

Original scientific paper

RELATIONSHIP BETWEEN TYPES OF ORGANIC FOOD AND SOCIO - DEMOGRAPHIC CHARACTERISTICS OF BUYERS IN SERBIA

MILICA ČOLOVIĆ^{ID}*, VLADIMIR MITIĆ^{ID}


ISSN 2466-4774

<https://www.contagri.info/>


Faculty of Business, Singidunum University, Danijelova 32, 11000 Beograd

*Corresponding author: mcolovic@singidunum.ac.rs

Submitted: 15.05.2023.

Accepted: 18.10.2023.

SUMMARY

An increasing number of consumers are buying organic foods, resulting in an enhancement of the value of this market, which recorded constant growth both before and during the COVID-19 pandemic. Concerns for health, environmental protection, animal welfare, and support for the local economy contribute to greater purchases of organic foods, whereas high prices, lack of trust in certification, scarce supply, and unavailability of organic products represent obstacles to their purchase. This paper examined the prevalence of certain types of organic food in purchasing, as well as its relationship with the level of physical activity, gender, education, and age of the consumer. The sample consists of 600 respondents with different socio-demographic characteristics. The SPSS program was used for data processing. In addition to descriptive statistics, non-parametric techniques were also used due to the distribution of scores on the tested variables, which significantly deviates from the normal. The results obtained indicate that among the organic foods in the Republic of Serbia, fruits and vegetables are the most purchased, and that females, persons with higher education, and older people are the most typical buyers.

Key words:

types of organic food, customers, demographic characteristics, physical activity, nutrition, COVID-19

INTRODUCTION

The COVID-19 pandemic has drawn the public's attention to the importance of maintaining a healthy lifestyle and bolstering immunity among the population to enhance resilience against viruses. There is no doubt that other pandemics caused by different virus mutations are likely to occur in the future. Therefore, there is a pressing need to raise awareness among the population regarding the importance of proper nutrition and adequate physical activity. Regular moderate or intense physical activity, coupled with proper nutrition, is essential for promoting better health and providing the energy needed to fulfill daily obligations. Regular physical activity is one of the best strategies for combating numerous chronic diseases (Pedersen & Saltin, 2015; Warburton et al., 2006), reducing the risk of premature death by 20 to 30% (Warburton & Bredin, 2016). By enhancing collective immunity, the burden on the healthcare system can be alleviated, resulting in reduced costs for the state. Therefore, both the population and the state stand to benefit from initiatives aimed at promoting healthier lifestyles.

Maintaining a healthy lifestyle with mandatory physical activity also encompasses proper nutrition, i.e. consuming food devoid of harmful substances and chemicals while being rich in nutritional value, minerals, vitamins, fibers, and other essential nutrients. Therefore, it is crucial to choose foods that meet all these criteria, and one of the optimal solutions is organic food. Organic food is produced in a more environmentally friendly manner than conventional food, preserving and protecting the natural ecosystem (Colom-Gorgues, 2009). Furthermore, organic food does not contain pesticides and herbicides (Huber et al., 2011; Mie et al., 2017) and maintains a high nutritional value (Sokołowicz et al., 2019), providing all necessary minerals and vitamins (Lairon, 2010; Reganold & Wachter, 2016).

This paper aims to investigate the types of organic food purchased by consumers in Serbia based on their level of physical activity. Additionally, it explores the relationship between the type of organic food purchased and the gender, education, and age of the respondents. The implications of this research are reflected in a better identification of organic food consumers, enabling both producers and sellers to devise appropriate marketing strategies to attract more consumers. Furthermore, they can refine and enhance their offerings of organic food products to augment the value of purchases made by existing customers and appeal to new ones.

The originality of this work is evident in its focus on examining the relationship between specific types of organic food and the socio-demographic characteristics of buyers. The existing literature (Azzurra et al., 2019; Kranjac et al., 2017; Rizzo et al., 2020; Perić et al., 2017; Petrescu et al., 2016; Singh & Verma, 2017; Stojić & Dimitrijević, 2020; Vittersø & Tangeland, 2015) has typically treated organic food as a singular variable, without categorizing it by type when examining its relationship with the socio-demographic characteristics of organic food buyers. Consequently, this research provides valuable insights into and a better understanding of organic food consumers and their preferences for organic food products.

Consumers who prefer a healthy lifestyle and favor a healthy diet generally have positive attitudes towards organic food and are more inclined to purchase it (De Magistris & Gracia, 2008). Individuals who engage in regular physical activity often prioritize their health, making it their primary motivation for choosing organic food, whereas for those who are physically inactive, the taste of organic food tends to be the primary motive (Soroka & Wojciechowska-Solis, 2019). People who buy organic food usually have an active lifestyle, while people who buy conventional food are mostly inactive and have a passive lifestyle (Goetzke & Spiller, 2014). This is further supported by a study conducted in Denmark (Andersen et al., 2021), which found a correlation between a healthy lifestyle, proper nutrition, and the purchase and consumption of organic food. Buyers of organic food typically lead physically active lives, thus reducing stress compared to buyers of conventional food (Chen, 2009). Stress is one of the most important factors that can negatively affect people's health, and due to the COVID-19 pandemic, stress levels have increased significantly among employees both in the private and public sectors (Čolović & Mitić, 2022; Čolović et al., 2022).

