

QUALITY OF GASTRO TOURIST OFFER DURING COVID-19 - PREDICTIONS FROM RURAL HOUSEHOLDS OF VOJVODINA¹

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ABSTRACT

The period during the COVID-19 pandemic brought major changes, mainly in terms of large losses for all economic activities, including all forms of tourism and hospitality. The aim of this paper was to investigate the possible effects of certain predictors on the future development and quality of gastro tourism products in Vojvodina. The survey included a total of 225 domestic visitors, in rural households. Also, the aim was to determine whether gender has a moderating role in the predictive validity of total gastro quality, based on food quality factors and guest relations. The results obtained by processing in the SPSS model, 26.00, macro Process.spss, version 4.0, undoubtedly show a positive attitude of consumers when it comes to predicting better development of quality gastronomic services, and that gender statistically significantly moderates the relationship between food quality and guest and total gastro quality.

¹ original research paper

KEY WORDS: gastrotourism, COVID-19, development, quality, rural Vojvodina.

INTRODUCTION

In the first five months of 2020, the total number of tourist arrivals in Serbia decreased by 52.8 percent compared to the same period in 2019, according to the report of the Ministry of Trade, Tourism and Telecommunications (<https://www.gov.rs.com>). COVID-19 has completely devastated the overall development of the economy, in all its sectors. He pushed the economy into an economic recession, at a time when all parameters and trends were recording a positive trend. This also applies to the tourism and hospitality industry, where a large number of facilities in this sector have faced huge costs, and even complete closures and closures. The quality of services provided has also deteriorated. The whole system collapsed in its development, when everyone saw only future growth. People are restricted from going to shops, bars, restaurants and workplaces. Preventing the spread of the COVID-19 pandemic necessarily leads to an economic recession. However, a large number of studies were conducted during the pandemic period, where the results mostly indicated long-term negative consequences, and difficult return to the original state of business, and even more difficult progress after the end of the pandemic. Crisis situations can completely destroy tourism and catering. The authors of the paper tried to determine the predictor of the influence of factors: food quality and attitude towards the host, in relation to the total gastro quality in rural households in Vojvodina. Two factors were obtained by exploratory factor analysis. The aim was also to determine the role of gender as a moderator, in relation to the given factors and total gastro quality. The results obtained with the help of macro Porcess.spss, 4.0, show that both men and women have a significant moderating role in the prediction of the output variable total gastro quality in rural households in Vojvodina.

The importance of research is reflected in the observation of the consequences of a crisis situation, and the establishment of new business systems in such situations. Also, it is necessary to determine strategic measures after the observed consequences, based on

research, in order to speed up the recovery of the tourism industry, and to preserve the quality of the offer in order to return to the regional and world market.

LITERATURE REVIEW

Rural gastro tourism should become one of the generators of the development of Serbia and the growth of overall economic activities (Cvijanović et al., 2021). First of all, Serbia has particularly favorable conditions for preserved nature, with a mild climate, clean air, unpolluted rivers and lakes, rich flora and fauna. These benefits are particularly pronounced in hilly and mountainous areas (Gajić et al., 2021a, b, c). Staying in nature provides tourists with the opportunity for walks, recreation, sports, organized trips to nearby caves, springs and waterfalls, hunting and fishing, horseback riding, hiking, picking berries and herbs and other recreational activities in nature. Protection measures during the COVID-19 pandemic have led to numerous restrictions in everyday life, but despite all the measures, the impact of these restrictions on health behavior and lifestyle at home is undefined (Ammar et al., 2020). A large percentage of tourists have reoriented their movements towards natural resources, the villages of Serbia (Blešić et al., 2021, Gajić et al., 2021c). The COVID-19 pandemic disrupted the food supply chain and thus threatened the food security of many people (Tian et al., 2022). The same authors found in their research that COVID-19 reduced the diversity in food, but increased the quality of food for households that are still engaged in food-related agricultural production. The decision to control the volume of travel by restricting freedom of movement should be balanced between the resulting estimated epidemiological impact and the anticipated economic consequences (Anzai et al., 2020). Wang et al. (2020), claim that the pandemic affected the short-term shortage and jump in prices of corn supply on farms; lack of market stocks in packaging facilities; parental adjustment disorder; meat import disorder. Robinson et al. (2020), argue that the pandemic probably had far-reaching consequences for lifestyle behavior. The decline in local production during the crisis has had a moderate impact on global prices and supply — but trade restrictions and precautionary purchases by several key players can lead to global food price spikes and severe local food

