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# ANALYSIS OF ATTITUDES TOWARDS SOCIAL-ECONOMIC AND MARKETING FACTORS ON THE GROWTH OF ORGANIC PRODUCTION

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## ABSTRACT

The aim of this paper was to examine the differences in attitudes towards the influential economic, social and marketing factors on the growth of organic agricultural production. In addition to the above, the scientific goals of the work are to determine the persistence, nature of the connection and predictability of the above strategies for dealing with health problems. The subject of this research is the examination of the attitudes of the population of agricultural producers who own farms and students of the Faculty of Agriculture in Novi Sad according to the representation of influential sociological, economic and marketing factors on the growth of organic agricultural production. The instruments used in this research include a sociodemographic questionnaire constructed for the purposes of this research, methods of analysis, synthesis, induction and comparative methods. The results show that students have a moderately positive attitude towards the use of organic agricultural products, with income, employment and economic growth being significant predictors.

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## Introduction

The main problem of the attitude towards the growth of organic agricultural production is the factors that significantly affect them. Socio-economic factors and the implementation of a marketing strategy that will raise consumer awareness of health care stand out as significant influencing factors (Proshchalykina, 2019). However, it

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could be said that the consequences of impaired health are increasing express the need for health care, and the dynamics of modernist frameworks, especially if to this are added the processes of globalization, the weight of the achievements of modern society and the progressive shortage individual's time to satisfy their own needs, make it difficult to maintain health individual (Subić et al, 2010; Mie et al, 2017; Reeve et al, 2016; Elmaz et al, 2004). Plant production from the point of view of the use of an increasing degree of mechanical means, as well as the use of different types of pesticides, leads to serious problems with human health, as well as the population that we will deal with in this paper (Kovačević et al, 2007; Lunch, 2009; Costa et al, 2014). Intensive agriculture of the conventional type pollutes the environment, and as a result, pollution of agricultural and food products occurs (Salai et al, 2015). Therefore, consumers are increasingly concerned about their nutrition, health and environmental impact, and demand products that are produced in accordance with their beliefs and lifestyle (Vehapi, 2015). What agricultural development is based on is based on the mutual connection of economic and sociological factors (Mihailović, 2007). Also, it stands out here as an important development factor in terms of the application of marketing activities. Marketing is seen as an important development driver in the production of organic products (Vehapi, 2015; Vehapi, 2016). The application of the marketing model with a certain degree of attention is considered one of the basic prerequisites for the success of organic agricultural production (Babović, 2013). Modern marketing contains all the benefits that can represent a basic prerequisite in the development of any segment of the economy (Tomić, 2016). What is of essential importance refers to the emphasis on the basic benefits, as well as on the effective management of the basic factors that affect the organic production itself (Lazić et al, 2015). As a specification of the mentioned domains and problems, it is made up of the student population and that in the major knowledge, availability of information, and monitoring of population concepts that concern almost everyone aspects of life (Mutiar, 2017). The problem itself establishes the importance of the question and the study of influencing factors on health, nature and dimensions of attitudes towards increasing their use (Willer et al, 2010). One of the common entities of most of the research concerning this issue could be said to refer to the issue of stigma, both perceived and self-stigma, was determined in one such research that the biggest problem is the stigma towards health problems (Tananeva, 2010), which is followed by the attitude towards looking for and treating the cause of the problem, not the consequences, and when these two aspects are considered together, the unequivocal conclusion is that health is evaluated more negatively than the possession of specific complaints as a consequence of impaired health (Allen, 2000). The subject of this research is the examination of the attitudes of the population of agricultural producers who own farms and students of the Faculty of Agriculture in Novi Sad towards the prevalence of influential sociological, economic and marketing factors on the growth of organic agricultural production.