Numerous studies have investigated the socio-demographic characteristics of organic food buyers, with a majority indicating that women purchase organic foods more frequently than men (Azzurra et al., 2019; Čolović & Mitić, 2021; Čolović & Mitić, 2022; Kranjac et al., 2017; Petrescu et al., 2016; Stojić & Dimitrijević, 2020; Vittersø & Tangeland, 2015). However, when it comes to age, the literature presents divided and contradictory results. Some authors suggest a correlation between age and organic food purchases (Dumortier et al., 2017; Misra & Singh, 2016; Roitner-Schobesberger et al., 2008; Singh & Verma, 2017), while others argue that there is no such correlation (Hughner et al., 2007; Hassan et al., 2009; Torjusen et al., 2010). Furthermore, a higher level of education is associated with increased and more frequent purchases of organic food (Baudry et al., 2016; Hashem et al., 2018; Husic-Mehmedović et al., 2017; Kesse-Guiot et al., 2013; Mitić & Čolović, 2022a; Singh & Verma, 2017).

In Serbia, the primary motivation for purchasing organic food is health concerns, while the biggest obstacle is the higher price of organic food compared to conventional options, due to low purchasing power of the population (Čendić & Zarić, 2019). The results of this research show that organic vegetables and fruits are the most commonly purchased, followed by milk and milk products, whereas meat and meat products of organic origin are acquired very rarely.

In neighboring markets, consumers in Croatia exhibit more positive attitudes towards organic food and make more frequent purchases than consumers in Serbia (Perić et al., 2017). However, it is noteworthy that both Croatian and Serbian consumers rank lower compared to other Balkan countries in terms of the frequency of organic food purchases (Vehapi, 2019), primarily due to the high price of organic products (Brčić-Stipčević & Petljak, 2011; Čolović & Mitić, 2021; Vlahović et al., 2011; Vehapi, 2015). When considering the Balkan region, vegetables and fruits are the most commonly purchased types of organic food (Radman, 2005; Vlahović et al., 2011; Vehapi & Dolićanin, 2016), with a notable preference for bread and cereal products in Croatia (Renko & Bošnjak, 2009), and milk and dairy products in Serbia (Vehapi & Dolićanin, 2016).

The paper is structured and divided into four parts. In the introduction, the authors gradually introduce readers to the research topic and problem. The introductory section provides an overview of the literature and presents the main research findings from both domestic and foreign sources, aiming to provide a current understanding of these phenomena. The third part, dedicated to research methodology, describes the sample, methods, and techniques employed. Following this, the results of the research are presented and discussed. In the final part, the authors draw conclusions based on the obtained results and offer recommendations on how these findings could be further utilized. Additionally, they suggest areas for improvement and further exploration based on the research outcomes.

MATERIAL AND METHODS

The primary purpose of this research is to ascertain how certain types of organic food are perceived by consumers when making purchasing decisions. Additionally, the study explores the relationship between the type of organic food and variables such as the consumer's physical activity, gender, education, and age. For the purposes of this study, organic food is categorized into the following six distinct types:

1. fruits and vegetables,
2. meat and meat products,
3. milk and milk products,
4. bread and cereals,
5. eggs, and
6. sweets.

The fundamental hypothesis with which we initiated the research posits that among all types of organic foods in Serbia, fruits and vegetables are the most prevalent among buyers (H1). Additionally, the following hypotheses were tested: there exists a relationship between the purchase of certain types of organic food and physical activity (H2), gender (H3), age (H4), and education level (H5). Data were collected both online using Google Forms and through in-person questionnaire administration. The questionnaire utilized had previously been employed in other studies, and its metric characteristics were deemed satisfactory (Čolović & Mitić, 2021; Mitić & Čolović, 2022b). In the current research, Cronbach's α was calculated to be 0.85. The questionnaire comprised 20 items presented on a five-point Likert scale, focusing on organic food and physical activity. Additionally, a basic information section about the respondents was included. The total sample size for the research was 600 respondents, exhibiting diverse socio-demographic characteristics (Tab. 1). Data analysis was conducted using the SPSS program version 26. Descriptive statistics were employed, and due to significant deviations from normal distribution, non-parametric techniques such as the Kruskal-Wallis test and the Mann-Whitney U test were utilized to determine differences in scores between the measured variables.

Table 1. Socio-demographic characteristics of the respondents

Socio-demographic characteristics	N	Percentage
Gender		
Male	150	25
Female	450	75
Total	600	100
Age		
From 18 to 24 years	114	19
From 25 to 39 years	276	46
From 40 to 64 years	185	30.8
Over 65 years	25	4.2
Total	600	100
Education		
Primary school	15	2.5
High school	215	35.8
Two-year college/vocational studies	63	10.5
Four-year college/master's studies	280	46.7
PhD	27	4.5
Total	600	100
Incomes		
Below average	63	10.5
Average	480	80
Above average	57	9.5
Total	600	100

RESULTS AND DISCUSSION

The results obtained indicate that fruits and vegetables (62.7%) are the most frequently consumed organic foods, followed by meat and meat products (12.8%), with bread and cereals (10.2%) ranking third. Milk and milk products (6.2%) are the least consumed, followed by eggs (5.5%), and sweets of organic origin (2.7%) (Tab. 2).