shortages (Falkendal, 2021). There are claims that 2022 is more of a transitional year for restaurants than was disruptive during 2021. All other sectors that rely on tourism, such as hotels, restaurants, travel agencies and the transport sector, have suffered greatly as a result of global closure due to the COVID-19 pandemic (Jafari et al., 2021). Some of the countries, such as Algeria, have not suffered great damage from the pandemic, because they do not depend so much on tourism (Bouara et al., 2021). The current pandemic may represent a paradigm shift in research into the behavior and decision-making of tourists (Kock et al., 2020). Cao et al. (2020), claim that the pandemic causes severe anxiety, and the consequences of making decisions about visiting tourist destinations and restaurants. The stability of food supply chains is key to food security for people around the world (Erokhin & Gao, 2020). Fountain (2021, pp. 1) claims that the following trends will return tourism and hospitality to the right path: "Restoring the basics", "Valuing the local and local population" and "Food for well-being". The COVID-19 pandemic continues to take its toll on all aspects of human life and on all sectors of the global economy, perhaps among the most notable effects being its impact on the tourism and hospitality sector (Santos Del Valle, 2020). Juliari et al. (2020), showed that the development of various culinary delights and gastronomic tourism had to be presented online, as a choice of tourist attractions. During the pandemic, technology played a major role in the way food was delivered to customers and presented through online training. Online cooking sessions and tutorials, live guided tastings, virtual reality tours, remote social nutrition and drinks are current and sustainable applications that have managed to support and temporarily replace the traditional experience of gastronomic tourism (Garibaldi & Pozzi, 2020, pp. 35). Milwood et al. (2021), claim that the online reaction of tourism-related culinary services providers has encountered a major external disturbance.

Hypotheses have been set on the basis of the given literature and research issues;

H1: Factor 1 (ATT-guest ratio) and Factor 2 (FQ-food quality), significantly predict total gastro quality (TGQ) in rural households in Vojvodina.

H2: Gender acts as a moderator in the relationship between ATT, FQ and TGQ.

METHODOLOGY

Sample and Measurement procedure

The authors of the paper conducted a survey on a total sample of 225 respondents in rural households in Vojvodina, during the period from October to December 2021. Exploratory Factor Analysis (EFA) was used to process the data to determine the number of factors or group all items into an appropriate number of factors and confirmed the reliability of the questionnaire. First, by exploratory factor analysis, it was determined that all items belong to exactly two factors by their saturation (ATT and FQ). ATT factor the factor refers to issues related to the host-guest relationship, and FQ factor refers to issues related to food quality. The distribution of questions by factors is given in the Results section. Then the reliability of the questionnaire was determined by the Cronbach's alpha method, where it can be seen from the data below that all factors have a very high reliability: Factor 1 (ATT) with Cronbach's $\alpha = 0.877$, and Factor 2 (FQ) with Cronbach's $\alpha = 0.82$. After exploratory factor analysis, the authors approached the analysis of moderation, in order to determine the extent to which a statistically significant gender has a moderating role in the relationship between the two factors and total gastro quality (TGQ). Moderation for two factors was performed individually, and statistical data and graphs were presented. Moderation was carried out through the software SPSS 26.00, Process.spss version 4.0. Otherwise Process. spss macro, by Andrew Hayes (Hayes, 2013) allows testing and presentation of complex models and moderation between variables. The analysis of moderation answers the question of when, for whom and under what conditions the predictor more (or less) predicts the criterion (Baron & Kenny, 1986; Fairchild & MacKinnon, 2009) the correlation between the two main variables changes, as a function of the level moderator. Moderation is, in fact, the inclusion of predictors in regression analysis, where the product between the centralized values of the first main variable and the moderator (hence their interaction) is also one of the predictors. Moderator is a variable that affects the strength of the relationship between predictors and

criteria and which represents nothing but an interaction in which the effect of one variable depends on the level of another (Baron & Kenny, 1986).

