥2.37)

The obtained results show that the largest differences have been noticed between the respondents who have finished master studies in comparison with the respondents who finished a college in *F1* (1.10) and *F3* (0.73) and in comparison with the respondents who finished the bachelor studies in *F2* (0.72). In *F4* no statistically significant difference has been proved between the answers of the observed educational groups. However, even though statistical significance has not been proved in the last factor, it can be stated that the respondents who finished master studies most often gave answers completely different from other respondents. The reason for that is also an extremely small number of the examined respondents who belong to this educational category (3.5% respondents). Apart from that, it can be concluded that the respondents from this

educational structure chose the lowest scores in the segments about the benefits from tourist development, negative impacts of tourist development and concern about that development in their rural settlements. According to the obtained results, it can be concluded that statistically significant differences in attitudes of local population towards agritourism development of Vojvodina according to the educational structure exist in two out of four factors (on the significance level of $p < 0.05$; $F \geq 2.37$), by which the sub-hypothesis *H1b* (+/-) has been partially proved.

Table 6. The results of ANOVA compared to the profession of the respondents

	Profession	N	M	σ	F	Sig.
F1	Student	24	2.8906	.75570	1.219	.304
	Full time job	103	3.3228	1.07636		
	Part time job	25	2.9800	1.11668		
	Retired	27	3.1852	.81701		
	Unemployed	49	3.2679	1.13680		
F2	Student	24	4.3869	.52189	**3.250**	**.013**
	Full time job	103	4.6796	.36255		
	Part time job	25	4.6629	.33217		
	Retired	27	4.4868	.56209		
	Unemployed	49	4.6472	.40100		
F3	Student	24	4.4667	.58582	**4.030**	**.004**
	Full time job	103	4.6913	.32392		
	Part time job	25	4.7200	.27080		
	Retired	27	4.3037	.95009		
	Unemployed	49	4.6204	.49370		
F4	Student	24	4.3750	.76337	**2.368**	**.054**
	Full time job	103	4.5728	.56479		
	Part time job	25	4.5733	.49554		
	Retired	27	4.2222	.89156		
	Unemployed	49	4.2177	1.20867		

Note: Sig. — the level of statistical significance, approximately $p < 0.05$; $F \geq 2.37$

In the Table 6, it can be noticed that the size of the statistical significance smaller than or equal to 0.05 is recorded in three out of four factors: *F2* (p=0.013), *F3* (p=0.004) and *F4* (p=0.054). In this case, only *F1* does not show a statistical significance between the mean scores of the respondents. In order to get an insight between which groups there are significant differences, here also the post-hoc *LSD* test has been applied. The results of this test, on the significance level of *p<0.05*, show that within *F1* there are no statistically significant differences between respondents of different profiles, which leads to the conclusion that all the respondents, according to this criterion, equally perceive the benefits from tourist development they have as individuals or their local community (the highest scores were chosen by the respondents who have full-time jobs, and the lowest by students). The largest statistically significant

differences are noticeable in the answers between people who have full-time jobs on one hand, and students in *F2* (0.29) and the unemployed in *F4* (0.35), on the other hand. It means that the respondents with full-time jobs better notice the positive effects of tourism in their settlements and have a higher general opinion about tourist development in their local surroundings. In *F3,* the largest difference has been noticed between the answers of retired people and those who have half-time jobs (0.42). The obtained result leads to the statement that the retirees feel less concern for local tourist development and they do not see the advantages of the activities initiated by tourism, contrary to the attitudes of the respondents who have half-time jobs. According to the obtained results, it can be concluded that statistically significant differences in the attitudes of local population towards agritourism development in Vojvodina Province, according to their working status, exist in three out of four factors (on the significance level of $p < 0.05$; $F \geq 2.37$), by which the sub-hypothesis *H1c* (+) has been mainly proved (except in the case *F1*).

Independent samples t-test findings

Independent samples *t*-test is used for the comparison of mean values of a continuous variable in two different groups of subjects (only two groups or two points in time). The aim is to determine if there is a statistically significant difference in the average result of a feature measuring in two groups (Turjačanin and Čekrlija, 2006). In the first part of the presented tables, we will present the results of *Levene's Test for Equality of Variances*, which examines whether the variable (variance) of results in two observed groups is equal. The outcome of this test determines which *t*-value should be considered correct and usable.

$$W = \frac{(N-k)}{(k-1)} \frac{\sum_{i=1}^{k} N_i (Z_{i \cdot} - Z_{\cdot \cdot})^2}{\sum_{i=1}^{k} \sum_{j=1}^{N_i} (Z_{ij} - Z_{i \cdot})^2},$$ (2)