Table 2. Prevalence of purchasing different types of organic food

Types of organic food	Frequency	Percentage
Fruits and vegetables	376	62.7
Meat and meat products	77	12.8
Milk and milk products	37	6.2
Eggs	33	5.5
Bread and cereals	61	10.2
Sweets	16	2.7
<i>Total</i>	600	100

The primary reason for the high purchase rate of organic fruits and vegetables may stem from the fact that individuals who prioritize proper nutrition and maintain a healthy lifestyle are more inclined to buy organic products (Goetzke & Spiller, 2014). Furthermore, fruits and vegetables are frequently recommended by doctors, nutritionists, and a significant portion of the general public for their health benefits. These research findings align with studies conducted in our local and neighboring markets (Kranjac et al., 2017; Radman, 2005; Vlahović et al., 2011; Vehapić & Dolićanin, 2016), as well as in India (Chandrashekar, 2014) and Poland (Bryła, 2016; Soroka & Wojciechowska-Solis, 2019), where fruits and vegetables are consistently reported as the most consumed organic foods.

Table 3. The level of physical activity of the respondents

Physical activity	Frequency	Percentage
Never	191	31.8
Once a week	141	23.5
2-3 times a week	210	35
Daily	58	9.7
<i>Total</i>	600	100

The majority of respondents reported having moderate physical activity, comprising almost 60% of the sample. This was followed by approximately 30% of respondents who indicated they were completely physically inactive, while nearly 10% reported engaging in physical activity daily (Tab. 3).

Table 4. The result of the Kruskal-Wallis test – the significance of the score differences obtained

	Fruits and vegetables	Meat and meat products	Milk and milk products	Eggs	Bread and cereals	Sweets
χ^2	7.899	16.234	9.455	63.722	3.706	4.286
df	3	3	3	3	3	3
Sig.	0.039	0.000	0.024	0.000	0.295	0.232

Group variable: physical activity

The score differences obtained regarding the level of the respondents' physical activity and type of organic food they purchase show that there is a statistically significant correlation between the respondents' physical activity and the purchase of organic fruits and vegetables ($\chi^2 = 7.899$; $p < 0.05$), meat and meat products ($\chi^2 = 16.234$; $p < 0.01$), milk and dairy products ($\chi^2 = 9.455$; $p < 0.05$), and eggs of organic origin ($\chi^2 = 63.722$; $p < 0.01$) (Tab. 4). The results are consistent with a number of previous studies affirming the connection between physical activity and organic food purchase (Goetzke & Spiller, 2014; De Magistris & Gracia, 2008).

Table 5. Differences in the relationship between the frequency of physical activity of the respondents and their purchase of different organic food types

Types of organic food	Physical activity	N	MR
Fruits and vegetables	Never	191	309.76
	Once a week	141	310.56
	2-3 times a week	210	286.64
	Daily	58	295.71
	<i>Total</i>	600	
Meat and meat products	Never	191	282.05
	Once a week	141	286.21
	2-3 times a week	210	302.06
	Daily	58	332.69
	<i>Total</i>	600	
Milk and milk products	Never	191	287.81

	Once a week	141	304.80
	2-3 times a week	210	290.50
	Daily	58	321.30
	<i>Total</i>	600	
Bread and cereals	Never	191	299.88
	Once a week	141	284.43
	2-3 times a week	210	310.44
	Daily	58	305.63
	<i>Total</i>	600	
Eggs	Never	191	238.12
	Once a week	141	275.55
	2-3 times a week	210	355.15
	Daily	58	368.70
	<i>Total</i>	600	
Sweets	Never	191	302.81
	Once a week	141	282.37
	2-3 times a week	210	302.59
	Daily	58	329.38
	<i>Total</i>	600	

The results obtained indicate that the purchase of meat and meat products of organic origin increase with increased physical activity. Consumers who exercise daily show the highest frequency of purchase (MR = 332.69), followed by those who are physically active 2-3 times a week (MR = 302.06), then by those who engage in physical activity once a week (MR = 286.21), and finally by those who are not physically active at all (MR = 282.05) (Tab. 5). A similar trend is observed for organic eggs, with the most physically active customers leading in purchases (MR = 368.70), followed by those active 2-3 times a week (MR = 355.15), then by those who engage in physical activity once a week (MR = 275.55), and finally by those who do not engage in physical activity at all (MR = 238.12). The reason for the higher purchasing trend among the most active customers may be attributed to the fact that physical activity necessitates the consumption of foods that can nourish the muscle tissues effectively, such as high-quality organic meat and eggs.