RESULTS AND DISCUSSION

Of the total number of respondents, 52.4% are women and 47.6% are men as guests of rural gastro restaurants. A total of 23.4% are aged between 20 and 35, followed by 42% between 36 and 50, and 34.6% over 51. Of all respondents, 18.9% have completed high school, followed by 72.8% with a university degree, and 8.3% with a PhD degree. A total of 29.9% have a monthly salary below 300 euros, 50.2% from 300 to 700 euros, and only 19.9% above 700 euros.

Table 1 gives the average grades and standard deviation for all questions, which are included in the factor analysis and grouped into two factors (exploratory factor analysis). It is noticed that the highest average rating is carried by item Homemade drinks are provided $m = 2.25$ ($sd = 0.695$). Then items: Expected return to each guest fulfilled ($m = 2.18$, $sd = 0.833$) and The hosts provide all the information ($m = 2.02$, $sd = 0.761$).

Table 1. Descriptive Statistics of all items		
	m	sd
Consumer requirements met	1.58	0.759
Quality of service to the guest achieved	1.86	0.859
Help is always available	1.97	0.898
All problems are solved immediately	1.82	0.879
Guest in the first place	1.75	0.803
Expected return to each guest fulfilled	2.18	0.833
The hosts are always hospitable	2.10	0.790
The hosts do the job properly	1.67	0.850
The hosts provide all the information	2.03	0.761
Quality gastronomic offer	1.62	0.843
Organic garden food	1.69	0.871
Fresh food	1.91	0.757
Achieved sensory food quality	1.57	0.794
HACCP standards are followed	1.47	0.694
Hygiene achieved	1.56	0.823
Homemade food is provided	1.84	0.879
Homemade drinks are provided	2.25	0.695
The traditional way of preparing food	1.45	0.807

Preparing food on the spot	1.36	0.634
Gastro product with a designation of origin	1.17	0.480
Tasting of local products possible	1.44	0.724

* m= arithmetic means; sd=standard deviation

Source:authors research.

The items Gastro product with a designation of origin (m = 1.17), Tasting of local products possible (m = 1.44) and HACCP standards are followed (m = 1.47) had lower average grades. From the given average grades, the achieved quality of the gastronomic offer in Vojvodina can be noticed.

After promax rotation with Kaiser normalization on two components, a factor structure matrix was obtained. The suitability of the correlation matrix for factor analysis can be examined using the KeiserMeyer-Olkin test (KMO) and the Bartlett test. The KMO value must be above 0.5 for the correlation matrix to be suitable for factorization. The values of the KMO and Bartlett's Test justify further factor analysis

Table 2. KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.891
Bartlett's Test of Sphericity	Approx. Chi-Square	4167.001
	df	210
	Sig.	.000

The goal of exploratory factor analysis was to reduce a large number of manifest variables to as few factors as possible. In this case, two factors were obtained: Attitude towards the guest - ATT (Consumer requirements met, Quality of service to the guest achieved, Help is always available, All problems are solved immediately, Guest in the first place, Expected return to each guest fulfilled, The hosts are always hospitable, The hosts do the job properly, The hosts provide all the information), I factor Food Quality - FQ (Quality gastronomic offer, Organic garden food, Fresh food, Achieved sensory food quality, HACCP standards are followed, Hygiene achieved, Homemade food is provided, Homemade drinks are provided, The

traditional way of preparing food, Preparing food on the spot, Gastro product with a designation of origin, Tasting of local products possible).