If the significance value (*Sig.*) is higher than 0.05, the first row of the figure should be used of the case of equal variances assumed. If it is lower than that value, then the second row of the figure should be used for the case of equal variances not assumed. On the other hand, in order to determine if there is a significant difference between two groups, the results are examined in the segment *t*-test for equality of means in significance column (*Sig. (2-tailed)*). If a number in the column is equal to or smaller than 0.05, then there is a statistically significant difference between the mean values of the dependent variable value in each of the two groups (Pallant, 2011). When determining the statistical significance of the obtained *t*-test value, the level of risk likelihood of 5% and 1% is taken. For large samples ($N \geq 200$) on the significance level of 5% or lower

(p≤0.05), the *t*-value has to be at least 1.98, and on the significance level of 1% (p=0.01), the *t*-value has to be at least 2.63. The *t*-test has been done on the significance level of p≤0.05. When this type of research is concerned, *t*-test shows whether there will be a statistically significant connection between independent variables (5) and dependent variables (grouped in four factors). All the listed variables have two groups of answers, according to the rule of testing with this measuring scale.

In the Table 7, it can be noted that only in *F1* an extremely mild statistically significant difference is recorded between the mean value of the attitudes of genders (p=0.053). Such a result leads to the conclusion that the male participants have given a bit higher scores for the items connected with the benefits they have from tourist development in their settlement, together with the benefits that the community also have from such a development. In other factors, there are no statistically significant inter-gender differences in respondents' attitudes.

Table 7. The results of *t*-test compared to the gender of the respondents

	Gender	N	M	σ	t	Sig. (2-tailed)
F1	Male	98	3.3648	1.07509	**1.941**	**.053**
	Female	130	3.0962	1.00285		
F2	Male	98	4.6429	.37894	.817	.415
	Female	130	4.5978	.45273		
F3	Male	98	4.6735	.42440	1.640	.102
	Female	130	4.5615	.56629		
F4	Male	98	4.5000	.79120	1.066	.288
	Female	130	4.3846	.82224		

Note: t — *t*-test value; Sig. (2-tailed) for p≤0.05

The results presented in the Table 7 can be interpreted by the fact that in the analyzed villages of Vojvodina Province, both of the genders have relatively similar attitudes toward the meaning of the statements within most of the factors (*F2, F3* and *F4*). The exception is *F1,* where an extremely mild statistically significant difference is recorded between the mean value of the attitudes of genders (p=0.053). Such a result leads to the conclusion that the male participants have given a bit higher scores for the items connected with the benefits they have from tourist development in their settlement, together with the benefits that the community also has from such a development. Such a conclusion does not agree with previous findings in which it has been proved that there are significant inter-gender differences in the perception of tourism impact on the attitudes of the residents in rural areas (Pizam & Pokela, 1985; Ritchie, 1988). According to the obtained results it can be concluded that there are no statistically significant differences in the attitudes of local population

towards agritourism development in Vojvodina, when the gender of respondents is concerned (on the significance level p≤0.05; t≥1.98). This leads to the conclusion that the sub-hypothesis *H1d* has been disproved (-), except in the case of *F1*.

Conclusion

This study assessed residents' attitudes of tourism impact on their local communities in Vojvodina. To achieve that, authors of the paper used Tourism Impact Attitude Scale (TIAS). The results of factor analysis proved that respondents consider personal, as well as community benefits of tourism development, as the most important ones. It is followed by the negative impacts of this development, which reflects the potential fear and possible consequences of large number of tourists, potential environmental degradation, social and cultural devastation, etc. The third important issue to the respondents is the concern and support for local tourism development, which have the connection with the benefits of tourism development. In other words, when the individual or group benefits of any kind rise, support for tourism rises as well and vice versa. Less favored is the fact the general opinion of the respondents about tourism development. This factor completely matches the findings of Rollins (1997), which has conducted his research in the rural areas of the Island of Vancouver (British Columbia, Canada). In his results, he has demonstrated that the respondents agreed that their local communities should stimulate an intensive building of tourist facilities in their local areas, with the aim of a more successful tourist development. Very similar answers we have received from the respondents in Vojvodina Province. The paper's results showed that locals perceived negative impacts and concern for agritourism development and that they are aware of the potential challenge and risks that may have from it. Together with these, the results point out that tourism is still developing in the observed areas and that locals give advantage to tourism to be economically important industry in future (in addition to the traditional agricultural production).

The finding also proved that the answers of the 35–44 age category respondents show the biggest statistically significant differences in the answers in all the four factors. These point to the conclusion that these respondents notice the most the benefits that the community and they themselves have from tourist development in their local surroundings. Similar with this, they consider, in a larger amount, tourism to have a positive impact in their villages, are more inclined to the concern for local tourist development and have the highest general opinion about tourist development. According to the gained results, it can be concluded that

statistically significant differences in attitudes of local population, exist in all the four factors (on the significance level $p<0.05$; $F \geq 2.37$). This means that the sub-hypothesis *H1a* (+) has been proved.