When purchasing milk and dairy products of organic origin, customers who engage in daily physical activity rank first (MR = 321.30), followed by those who are active once a week (MR = 304.80). Customers who are active 2-3 times a week come in third place (MR = 290.50), whereas those who never engage in physical activity are last (MR = 287.81).

It is noteworthy that customers who exercise once a week are at the top of the list for buying organic fruits and vegetables (MR = 310.56), followed by those who do not exercise at all (MR = 309.76). Next are customers who exercise every day (MR = 295.71), and those who exercise 2-3 times a week (MR = 286.64). A potential explanation for this could be that individuals who are not physically active enough may compensate by adopting a healthier diet, such as consuming more organic fruits and vegetables.

Table 6. Mann-Whitney U test results – gender differences

	Fruits and vegetables	Meat and meat products	Milk and milk products	Eggs	Bread and cereals	Sweets
Mann-Whitney U	24470.500	23141.500	29073.500	29656.000	28041.500	30506.000
Sig.	0.010	0.000	0.258	0.419	0.247	0.813

The results indicate statistically significant differences in the scores between men and women only in the purchase of fruits and vegetables (U = 24470.500; $p < 0.01$) and meat and meat products (U = 23141.500; $p < 0.01$) (Tab. 6).

Table 7. Gender differences in the purchase of different types of organic food

Types of organic food	Gender	N	MR	ΣR
Fruits and vegetables	Male	150	277.47	36625.50
	Female	450	307.00	143674.50
	<i>Total</i>	600		
Meat and meat products	Male	150	359.19	47412.50
	Female	450	283.95	132887.50
	<i>Total</i>	600		
Milk and milk products	Male	150	286.75	37851.50

	Female	450	304.38	142448.50
	<i>Total</i>	600		
Eggs	Male	150	309.83	40897.50
	Female	450	297.87	139402.50
	<i>Total</i>	600		
Bread and cereals	Male	150	291.32	38454.00
	Female	450	303.09	141846.00
	<i>Total</i>	600		
Sweets	Male	150	303.39	40048.00
	Female	450	299.68	140252.00
	<i>Total</i>	600		

The results obtained reveal that women purchase more fruits and vegetables of organic origin (MR = 307.00) than men (MR = 277.47), which is consistent with previous research (Azzurra et al., 2019; Čolović & Mitić, 2021; Petrescu et al., 2016; Vittersø & Tangeland, 2015). Conversely, men tend to buy organic meat and meat products more frequently (MR = 359.19) than women (MR = 283.95) (Tab. 7). One potential explanation for women's higher consumption of fruits and vegetables could be their greater attention to calorie intake and balanced nutrition to maintain a desirable physical appearance. Additionally, in many cultures, women often take on the role of meal preparation for the family, where fruits and vegetables are commonly included ingredients. Nevertheless, men typically consume more meat and meat products of organic origin, which aligns with their higher levels of physical activity compared to women (Ceña et al., 2011; Hallal et al., 2012; Stamatakis & Chaudhury, 2008). On balance, men have higher daily calorie requirements, thus it is logical for them to regularly consume foods that can meet these needs, such as meat and meat products, which are calorically dense compared to other food types.

Table 8. The result of the Kruskal-Wallis test – the significance of the obtained differences

	Fruits and vegetables	Meat and meat products	Milk and milk products	Eggs	Bread and cereals	Sweets
χ^2	169.295	2.245	84.887	1.747	147.041	10.059
df	3	3	3	3	3	3
Sig.	0.000	0.523	0.001	0.862	0.000	0.018

Group variable: Age

The magnitude of the observed differences in scores indicates statistical significance between the consumer's age and the purchase of organic fruits and vegetables ($\chi^2 = 169.295$; $p < 0.01$), milk and milk products ($\chi^2 = 84.887$; $p < 0.01$), bread and cereals ($\chi^2 = 147.041$; $p < 0.01$), and organic sweets ($\chi^2 = 10.059$; $p < 0.05$) (Tab. 8).

Table 9. Differences in the purchase of organic food types according to the respondent's age

Types of organic food	Age	N	MR
Fruits and vegetables	From 18 to 24 years	114	161.11
	From 25 to 39 years	276	283.79
	From 40 to 64 years	185	399.62
	Over 65 years	25	516.50
	<i>Total</i>	600	
Meat and meat products	From 18 to 24 years	114	297.85
	From 25 to 39 years	276	302.04
	From 40 to 64 years	185	297.92
	Over 65 years	25	326.00
	<i>Total</i>	600	
Milk and milk products	From 18 to 24 years	114	176.04
	From 25 to 39 years	276	330.82
	From 40 to 64 years	185	327.19
	Over 65 years	25	252.00
	<i>Total</i>	600	
Bread and cereals	From 18 to 24 years	114	148.19
	From 25 to 39 years	276	305.12
	From 40 to 64 years	185	373.30
	Over 65 years	25	550.00
	<i>Total</i>	600	