Table 3 shows the percentage variance of items on both factors. If the loads are in the range of ± 0.30 to ± 0.40 , then they meet the minimum requirements for participation in the interpretation of a given data structure. Also, the eigen value of sea items (the amount of variance explained by one factor) should be greater than one.

Table 3. Total Variance Explained							
Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings ^a
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total
1	4.771	22.721	22.721	4.771	22.721	22.721	4.735
2	4.002	19.055	41.776	4.002	19.055	41.776	4.056
3	3.096	14.741	56.517				
4	2.370	11.285	67.802				
5	1.381	6.575	74.378				
6	1.191	5.672	80.050				
7	.959	4.567	84.617				
8	.745	3.546	88.163				
9	.511	2.435	90.599				
10	.400	1.903	92.502				
11	.276	1.314	93.815				
12	.240	1.144	94.959				
13	.202	.960	95.919				
14	.178	.850	96.769				
15	.151	.719	97.488				
16	.125	.597	98.084				
17	.111	.528	98.612				
18	.097	.462	99.074				
19	.079	.379	99.453				
20	.062	.297	99.750				
21	.052	.250	100.000				
Extraction Method: Principal Component Analysis.							

Factor loading indicates the relative importance of each characteristic in defining the factor. It is actually the correlation coefficient between each characteristic (variable, question) and the factor itself. The higher the correlation, the better the given characteristic describes the factor. Namely, the first two factors had a significant saturation of items on the factors, while the others had a characteristic root less than 1. The first factor showed the highest saturation with a factor of 22.72%, while the second factor had a saturation of 19.05%. If we extract these

two factors, they together will explain 41.77% of the variance. After determining the number of factors, the authors approached the application of the model Process.spss, 4.0, macros. The aim was to determine the moderator role of gender, observing the influence of both factors on the output variable total gastro quality (TGQ).

Table 4. The moderating role of gender in the relationship between TGQ and FQ

Sample
Size: 225

OUTCOME VARIABLE:
TGQ (Total Gastro Quality)

Model Summary

	R	R-sq	MSE	F	df1	df2	p
	.89	.80	.01	296.50	3.00	221.00	.00

Model

	coeff	se	t	p	LLCI	ULCI
constant	-.14	.12	-1.16	.25	-.39	.10
FQ	1.13	.08	14.90	.00	.98	1.28
Gender	.55	.09	6.18	.00	.37	.72
Int_1	-.31	.05	-5.72	.00	-.41	-.20

Test(s) of highest order unconditional interaction(s):

	R2-chng	F	df1	df2	p
X*W	.03	32.71	1.00	221.00	.00

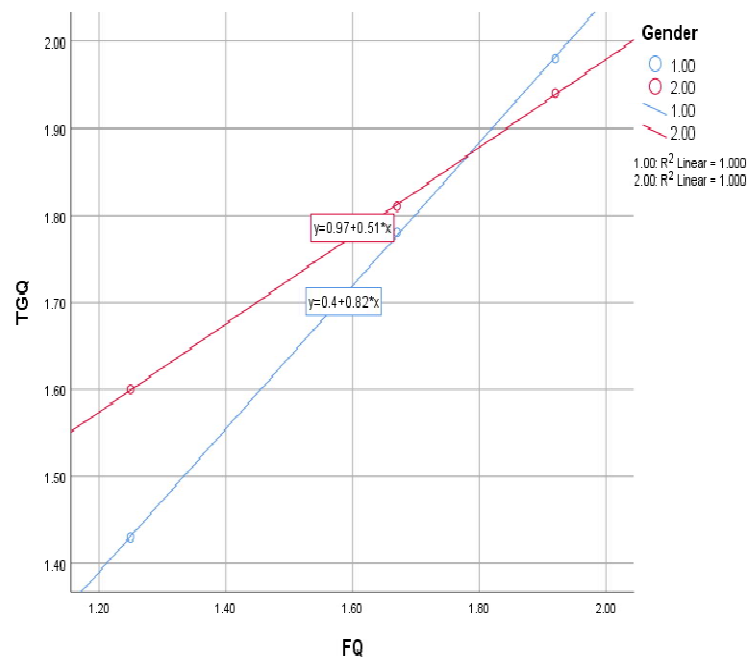
Conditional effects of the focal predictor at values of the moderator(s):