When it comes to the educational differences in the responses of the locals, it can be stated that the respondents who finished master studies, most often gave answers completely different from other educational groups. The reason for that is an extremely small number of the examined respondents who belong to this educational category (3.5% respondents). Apart from that, it can be concluded that the respondents from this educational structure chose the lowest scores in the segments about the benefits from tourist development, negative impacts of tourist development and concern about that development in their rural settlements. According to the obtained results, it can be concluded that statistically significant differences in attitudes, according to the educational structure, exist in two out of four factors (on the significance level of $p<0.05$; $F \geq 2.37$). This means that the sub-hypothesis *H1b* (+/-) has been partially proved.

Further results also proved that the respondents with full-time jobs better notice the positive effects of tourism in their settlements and have a higher general opinion about tourist development in their local surroundings. The obtained findings lead to the statement that the retirees feel less concern for local tourist development and they do not see the advantages of the activities initiated by tourism, contrary to the attitudes of the respondents who have half-time jobs. According to the obtained results, it can be concluded that statistically significant differences in the attitudes of locals towards agritourism development in Vojvodina, according to their profession, exist in three out of four factors (on the significance level of $p<0.05$; $F \geq 2.37$). This state points out to the conclusion that the sub-hypothesis *H1c* (+) has been mainly proved (except in the case *F1*).

On the other hand, sub-hypothesis *H1d* has been disproved (-), because there are no statistically significant differences in the attitudes, when the gender of respondents is concerned (on the significance level $p \leq 0.05$; $t \geq 1.98$). This can be explained by the fact that an extremely mild statistically significant difference is recorded in *F1* only. Such a result leads to the conclusion that the male participants have given a bit higher scores for the items connected with the benefits they have from tourist development in their settlement, together with the benefits that the community also has from such a development. In other factors, there are no statistically significant inter-gender differences in examinees' attitudes. These suggest that both of the genders have relatively similar attitudes toward the meaning of the statements within each of the remaining three factors (*F2, F3* and *F4*). With all these matters, our research emphasizes the finding that

the higher the general opinion and attitude of an individuals and the community on tourist development in their local surroundings are, the higher is the care about the community. These statements in fact describe the general aspects of agritourism impact, as well as its effect on the locals in Vojvodina.

References

Andereck, K. L., Valentine, K. M., Knopf, R. C., & Vogt, C. A., (2005). Residents' perceptions of community tourism impacts. *Annals of Tourism Research*, *32*(4), 1056–1076.

Babbie, E. (1986). *The Practice of Social Research* (4th ed.). Belmont: Wadsworth.

Bagozzi, R. P. (1981). Evaluating Structural Equation Models with Unobservable Variables and Measurement Error: A Comment. *Journal of Marketing Research*, *18*(3), 375–381.

Blešić, I., Pivac, T., Besermenji, S., Ivkov-Džigurski, A., & Košić, K. (2014). Residents' Attitudes and Perception towards Tourism Development: A Case Study of Rural Tourism in Dragacevo, Serbia. *Eastern European Countryside*, *20*(1), 151–165.

Brankov, J., Jovičić, D., & Milijašević, D. (2015). Sustainable Tourism in National Park "Đerdap", Serbia – Attitudes of Local Population. *Journal of the Geographical Institute "Jovan Cvijić" SASA*, *65*(2), 183–199.

Briggs, S. R., & Cheek, J. M. (1986). The role of factor analysis in the development and evaluation of personality scales. *Journal of Personality*, *54*(1), 106–148.

Choi, H. S., & Sirakaya, E. (2005). Measuring residents' attitude toward sustainable tourism: development of sustainable tourism attitude scale. *Journal of Travel Research*, *43*(4), 380–394.

DeVellis, R. F. (2003). *Scale development: Theory and application (2nd Ed.),* Thousand Oaks: Sage.

Harrill, R., & Potts, T. D. (2003). Tourism Planning in Historic Districts: Attitudes toward Tourism Development in Charleston. *Journal of the American Planning Association*, *69*(3), 233–244.

Kaiser, F. H. (1974). An Index of Factorial Simplicity. *Psychometrika*, *39*(1), 31–36.

Lankford, S. V., & Howard, D. R. (1994). Developing a Tourism Impact Attitude Scale. *Annals of Tourism Research*, *21*(1), 121–139.

Lankford, S. V., Chen, J. S. Y., & Chen, W. (1994). Tourism's impacts in the Penghu National Scenic Area, Taiwan. *Tourism Management*, *15*(3), 222–227.