The scientific goal of this research concerns the determination of the attitudes of the student population towards the increase in the use of organic agricultural products,

and it is based on the prediction of the contribution to the scientific community, but also to the practical implementation. (Lazić et al, 2003; Lotter, 2003; De Lind, 2000). In addition to the above, the research also includes question, that is, the initial assumption about the existence of a different position of the examined sample groups in the given construct, and predictions about the connection of the constructed test, the scale for examining the overcoming of negative effects of influential factors. The social justification of this research refers to its uniqueness and first conducting research on this topic in the Republic of Serbia. Apart from the specificity of the sample population (farmers and students), there is also a comparison of agricultural producers and students of the Faculty of Agriculture in Novi Sad. The results of this research would be useful in terms of understanding needs, promotion importance of health care in general, health difficulties, and can also serve as support efforts to highlight the importance of health hygiene and literacy.

Considering the subject, problem and goal of the research, the following hypotheses are taken as a starting point:

H1: It is assumed that there is a difference between agricultural producers and students of the Faculty of Agriculture in Novi Sad regarding the attitude towards the influential socio-economic and marketing factors on the growth of organic agricultural production. It is expected that the questionnaire that is intended to assess the attitude towards the growth of the purchase of organic agricultural products, and ultimately in the growth of organic agricultural products to discriminate well the differences that concern ability to recognize and express the need for health care.

H1a: Taking into account the findings that support the fact that the level of information and the importance of health care and a positive attitude towards the consumption of organic agricultural products are positively correlated (Jorm, 2000) it is assumed that agricultural producers will be more open and have a more positive attitude towards organic agricultural production in relation to students of the Faculty of Agriculture.

### **Materials and methods**

The practical part of the work includes research conducted in January and February 2023. The methodology of this research includes empirical knowledge and mathematical - statistical processing, and will be relevant test material and statistical analysis of the obtained data are shown. Methods used in this research are: socio-demographic questionnaire constructed for needs of this research, method of analysis, synthesis, induction, comparative method.

The data for this scientific research work was collected online, using Google Form questionnaires, predominantly through social networks. They are emphasized at the very beginning of the questionnaire the aim and purpose of the research, and the respondents were informed about the anonymity of the answers received. Time required to fill it varied from 10 to 20 minutes. What the research will be based on is a questionnaire about socio- demographic data, a questionnaire on the respondents' attitude towards

the influence of socio-economic factors on the improvement of agricultural production, as well as the influence of marketing activities on the growth of organic agricultural production. Except for the question that initiated a descriptive answer, all 215 respondents answered to the questions, while the aforementioned question (which asked for a description of a significant problem) was answered 172 respondents.

Socio-economic factors analyzed in the paper include consumer awareness, environmental awareness, subsidies, incentives and regulation, while marketing factors include branding, distribution and marketing campaigns.

## Results

215 students living and studying in Serbia participated in this research. The age range in this sample is between 19 and 53, while the average age of respondents in this sample is 23.6. The questionnaire was available to respondents for 30 days, as long as the collection lasted data or answers. Socio-demographic questionnaire. The socio-demographic questionnaire was filled out by 215 respondents, ranging from 19 to 53 years old, while average age of respondents 23.64 years, with a standard error of measurement  $SD=4.72$ . The largest number of respondents is in the age range of 20 to 24 years, ie 63.7% of respondents. A range of the age of the respondent group of farmers is from 19 to 53 years, with the standard with measurement error  $SD=5.98$ . The largest number of respondents (74.1%) are in the age range from 20 to

26. When it comes to the group of students, the age range of the respondents is from 19 to 29 years, with a standard error of measurement  $SD= 2.22$ . The average age of the respondents is 22.22, while the largest number of respondents, more precisely 74.9% of students in the age range from 20 to 23. As for demographic variable gender, 130 female persons participated in this research, that is 60.5% of the sample, while 84, i.e. 39.1%, were male, while one respondent did not stated on this dyadic scale of choice, and makes up 0.4% of the sample. In the group of farmers, 79.6% of the sample is female, 19.4% male and one respondent who did not express himself precisely on this item. The group of students consists of 41.1% of people female and 58.9% of male respondents. The surveyed population in this research are students of the Faculty of Agriculture and farmers who own farms from Vojvodina.

