



Food for thought: identifying the influential factors that affect consumption of organic produce in today's youth

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Food for thought: identifying the influential factors that affect consumption of organic produce in today's youth

Purpose

This paper seeks to identify the factors that influence the perceptions and attitudes of youth towards organic products. Unlike most research that has previously examined issues concerning organic production, this paper provides a better understanding of the behavior of young consumers towards organic products, by outlining their perceptions and attitudes towards this product category.

Design/methodology/approach

The research was conducted using a survey on a stratified random sample, and the data was analysed using the multivariate factor analysis.

Findings

The results showed that the vast majority of young consumers identify organic food as healthy and natural, and that its higher price is a significant barrier to purchasing, along with inaccessibility and the limited options offered. The results provide valuable information for managers and decision-makers working in organic food production and sales.

Originality/value

The originality of this research stems from the fact that this is the first instance in which this type of study has been performed on this specific market. It contributes to existing literature by analyzing the concept of organic food in a less developed market; exploring it through the eyes of young people as individuals who will contribute towards the future development of society; and contextualizing the topic with problems linked to obesity, the environment, and the need to support local producers.

Managerial implications

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3 The data obtained represents a meaningful contribution to the field of organic food production and
4 sale, as obtained results can aid in the decision process regarding the implementation of the
5 strategy for the production development and better positioning on the market.
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8 9 **Research limitations/ further reserch**

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11 The study was carried out in the CEE transition country of Montenegro, with 300 young
12 consumers. Further research is needed to validate the results through longitudinal study.
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16 **Key words:** organic products, consumer attitudes, perception, purchasing factors, Montenegro.
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19 20 21 **1. Introduction**