Eggs	From 18 to 24 years	114	292.27
	From 25 to 39 years	276	302.69
	From 40 to 64 years	185	301.85
	Over 65 years	25	301.33
	<i>Total</i>	600	
Sweets	From 18 to 24 years	114	260.52
	From 25 to 39 years	276	300.11
	From 40 to 64 years	185	322.89
	Over 65 years	25	349.67
	<i>Total</i>	600	

The results from the Kruskal-Wallis test indicate that the propensity to purchase organic fruits and vegetables increases with age, with older consumers exhibiting the highest purchase frequency (MR = 516.50), followed by those aged 40 to 64 years (MR = 399.62), then by individuals aged 25 to 39 years (MR = 283.79), whereas the youngest consumers aged 18 to 24 years show the lowest purchase frequency (MR = 161.11) (Tab. 9). A similar trend is observed in the purchase of organic bread and cereals, where the oldest consumers lead (MR = 550.00), followed by those aged 40 to 64 years (MR = 373.30), individuals aged 25 to 39 years (MR = 305.12), and finally, consumers aged 18 to 24 years (MR = 148.19). For organic sweets, consumers over 65 years exhibit the highest purchase frequency (MR = 349.67), followed by those aged 40 to 64 years (MR = 322.89), whereas individuals aged 25 to 39 years (MR = 300.11) and the youngest consumers aged 18 to 24 years (MR = 260.52) show lower frequencies. However, the relationship differs slightly for the purchase of organic milk and dairy products, where consumers aged 25 to 39 years are most prevalent (MR = 330.82), followed by those aged 40 to 64 years (MR = 327.19), whereas consumers over 65 years (MR = 252.00) and the youngest consumers (MR = 176.04) rank lower. These findings align with certain research studies (Dumortier et al., 2017; Roitner-Schobesberger et al., 2008; Singh & Verma, 2017), which suggest a correlation between consumer age and organic food purchases, although they contrast with other studies (Hughner et al., 2007; Hassan et al., 2009; Misra & Singh, 2016; Torjusen et al., 2010).

Table 10. The result of the Kruskal-Wallis test – the significance of the obtained differences

	Fruits and vegetables	Meat and meat products	Milk and milk products	Eggs	Bread and cereals	Sweets
χ^2	15.935	4.291	11.869	4.584	14.199	6.213
df	4	4	4	4	4	4
Sig.	0.003	0.368	0.018	0.333	0.007	0.184

Group variable: Education

The magnitude of the observed differences in scores indicates statistical significance in the scores between the level of education and the purchase of organic fruits and vegetables ($\chi^2 = 15.935$; $p < 0.01$), milk and milk products ($\chi^2 = 11.869$; $p < 0.05$), as well as bread and cereals ($\chi^2 = 14.199$; $p < 0.01$) (Tab. 10).

Table 11. Differences in the purchase of organic food types according to the respondent's education

Types of organic food	Education	N	MR
Fruits and vegetables	Primary school	7	280.39
	High school	221	285.75
	Two-year college/vocational studies	61	286.50
	Four-year college/master's studies	293	303.78
	PhD	18	348.87
	<i>Total</i>	600	
Meat and meat products	Primary school	7	343.93
	High school	221	311.90
	Two-year college/vocational studies	61	315.95
	Four-year college/master's studies	293	286.46
	PhD	18	319.78
	<i>Total</i>	600	
Milk and milk products	Primary school	7	287.74
	High school	221	297.93
	Two-year college/vocational studies	61	303.36
	Four-year college/master's studies	293	311.39
	PhD	18	374.75
	<i>Total</i>	600	

	<i>Total</i>	600	
Bread and cereals	Primary school	7	277.28
	High school	221	408.14
	Two-year college/vocational studies	61	316.23
	Four-year college/master's studies	293	306.53
	PhD	18	392.28
	<i>Total</i>	600	
Eggs	Primary school	7	245.14
	High school	221	290.80
	Two-year college/vocational studies	61	316.17
	Four-year college/master's studies	293	301.92
	PhD	18	363.06
	<i>Total</i>	600	
Sweets	Primary school	7	283.29
	High school	221	289.81
	Two-year college/vocational studies	61	333.89
	Four-year college/master's studies	293	298.14
	PhD	18	363.78
	<i>Total</i>	600	

The results obtained through the Kruskal-Wallis test reveal that the purchase of organic fruits and vegetables, as well as organic milk and milk products, correlates with higher levels of education (Tab. 11). Specifically, consumers with a PhD demonstrate the highest frequency of purchasing organic fruits and vegetables (MR = 348.87), followed by those with completed bachelor's or master's degrees (MR = 303.78), those with completed two-year college and vocational studies (MR = 286.50), and those with high school (MR = 285.75) and primary school degrees (MR = 280.39), who exhibit the lowest frequencies of purchase. A similar trend is observed in the purchase of organic milk and milk products, where individuals with a PhD top the list (MR = 374.75), followed by those with bachelor's and master's degrees (MR = 311.39), those with professional studies or two-year college degrees (MR = 303.36), and those with high school (MR = 297.93) and primary school degrees (MR = 287.74). Regarding the purchase of organic bread and cereals, consumers with a high school education show the highest frequency (MR = 408.14), followed by those with a PhD (MR = 392.28), those with two-year college or vocational study degrees (MR = 316.23), those with completed bachelor's or master's degrees (MR = 306.53), and those with the lowest level of education (MR = 277.28), who exhibit the lowest frequency of purchase. These findings align with previous research indicating that consumers with higher levels of education tend to purchase organic foods more frequently (Baudry et al., 2016; Kesse-Guyot et al., 2013; Mitić & Čolović, 2022b; Singh & Verma, 2017). One potential reason for this trend may be the higher incomes associated with higher education levels, enabling easier affordability of organic food, which is typically more expensive than conventional options. Additionally, consumers with higher education levels often possess more information and awareness about the benefits of consuming organic foods compared to other food types.