The target group of this research consists of students of the Faculty of Agriculture, who make up 50.2% of the sample, while the second group of respondents consists of farmers who own farms and who make up 49.8% of the total sample. Students are in at the time of conducting the questionnaire studied at 3 levels of study, namely: basic studies 68.4% of respondents, in specialist studies, 7.4% of respondents, while in master's studies, 24.3% of respondents. The last variable of the socio-demographic questionnaire referred to the completed level of studies, whereby the largest percentage of the surveyed population, more precisely 52.6% of students did not complete their basic studies, 38.6% of students have completed basic studies, students who have completed specialist studies make up 6% of the examined sample, while 2.8% of

students completed master's studies. In order to check the normality of the distribution and further application of parametric procedures, used is the Kolmogorov–Smirnov test, skewness index, and measure of asymmetry of the distribution for a sample group of students of the Faculty of Agriculture in Novi Sad and farmers. Values normality test, skewness index and measure of asymmetry are presented in Table 1.

**Table 1.** Values normality test, skewness index and measure of asymmetry

	Kolmogrov – Smirnov test	Skewness index	Measure of asymmetry
<b>Students and farmers</b>	0,341	-2,02	0,01

The Kolmogorov-Smirnov test shows that the group samples are normally distributed in the population with a significance level of 0.05. Furthermore, the value of the curvature index indicates that the distribution of this sample is platykurtic that is, that the grouping of the sample around the mean value is more pronounced, which initiates less dispersion of the sample, while the curvature index coefficient indicates a distinctly slightly asymmetric distribution sample.

Attitude towards the influence of socio-economic factors on organic agricultural production

The questionnaire that measures the attitude towards the influence of socio-economic factors on organic agricultural production was filled out by 215 respondents, aged from 19 to 53 years. Since this instrument is not standardized on the population of students and farmers, the reliability of the scale was calculated to be 0.84, while the sample adequacy measure for this test (KMO) is 0.82. Since the test measures existence negative or positive attitude towards the growth of organic agricultural production, the results obtained the average response for the entire sample is 21.68, which indicates the existence of a moderately positive put in this sample, given that the theoretical values range from 10 to 40. A measure of standard deviation ie of variability is 6.68, while the overall distribution of response frequency is unimodal (26), a the distribution of responses in the sample is negatively skewed (-.831).

Within the sample group of farmers, the average rating of the attitude towards the influence of socio-economic factors on the growth of organic production of agricultural products is 23.79, while the average rating of the attitude for students of the Faculty of Agriculture in Novi Sad is 19.55.

Table 2 shows the values of statistical measures for the attitude inventory towards the influence of socio-economic factors on the growth of organic agricultural production separately for sample groups (students and farmers).

**Table 2.** Values of descriptive statistics for two sample groups in relation to the attitude towards the influence of socio-economic factors on the growth of organic agricultural production

	Agricultural producers	Students of the Faculty of Agriculture
<b>Average grade of attitude towards increasing the use of organic agricultural products</b>	23,79	19,55
<b>Standard deviation</b>	6,1	6,68
<b>Minimum response value</b>	10	2
<b>Maximum response value</b>	30	30
<b>Central tendency value</b>	28	27

The difference between the two groups is 4.24, which is a deviation from the overall average answers for farmers 2.11 and for students -2.13. Students declare that in the situation of various socio-economic factors, there would not be a significant increase in organic agricultural production, while farmers express a higher disagreement rather than agreement with the given description of the situation, and the given relationship of both groups have according to the statement “If there was an improvement in socio-economic factors, I am sure that the impact on the growth of organic agricultural production would be significantly improved”.