Lehman, A., O'Rourke, N., Hatcker, L., & Stepanski, E. J. (2005). *JMP for Basic Univariate and Multivariate Statistics: A Step by Step Guide.* Cary: SAS Institute Inc.

Miljković, O., & Živković, Lj. (2012). Possibilities for the development of ecotourism in protected areas of western Serbia. *Journal of the Geographical Institute "Jovan Cvijić" SASA*, *62*(3), 65–80.

Murdock, S. H., & Schriner, E. C. (1979). Community Service Satisfaction and Stages of Community Development: An Examination of Evidence from Impacted Communities. *Journal of the Community Development Society, 10*(1), 109–124.

Nunkoo, R., & Ramkisson, H. (2011). Residents' satisfaction with community attributes and support for tourism. *Journal of Hospitality and Tourism Research*, *35*(2), 171–190.

Nunnally, J. C. (1978). *Psyhometric Theory* (2nd ed.). New York: McGraw-Hill Book Company.

Pallant, J. (2011). *SPSS Survival Manual* (4th ed.). *A step by step guide to data analysis using SPSS version 18*. Maidenhead: Open University Press.

Petrović, M. D., Bjeljac, Ž., & Demirović, D. (2016). Tourism Impact Attitude Scale (*TIAS*) as a Tool of Contemporary Analysis in Agritourism. *Agricultural Bulletin of Stavropol Region. 1* Supplement, 13-19.

Petrović, M. D., Radović, G., & Terzić, A. (2015). An Overview of Agritourism Development in Serbia and European Union Countries. *International Journal of Sustainable Economies Management (IJSEM)*, *4*(2), 1–14.

Petrović, M. D., Vujko, A., & Blešić, I. (2015). Leisure Time in Countryside: The Health Aspects of Agritourism Activities. *KNOWLEDGE — International Journal Scientific and Applicative papers, 8*(1), 131–136.

Pizam, A., & Pokela J. (1985). Perceived The Impacts of Casino Gambling on a Community. *Annals of Tourism Research*, *12*(2), 147–165.

Ritchie, B. J. R. (1988). Consensus Policy Formulation in Tourism: Measuring Resident Views Via Survey Research. *Tourism Management, 9*(3), 199–212.

Rojek. D. G., Clemente, F., & Summers D. F. (1975). Community Satisfaction: A Study of Contentment with Local Services. *Rural Sociology, 40*, 177–192.

Rollins, R. (1997). Validation of TIAS as a Tourism Impact Management Tool. *Annals of Tourism Research*, *24*(3), 740–742.

Schneider, I. E., Lankford, S. V., & Oguchi, T. (1997). The Cross-Cultural Equivalency of the TIAS: Summary Results. *Annals of Tourism Research*, *24*(4), 994–998.

Srdanović, M., & Pavić, D. (2015). Tourists' attitudes on tourism offer in north-western part of Montenegro. *Journal of the Geographical Institute "Jovan Cvijić" SASA*, *65*(2), 201–214.

Sznajder, M., Przezborska, L., & Scrimgeour, F. (2009). *Agritourism*. Wallingford: CABI Publishing.

Turjačanin, V., & Čekrlija, Đ. (2006). *Osnovne statističke metode i tehnike u SPSS-u — Primena SPSS-a u društvenim naukama*. Banja Luka: Centar za kulturni i socijalni popravak.

Vujko, A., & Gajić, T. (2014). Opportunities for tourism development and cooperation in the region by improving the quality of supply — The "Danube Cycle Route" Case Study. *Ekonomska istraživanja — Economic research*, *27*(1), 847–860.

Vujko, A., & Plavša, J. (2014). Evaluation of National Park Fruška Gora (Serbia) for sport and recreational tourism. *Acta Geographica Slovenica*, *54*(2), 321–334.

Wang, Y., & Pfister, R. E. (2008). Residents' Attitudes toward Tourism and Perceived Personal Benefits in a Rural Community. *Journal of Travel Research*, *3*, 1–10.

Wang, Y., Pfister, R. E., & Morais, D. B. (2006). Residents' Attitudes toward Tourism Development: A case study of Washington, NC. Proceedings from *The 2006 Northeastern Recreation Research Symposium*. New York, NY: Bolton Landing.

Woosnam, K. M. (2012). Using Emotional Solidarity to explain residents' attitudes about tourism and tourism development. *Journal of Travel Research*, *51*(3), 315–327.

Yu, C. P., Chancellor, H. C., & Cole, S. T. (2011). Measuring residents' attitudes towards sustainable tourism: A reexamination of the sustainable tourism attitude scale. *Journal of Travel Research*, *51*(1), 57–63.

http://www.moto-berza.com/mapa-srbije.jpg (accessed on October 23, 2014)