CONCLUSION

The organic food market is experiencing continual growth, prompting increased interest from all stakeholders involved. Consequently, contemporary literature is increasingly focused on customers of organic food. Such information is invaluable as it provides insights into the preferences and habits of typical consumers. Utilizing this data, organic food producers and sellers can effectively identify and track market trends, allowing for the development of targeted marketing strategies to attract more customers. This study examined the most commonly purchased types of organic food in Serbia and investigated the extent to which factors such as physical activity level, gender, and age influence the purchase of specific organic food items. The findings revealed that in the Republic of Serbia, fruits and vegetables are overwhelmingly the most purchased organic foods (over 60%), whereas organic sweets are the least purchased. In terms of gender, women tend to favor organic fruits and vegetables, whereas men typically opt for organic meat and meat products. Furthermore, individuals with higher levels of education are more inclined to purchase organic fruits and vegetables, milk and dairy products, as well as bread and cereals. Additionally, the research noted that individuals who engage in higher levels of physical activity are more likely to purchase certain organic foods such as eggs, meat, milk, and fruits and vegetables, due to increased calorie requirements associated with higher energy expenditure. This study serves as a solid foundation for further exploration of the prevalence of purchasing specific organic food items among consumers in Serbia. Future research

could incorporate additional variables such as marital and employment status, income, education level, household size, level of information, and religion to observe and analyze their relationship with certain types of organic food. Moreover, conducting similar research in neighboring regions and countries could help determine whether similar trends exist or if typical buyers of organic food differ significantly.

Acknowledgements: This study has been supported by the Singidunum University, Faculty of Business in Belgrade.

Conflict of interest: The authors declare that they have no conflict of interest.

REFERENCES

- Andersen J.L., Frederiksen K., Nielsen O.R., Hansen J., Kyrø C., Tjønneland A., Olsen A. (2021). Organic food consumption is associated with a healthy lifestyle, socio-demographics, and dietary habits – A cross-sectional study based on the Danish Diet, Cancer and Health cohort. *Public Health Nutrition*, 25(6): 1-18. <https://doi.org/10.1017/S13688980021001270>
- Azzurra A., Massimiliano A., Angela M. (2019): Measuring sustainable food consumption: A case study on organic food. *Sustainable production and consumption*, 17: 95-107. <https://doi.org/10.1016/j.spc.2018.09.007>
- Baudry J., Touvier M., Allès B., Péneau S., Hercberg S., Kesse-Guyot E. (2016): Typology of eaters based on conventional and organic food consumption: results from the NutriNet-Santé cohort study. *British Journal of Nutrition*, 116(4): 700-709. doi: 10.1017/S0007114516002427
- Brčić-Stipčević V. & Petljak K. (2011): Research on organic food purchase in Croatia. *Tržište*, 23(2): 189-207.
- Bryła P. (2016): Organic food consumption in Poland: Motives and barriers. *Appetite*, 105: 737-746. <https://doi.org/10.1016/j.appet.2016.07.012>
- Ceña D.P., Blanco C.A., García R.J., Barrera V.H., Garrido P.C., Martínez E.P., de-las-Peñas C.F. (2011): Time trends in leisure time physical activity and physical fitness in elderly people: 20 year follow-up of the Spanish population national health research. *BMC Public Health*, 11: 799. <https://doi.org/10.1186/1471-2458-11-799>
- Chandrashekar H.M. (2014): Consumers Perception towards Organic Products - A Study in Mysore City. *International Journal of Research in Business Studies and Management*, 1(1): 52-67.
- Chen M. (2009): Attitude toward organic foods among Taiwanese as related to health consciousness, environmental attitudes, and the mediating effects of a healthy lifestyle. *British Food Journal*, 111(2): 165-178. <https://doi.org/10.1108/00070700910931986>
- Colom-Gorgues A. (2009): The Challenges of Organic Production and Marketing in Europe and Spain: Innovative Marketing for the Future With Quality and Safe Food Products. *Journal of International Food & Agribusiness Marketing*, 21(2-3): 166-190. <https://doi.org/10.1080/08974430802589675>
- Čolović M. & Mitić V. (2021): Determinant factors influencing organic foods purchase. *Acta agriculturae Serbica*, 26(51): 89-95. <https://doi.org/10.5937/AASer2151089C>
- Čolović M. & Mitić V. (2022): The main motives for buying organic food in people of the former Yugoslavia. *British Food Journal*, 125(6): 2257-2274. <https://doi.org/10.1108/BFJ-06-2021-0651>
- Čolović M., Mitić V., Nikolić M., Milojković D. (2022): Occupational Safety as One of the Important Factors of Professional Satisfaction and Stress in Regular Conditions and During the COVID-19 Pandemic. *Handbook of Research on Key Dimensions of Occupational Safety and Health Protection Management*. <https://doi.org/10.4018/978-1-7998-8189-6.ch006>
- Ćendić J. & Zarić V. (2019): Motives of buying organic products in the Republic of Serbia. *Agroekonomika*, 48(82): 71-78. <https://doi.org/10.5937/AASer2151089C>
- De Magistris T. & Gracia A. (2008): The decision to buy organic food products in Southern Italy. *British Food Journal*, 110(9): 929-947. <https://doi.org/10.1108/00070700810900620>
- Dumortier J., Evans K.S., Grebitus C., Martin P.A. (2017): The influence of trust and attitudes on the purchase frequency of organic produce. *Journal of International Food & Agribusiness Marketing*, 29(1): 46-69. <https://doi.org/10.1080/08974438.2016.1266565>
- Goetzke I. & Spiller A. (2014): Health-improving lifestyles of organic and functional food consumers. *British Food Journal*, 116(3): 510-526. <https://doi.org/10.1108/BFJ-03-2012-0073>
- Hallal P.C., Andersen L.B., Bull F.C., Guthold R., Haskell W., Ekelund U. (2012): Global physical activity levels: surveillance progress, pitfalls, and prospects. *Physical activity*, 380(9838): 247-257. [https://doi.org/10.1016/S0140-6736\(12\)60646-1](https://doi.org/10.1016/S0140-6736(12)60646-1)
- Hassan D., Monier S., Nichele V., Simioni M. (2009): Organic Food Consumption Patterns in France. *Journal of Agricultural & Food Industrial Organization*, 7(2): 12. <https://doi.org/10.2202/1542-0485.1269>
- Hashem S., Migliore G., Schifani G., Schimmenti E., Padel S. (2018): Motives for buying local, organic food through English box schemes. *British Food Journal*, 120(7): 1600-1614. <https://doi.org/10.1108/BFJ-08-2017-0426>
- Huber M., Rembiałkowska E., Średnicka D., Bügel S., Van de Vijver L. (2011): Organic food and impact on human health: Assessing the status quo and prospects of research. *NJAS - Wageningen Journal of Life Sciences*, 58(3-4): 103-109. <https://doi.org/10.1016/j.njas.2011.01.004>