Farmers, on average, have the highest agreement with the statement “The application of marketing activities would have a significant impact on the growth of organic agricultural production.” When it comes to the group of students, the highest average degree of compliance is with with the statement “Marketing activities increase consumer awareness of the importance of buying organic agricultural products and their positive impact on health.” The lowest degree of compliance with the statement “There is no significant impact of marketing activities on the growth of organic agricultural production” is expressed by both groups of respondents.

When it comes to the demographic variable gender, researches that dealt with gender determination the difference in attitude towards the significant impact of socio-economic factors on the growth of organic agricultural production suggests that women occupy more positive attitude compared to men. Namely, the results indicate that persons females have a 6.41 more positive attitude towards seeking psychological help ( $M=31.13$ ) in compared to men ( $M=24.72$ ). In the group of farmers, the average value attitude towards seeking psychological help in women is 28, while in men this value is 20. Regarding the demographic variable gender in the group of students, average knowledge for female students it is 26, while for male students the average value is 13.5. When it comes to the need to buy organic products and the influence of income on the purchase of organic agricultural products, 46.9% of respondents and 16.7% of male respondents give an affirmative answer. 26.9% of respondents and 8.3% of respondents intend to increase their purchase of organic agricultural products in the next three months. in the whole sample. As for female farmers, 39.5% of them state that they have the need to buy organic agricultural products, with which many female

students agree that is, 61.4%. When it comes to men, 19% of male respondents agree with the same statement who are farmers, and 15.9% are students. I intend to in the next three 24.4% of farmers and 31.8% of students increase their purchase of organic agricultural products.

With the aim of determining cause-and-effect relationships between tests and subtests within the inventory, a correlation analysis procedure was carried out. Data analysis and determination of the existence, degree and value of correlations was carried out for the inventory of the attitude towards the influence of socio-economic factors on the growth of organic agricultural production and the attitude towards the influence of marketing activities on the growth of organic agricultural production. Although the level of correlation for each subscale is at a lower level, the obtained data indicate that the connection or the existence of low correlations with a significance level of 0.01% and 0.05%. The highest degree of correlation is seen with the leadership as a social resource subtest, and reliable connections and social integration. By comparing 6 subtests, i.e. (income, occupation, education, awareness, promotion, advertisement), it can be seen that the lowest degree of correlation of the attitude inventory towards seeking psychological help with the social need is nurturing, which is also the least represented strategy in the sample, while the highest degrees of correlation are precisely on the most represented resources of social support for the attitude towards seeking psychological help, namely guidance and reliable relationships. Correlation analysis can determine that social support, nurturing and attachment are not correlated with the attitude towards seeking psychological help.

**Table 3.** Correlation of factors according to the growth of organic agricultural production

Scale of attitudes towards the influence of socio-economic and marketing factors on the growth of organic agricultural production	Income	Occupation	Education	Conscience	Promotion	Commercials
	0,24**	0,13	0,20**	0,23**	0,1	0,17*

\*\*Correlation is significant at the 0.01 level (2-tailed).

\*Correlation is significant at the 0.05 level (2-tailed).

**Table 4.** Correlations of strategies for overcoming the negative effects of factors and attitudes towards the growth of organic agricultural production

	Employment	Economic growth	Avoidance
<b>Attitude towards influential factors on the growth of organic agricultural production</b>	-,075	-,284 **	,054

\*\*Correlation is significant at the 0.01 level (2-tailed)

The highest degree of significance of the correlation at the level of 0.01% is recorded on the subtest which is moderately low and negative, which implies that the use of social support resources as a dominant strategy has a low and negative effect on the attitude towards impact on the growth of organic agricultural production. More precisely, the obtained values indicate that a higher degree of presence of socio-economic and marketing factors has a moderately low influence on taking a more negative attitude towards increasing organic agricultural production.