Gender	Effect	se	t	p	LLCI	ULCI
1.00	.82	.03	26.59	.00	.76	.88
2.00	.52	.04	11.79	.00	.43	.60

It is noticed that there is statistical significance in the moderator role of gender ($p = 0.00$), and that the percentage of explained variance is 80%. The given model through Table 3 shows the importance of food quality in predicting the total gastro quality, and the influence of gender, as well as their significant interaction ($p = 0.00$). Using this macro Process.spss, we found that: gender moderates the ratio of food quality and total gastronomic supply ($R^2 = .03$, $F(1,221) = 32.71$, $p = 0.00$). Both values, lower and upper confidence interval, LLCI and ULCI, do not imply a value of 0, so the influence of gender is such that the data show that both men and women have a significant

influence on predicting the quality of gastronomic offer, with the values indicating that women show greater importance, women indicate more prediction of total quality.

Graph 1. The moderator role of gender in the relationship between FQ (food quality) and TGQ (total gastro quality)



Source: authors research

Graph 1 gives us an insight into the significance of the slope of regression rights in predicting total quality in relation to gender. There is talk of an upward trajectory. It can be noticed in both men and women that the more they assess that the quality of food is good, and the more they predict the total quality.

Table 5. The moderating role of gender in the relationship between TGQ and ATT

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Model : 1
Y : TGQ (Total gastro quality)
X : ATT (Attitude towards tourist)
W : Gender (Mediator)

Sample
Size: 225

*****
OUTCOME VARIABLE:
TGQ

Model Summary
      R      R-sq      MSE      F      df1      df2      p
      .86      .74      .02     208.79     3.00     221.00 |     .00

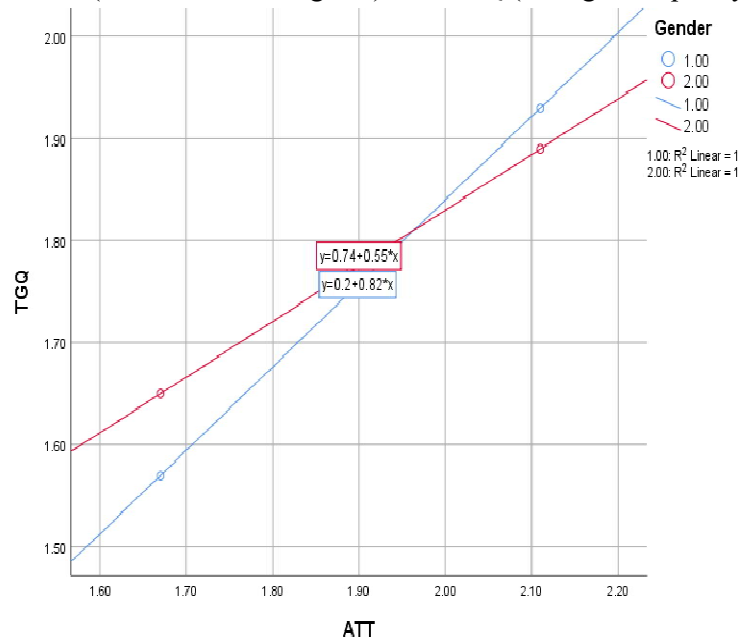
Model
      coeff      se      t      p      LLCI      ULCI
constant     -.27     .20    -1.31     .19     -.67     .14
ATT           1.06     .11     9.99     .00     .85     1.27
Gender         .51     .17     2.95     .00     .17     .84
Int_1         -.26     .09    -2.94     .00    -.43    -.09

Test(s) of highest order unconditional interaction(s):
      R2-chng      F      df1      df2      p
X*W         .01      8.65      1.00     221.00     .00
-----
      Gender      Effect      se      t      p      LLCI      ULCI
      1.00         .80      .03     23.42     .00     .73     .87
      2.00         .54      .08      6.69     .00     .38     .70