- Hughner R.S., Prothero A., Shultz C.J., McDonagh P. (2007): Who Are Organic Food Consumers? A Compilation and Review of Why People Purchase Organic Food. *Journal of Consumer Behaviour*, 62(2-3): 94-110. <https://doi.org/10.1002/cb.21039>
- Husic-Mehmedovic M., Arslanagic-Kalajdzic M., Kadic-Maglajlic S., Vajnberger Z. (2017): Live, eat, love: Life equilibrium as a driver of organic food purchase. *British Food Journal*, 119(7): 1410-1422. <https://doi.org/10.1108/BFJ-07-2016-0343>
- Kesse-Guyot E., Péneau S., Méjean C., Edelenyi F.S. (2013): Profiles of Organic Food Consumers in a Large Sample of French Adults: Results from the Nutrinet-Sant  Cohort Study. *PLoS ONE*, 1-13
- Kranjac M., Vapa-Tankosić J., Knežević M. (2017): Profile of organic food consumers. *Ekonomika poljoprivrede*, 64(2): 497-514. <https://doi.org/10.5937/ekoPolj1702497K>
- Lairon D. (2010): Nutritional quality and safety of organic food. A review. *Agronomy for Sustainable Development*, 30. 33-41. <https://doi.org/10.1051/agro/2009019>
- Mie A., Andersen H.R., Gunnarsson S., Kahl J., Kesse-Guyot E., Rembiałkowska E., Quaglio G., Grandjean P. (2017): Human health implications of organic food and organic agriculture: a comprehensive review. *Environmental Health*, 16: 111. <https://doi.org/10.1186/s12940-017-0315-4>
- Misra R. & Singh D. (2016): An analysis of factors affecting growth of organic food: Perception of consumers in Delhi-NCR (India). *British Food Journal*, 118(9): 2308-2325. <https://doi.org/10.1108/BFJ-02-2016-0080>
- Mitić V. & Čolović M. (2022a): The main demographic characteristics of customers and the frequency of purchases organic food. *Economics of Agriculture*, 69(2): 349-364. <https://doi.org/10.5937/ekoPolj2202349M>
- Mitić V. & Čolović M. (2022b): The basic features of typical consumers of organic food, *Journal of Agricultural Sciences*, 67(4): 433-452. <https://doi.org/10.2298/JAS2204433M>
- Pedersen B.K. & Saltin B. (2015): Exercise as medicine - evidence for prescribing exercise as therapy in 26 different chronic diseases. *Scandinavian journal of medicine and science in sports*, 25: 1-72. <https://doi.org/10.1111/sms.12581>
- Perić N., Vasić-Nikević A., Vujić N. (2017): Consumers attitudes on organic food in Serbia and Croatia: A comparative analysis. *Ekonomika poljoprivrede*, 64(3): 1049-1064. <https://doi.org/10.5937/ekoPolj1703049P>
- Petrescu D.C., Petrescu-Mag R.M., Azadi H., Burny P. (2016): A new wave in Romania: organic food. Consumers' motivations, perceptions, and habits. *Agroecology and Sustainable Food Systems*, 41(1). 46-75. <https://doi.org/10.1080/21683565.2016.1243602>
- Radman M. (2005): Consumer consumption and perception of organic products in Croatia. *British Food Journal*, 107(4): 263-273. <https://doi.org/10.1108/00070700510589530>
- Reganold J P. & Wachter J.M. (2016): Organic agriculture in the twenty-first century. *Nature Plants*, 2: 15221. <https://doi.org/10.1038/nplants.2015.221>
- Renko S. & Bošnjak K. (2009): Aktuelno stanje i perspektive razvoja tržišta ekološke hrane u Hrvatskoj. *Ekonomski pregled*, 60(7-8): 369-395.