The level of association between the test that examines the attitude towards influencing factors and the growth of organic agricultural production at for the whole sample it is negative, moderately low (-.293) with a significance level of 0.01%. Correlation attitude to attitude in in the sample of farmers, it is negative, moderately low and amounts to -.233, while it is the same the value in the sample of students is slightly higher and amounts to -.238. Level of significance correlation for both samples is at the level of 0.05%

Examining multiple linear regression analysis of attitude towards socio-economic factors of marketing factors on the growth of organic agricultural production was performed for 3 subtests whose values are at the highest level correlations, and at the same time 3 coping strategies that respondents use most often.

**Table 5.** Regression analysis of attitude towards seeking psychological help and coping strategies

	R	R <sup>2</sup>	B	P
<b>Employment</b>	0,22	0,50	-0,14	0,01
<b>Economic growth</b>	0,01	0,00	0,00	0,93
<b>Avoidance</b>	0,22	0,50	-0,14	0,01

Using multiple linear regression, it was determined that avoidance is a significant determining factor attitude towards the purchase of organic agricultural products by 5%, while the Beta regression indicates that for each unit of change in the avoidance



strategy, there is a change in attitude towards the growth of organic agricultural production by  $-0.14$ . More precisely, it was determined that the attitude towards seeking psychological help will decrease by  $0.14$  if there is an increase of one unit in the case of using avoidance as a dominant stress coping strategy

### Conclusions

The ultimate goal of this work was to examine the attitude towards socio-economic and marketing factors on the growth of organic agricultural production. In this connection, the role of the strategy of overcoming the negative effects of factors on the growth of organic agricultural production was investigated. Statistical analysis indicates high levels of reliability and adequacy of the batteries used of tests for the research topic and the examined population sample. The analysis of the obtained data indicates to the existence of a moderately positive attitude towards the significant influence of socio-economic factors on the growth of organic agricultural production, which is something more pronounced in the group of agricultural producers, thus confirming the first hypothesis. Obtained the findings are somewhat expected as less than a third of respondents increased their purchase of organic agricultural products. Furthermore, the expectation of representation more positive attitude of farmers in relation to students of the Faculty of Agriculture is reflected through better information, i.e. a greater degree of knowledge about the importance of healthier nutrition through organic agricultural products.

Apart from the above, in the group of farmers, respondents asked for more professional assistance in improving organic agricultural production in relation to students of the Faculty of Agriculture. Regarding the examined socio-demographic variable education, the obtained findings are partially in agreement with previous researches that speak in favor of it'd at the level of the whole sample, the most positive position taken by farmers.

The obtained correlations, although moderately low, are suggestive on the existence of a connection between the two examined constructs, whereby the social resource is guidance to the greatest extent reciprocally connected with the attitude towards seeking psychological help, especially in to a group of farmers. The result indicates that seeking information and advice from other persons, as well as the media campaign, i.e. the source of information of persons associated with representing a more positive attitude towards organic agricultural products.

The assumption that strategies to overcome the negative effects of factors can be a good predictor of the growth of organic agricultural production, more precisely that a higher score in to the aspect of overcoming negative factors with a method focused on avoidance, determines a lower tendency to increasing the consumption of organic agricultural products. The results indicate that using the effect of increased employment as dominant strategies for overcoming the negative effects of the factor have a moderately low influence on the attitude towards the growth of consumption of organic agricultural products. The obtained results show that avoidance strategy is a significant predictor of attitude towards seeking psychological help, which initiates it that it supports and

promotes a more negative attitude towards seeking psychological help avoidance as a dominant coping strategy. The obtained correlation and regression values analyzes are low, largely due to the complexity of both examined variables. Furthermore, it can be to assume that a superficial, incomplete attitude towards health and rejection of dealing with problem indicates that people underestimate health care, although qualitative analysis suggests that the respondents have a solid insight into everyday issues, because the events they mentioned they mostly represent critical situations and significant challenges. What can be concluded based on the qualitative analysis of descriptive data about the subjective significant problems is that important factors that influence the increase in the use of organic agricultural products are awareness, lack of funds, lack of knowledge about health benefits.

### Conflict of interests

The authors declare no conflict of interest.

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