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23 The main driving force of organic production development is the growing demand for organic
24 produce from year to year. This trend extends across developed and less developed countries, with
25 a degree of time lag. According to research results in this field (Willer et al., 2013), in 2001, the
26 predicted value of the market for products certified as organic was \$20 billion. By 2012, it reached
27 \$63 billion globally, justifying the increasing interest of researchers in this field (Orboi, 2013).
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31 Specific attributes of organic products can significantly affect the purchasing behavior of
32 consumers, and these are influenced by several factors: income level, price, customer age, product
33 attributes, and purchasing motives such as perception, consumer motivation, consumer values,
34 product quality, taste (Basha et al., 2015; Perić et al., 2017; Yadav and Pathak, 2016; Pearson,
35 Henryks, and Moffitt, 2007), change in behavior (Hawkins and Mothersbaugh, 2009), product
36 awareness (Asif et al., 2018), consumer habits (Çabuk et al., 2014; Stobbelaar et al., 2007, Denver
37 et al., 2019), distribution channels, health benefits (Sheperd et al., 2005; Hemmerling et al., 2015),
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3 “turning local” (Adams and Salois, 2010; Megicks et al., 2012), and hedonistic and political
4 motivations towards changes in our current food system (Hashem et al., 2018).
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8 Trends over the last 15 years have contributed towards an increased recognition of the value of
9 organic food with regards to human health and, in particular, the necessity of its inclusion in the
10 everyday diets of young people. A large number of scientific papers examining organic agriculture
11 have addressed problems linked to the organization of organic production (Ponizio and Kremen,
12 2016), its financing (Melović et al., 2018; Crowder and Reganold, 2016), the introduction of
13 standards (Boström and Clintman, 2006; Guthman, 2004), promotion (Lohman and Foster, 1997;
14 Pearson and Henryks, 2008), and the development of its distribution channel (Hamzaoui-Essoussi
15 et al., 2013).
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29 While a significantly smaller number of papers have analysed consumer behavior and outlined
30 perceptions and attitudes concerning organic products in the Balkans, thus far no similar research
31 has been conducted in Montenegro. As shown in existing literature, a gap exists between
32 favourable opinions towards sustainable food and the motivation to buy this food (Padel and
33 Foster, 2005). This was the main motivation for conducting this research amongst the younger
34 population in Montenegro. In addition to this, Hemmerling et al. (2015) have identified that
35 research concerning price perception and price differentiation is still lacking. We have tried to
36 fulfil these gaps and, as such, the unique contribution of this research lies in the knowledge that it
37 is the first to examine this topic in relation to young consumers in Montenegro. Furthermore, this
38 research focuses on a transition economy, contributing to the gap in research concerning the impact
39 of both consumer perception and organic production on entrepreneurial development.
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54 Additionally, this research garners importance through multi-context analysis - one of the
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3 motivating factors for this research. This involves linking primary research (organic products) with
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5 three important elements: the problem of obesity, environmental protection, and the need to
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7 support local producers.
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12 This paper presents the data from an emerging market, as Montenegro is a country with only a
13
14 short history in organic farming and food consumption. According to official data from the
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16 Statistical Office of Montenegro, Monstat, the total value of the minimum consumer basket for
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18 May 2019 was EUR 647.90, which is over 130 euros higher than the average salary (Monstat,
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20 2019). Of this amount, expenditures for food and non-alcoholic beverages amounted to EUR
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22 273.40, while expenditures for non-food products and services amounted to EUR 374.50 (Monstat,
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24 2019). Based on a simple calculation, we can conclude that a family of four has a daily food cost
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26 of around 9 euros, further justifying the conclusion that price is one of the main barriers when it
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28 comes to buying organic products. This is additionally reinforced when we consider that organic
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30 products in Montenegro are considerably more expensive than non-organic.
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38 A unique incentive for the implementation of this research is reflected in the fact that consumers'
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40 preferences towards this product category are gradually evolving, and that attitudes on organic
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42 products have not yet been fully formed. In addition to this, research concerning the insights of the
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44 younger population is increasing in gravitas, given that the timely targeting of this emerging
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46 market could offer potential in the long run. Geographical considerations additionally strengthen
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48 the value of this research as, until now, no similar research has been conducted in the countries of
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50 South-East Europe to examine young people's preferences when it comes to organic products.
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3 The multi-contextual importance of this research cannot be understated. In this respect, three
4 elements stand out in particular. Firstly, the impact of diet quality on the problem of obesity in
5 young people is significant, given that obesity is one of the biggest health issues in our modern
6 society (Gardašević et al., 2015). Secondly, the concept of social responsibility and environmental
7 concern is an issue of global proportions, and the cultivation and consumption of organic produce
8 is aligned with the principles of this concept. Young people, as drivers of social change, are driven
9 by environmental concerns (Chrysosoidis and Krystallis, 2005; Laroche, Bergeron, and Barbaro-
10 Forleo, 2001), and this paper seeks to demonstrate whether or not global purchasing trends
11 favouring organic products are present in the Montenegrin market. Finally, the third element
12 concerns assisting in the development of local (and small) producers by purchasing organic
13 products. Given that agriculture is recognized as one of the components of economic development
14 in Montenegro, building positive attitudes towards this type of product stimulates the development
15 of entrepreneurship in this area.
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34 With this in mind, this study contributes to and enhances existing scholarly literature by analyzing
35 the concept of organic food in a less developed market; exploring it through the eyes of young
36 people as individuals who will contribute towards the future development of society; and
37 contextualizing the topic with problems linked to obesity, the environment, and the need to support
38 local manufacturers. This is the first time in which a study of this type has been conducted on this
39 specific market and, to the authors' best knowledge, no other studies have included any similar
40 observations.
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51 The paper is organised into six sections. Following the introduction, in the second section, the
52 results of previous research in this area is reviewed, along with existing literature which served to
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3 motivate this research. This section provides an analysis of key elements of organic produce,
4 including buying motives and barriers, attitudes and preferences, consumer behavior, and the
5 integration of these factors, in a way that brings the topic into context and links it to issues
6 concerning obesity, environmental protection, and the need to support local producers. The third
7 section provides a conceptual framework, including a conceptual model and research questions.
8 The fourth part outlines methods and data and explains the methodology, i.e. data collection,
9 sample, measures, and instrument validation. In the fifth section, the results of the research are
10 presented. Findings are discussed in the sixth section. The paper ends with concluding remarks, a
11 review of the study's implications, a discussion of the limitations of the research, and
12 recommendations for future research.
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26 27 **2. Literature review**