- Rizzo G., Borrello M., Guccione G.D., Schifani G., Cembalo L. (2020): Organic Food Consumption: The Relevance of the Health Attribute. *Sustainability*, 12(2): 595. <https://doi.org/10.3390/su12020595>
- Roitner-Schobesberger B., Darnhofer I., Somsook S., Vogl C.R. (2008): Consumer perceptions of organic foods in Bangkok, Thailand. *Food Policy*, 33. 112-121. <https://doi.org/10.1016/j.foodpol.2007.09.004>
- Singh A. & Verma P. (2017): Factors influencing Indian consumers' actual buying behaviour towards organic food products. *Journal of Cleaner Production*, 167: 473-483. <https://doi.org/10.1016/j.jclepro.2017.08.106>
- Sokołowicz Z., Dykiel M., Krawczyk J., Auguścińska-Prejsnar A. (2019): Effect of layer genotype on physical characteristics and nutritive value of organic eggs. *CyTA - Journal of Food*, 17(1): 11-19. <https://doi.org/10.1080/19476337.2018.1541480>
- Soroka A. & Wojciechowska-Solis J. (2019): Consumer Motivation to Buy Organic Food Depends on Lifestyle. *Foods*, 8(11): 581-589. <https://doi.org/10.3390/foods8110581>
- Stamatakis E. & Chaudhury M. (2008): Temporal trends in adults' sports participation patterns in England between 1997 and 2006: the Health Research for England. *British journal of sports medicine*, 42(11): 901-908. <https://doi.org/10.1136/bjsm.2008.048082>
- Stojić V. & Dimitrijević M. (2020): Consumers' intentions to use of organically produced food in the Šumadija region. *Ekonomika poljoprivrede*, 67(1): 253-267. <https://doi.org/10.5937/ekoPolj2001253S>
- Torjusen H., Brantsaeter A.L., Haugen M., Lieblein G., Stigum H., Roos G., Holmboe-Ottesen G., Meltzer H.M. (2010): Characteristics associated with organic food consumption during pregnancy; data from a large cohort of pregnant women in Norway. *BMC Public Health*, 10: 775. <https://doi.org/10.1186/1471-2458-10-775>
- Vehapi S. (2015): A Study of the Consumer Motives which Influence the Purchase of Organic Food in Serbia. *Economic Themes*, 53(1): 102-118. <https://doi.org/10.1515/ethemes-2015-0007>
- Vehapi S. (2019): Determinante razvoja tržišta organske hrane u zemljama Zapadnog Balkana. *Marketing*, 50(1): 43-56. <https://doi.org/10.5937/Markt1901043V>
- Vehapi S. & Dolicanin E. (2016): Consumers behavior on organic food: Evidence from the Republic of Serbia. *Ekonomika poljoprivrede*, 63(3): 871-889. <https://doi.org/10.5937/ekoPolj1603871V>
- Vittersø G. & Tangeland T. (2015): The role of consumers in transitions towards sustainable food consumption. The case of organic food in Norway. *Journal of Cleaner Production*, 92: 91-99. <https://doi.org/10.1016/j.jclepro.2014.12.055>
- Vlahović B., Puškarić A., Jeločnik M. (2011): Consumer Attitude to Organic Food Consumption in Serbia. *Economic Sciences Series*, 63(1): 45-52.

- Warburton D.E., Nicol C., Bredin S.S. (2006): Prescribing exercise as preventive therapy. *Canadian Medical Association Journal*, 174(7): 961-974. <https://doi.org/10.1503/cmaj.1040750>
- Warburton D.E. & Bredin S.S. (2016). Reflections on Physical Activity and Health: What Should We Recommend? *Canadian Journal of cardiology*, 32(4): 495-504. <https://doi.org/10.1016/j.cjca.2016.01.024>