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ATT statistically significantly predicts TGQ ($p = 0.00$). Gender plays a significant moderating role in the interaction of ATT and TGQ, which can be seen from the given values of $p = 0.00$. Their interaction is also very significant. Using this macro, we found that: gender moderates the relationship between ATT (guest ratio) and TGQ (total gastronomic offer), which shows the values: $R^2 = .03$, $F(1,221) = 32.71$, $p = 0.00$. Both values, lower and upper confidence interval, LLCI and ULCI do not imply a value of 0, and significant moderation is also studied here. The influence of gender is such that the data show that both men and women have a significant positive impact on predicting the quality of gastronomic offer, with the values indicating that women show a greater tendency to predict TGQ.

Graph 2. Moderator role of gender in the relationship between ATT (Attitude towards guest) and TGQ (total gastro quality)



Source: authors research

Graph 2 shows the ascending path of the curve, where it is observed in both men and women that the more they evaluate the attitude towards the guest positively, the more they predict the total gastro quality. Similar research has been done around the world on the issue of achieved and perceived quality of gastronomic offer during crisis situations, which includes a pandemic (Salvatore et al., 2021). The gastronomic offer is under attack by the quality assessment during the pandemic, and it is of great importance to examine consumers on the quality of the gastronomic offer in the period COVID-19 (Tian et al., 2022). Not only is the health of tourists damaged in terms of lung diseases, but there are major problems that arise in the lack of conditions for providing quality food to tourists (Nie et al., 2020). Food quality must be fully satisfied in order to talk about future successful business after a pandemic (Wang et al., 2022). The results

obtained by the theorists largely coincide with this research. The quality of supply in rural areas did not completely decline during the pandemic. Tourists are quite satisfied with the offer, and all the precautions that are taken to achieve good business (Zhou et al., 2021).

CONCLUSION

During the COVID-19 pandemic in the world and in Serbia, the most affected are tourism and catering companies, and this includes rural households that provide accommodation and food to visitors. However, in that period, tourism was reoriented mainly to domestic destinations, where rural households made a profit of over 80%. At one time they were even closed completely, which led to the collapse of this activity. Due to the corona virus pandemic, which caused the cancellation of many arrangements, about 4,000 tourist workers lost their jobs (Cvijanović et al., 2021). The tourism industry has been hit hard by suffering a drop in revenue of about \$ 460 billion globally, in the first half of 2020 alone. As many could not leave the country, due to limited movement and regulations of other countries, and due to the fear of infection, they turned to the tourist potentials offered by Serbia. The season of rural tourism did not start in June as usual, but in March, with the first announcements of limited movement and closing of borders. All the restrictions on movement brought about by the pandemic have had a very negative impact on the hospitality industry in the past two years, despite the help of the state for some time. The authors of the paper tried to determine the influence of certain factors on the prediction of total gastro quality during COVID-19. The aim was also to determine the moderating power of gender, in relation to the two obtained factors and total gastro quality. The survey was conducted in rural households in Vojvodina in the period 2021, on a total sample of 225 respondents. Out of the total number of questions from the questionnaire, after fulfilling the conditions, two factors are obtained by exploratory factor analysis: the attitude towards the guest and the quality of the food. After that, macro Process.spss, version 4.0 was used to determine moderation. The results indicate the influence of both sexes in the moderation of determining the relationship between the two factors and the total gastro quality of TGQ. The

initial hypotheses were confirmed that the given factors can predict the total gastro quality, and that gender plays the role of moderator in the relationship between ATT, FQ and TGQ.

The research has a wide social, economic and scientific significance, and can be part of a broader and much more significant research on the development of the gastronomic offer in rural households in Serbia. Based on the obtained results, it is possible to determine the main factors in the development of rural gastronomic offer, and the power of their prediction. Also, it is possible to identify the main Greek and stagnation in development, and devise strategic measures in the future development of rural gastronomic products.

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