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30 When investigating existing academic literature in this field, we found that consumers in
31 developed European countries demonstrated an interest in healthy and tasty food with high
32 nutritional values. Two main reasons for the growing trend in the consumption of organic products
33 were shown to be environmental concerns and concern for one's own health (Vukasovič, 2015).
34 Organic food is perceived to be better than traditionally grown food, which is the reason why
35 health is often a primary consideration in purchasing decisions (Pearson, 2001; Chinnici et al.,
36 2002; Hill and Lynchehaun, 2002; Tregear et al., 1994). However, inflated prices are often cited
37 as one of the significant barriers to purchasing (Asadi et al., 2008; Millock et al., 2002; Nedra, et
38 al., 2015; Lee and Yun, 2015) and between 2000 and 2013, as many as 194 research studies have
39 addressed this issue (Rödiger and Hamm, 2015).
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3 Organic products are often labeled as healthier than conventional foods (Lea and Worsley, 2005;
4 Williams and Hammitt, 2001), and this perception is highlighted in existing academic literature as
5 one of the most important purchase decision factors (Yadav and Pathak, 2016). **Research shows**
6 **that there is a significant relationship between the frequency at which organic food is consumed**
7 **and the risk of obesity in young people (Kesse-Guyot et al., 2017).** Massey, O'Cass and Otahal
8 (2018) used meta analysis to research the factors involved in the purchase of organic food. Their
9 results showed that widely accepted attributes and qualities of organic food are more important
10 than previous product consumption, thus demonstrating that the market is heavily influenced by
11 the observed perks of eating organic produce over commercially grown products.
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15 As previously stated, many research papers have focused on consumption behaviour towards
16 organic products, examining the main influencing factors of purchasing decisions. Hence, the table
17 one presents the factors most commonly cited as the main instigators (and barriers) when
18 purchasing organic products.
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35 Similar to the research results for the general population, young consumers were seen to consider
36 health and environmental concerns as their main purchasing decision factors (Al-Taie et al., 2015).
37 However, an interesting result was obtained by Sa'ari and Koe (2014), who found that quality,
38 environment issues, and trust are some of the main influencers of organic product consumption,
39 while health care and price were not found to be significant. When it comes to the youth
40 demographic, many individuals have been seen to decide to postpone the purchase of organic
41 products until they're older (Aschemann-Witzel and Aagaard, 2014). This statement is in
42 accordance with the research results obtained by Kazlauskiene et al. (2014), who stated that
43 organic food consumption is higher in middle-aged women with children. In the research
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3 conducted in Canada, Hamilton and Hekmat (2018) concluded that young consumers have positive
4 associations, and are willing to pay a premium price for organic products. Results from studies in
5 Brazil and Spain (Molinillo, Vidal-Branc, and Japutra, 2020) highlight the importance of social
6 consciousness and health consciousness regarding millennials' organic food purchasing,
7 confirming the role of environmental concern as a key antecedent of social consciousness. Caring
8 for the environment affects the demand for organic produce - the more positive an environmental
9 attitude consumers have, the more likely they are to buy organic products (Chryssohoidis and
10 Krystallis, 2005). In line with this research, Laroche, Bergeron, and Barbaro-Forleo (2001) state
11 that customers are aware of the impact of their purchasing decisions on ecological problems around
12 the world. Taking this into account, consumer loyalty can be built based on important product
13 characteristics perceived by customers, such as environmental friendliness.
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29 Moreover, results from Northern India show that the main reason for purchasing organic food is
30 its perceived healthiness, while a lack of availability was identified as the main barrier, followed
31 by high price, taste, and popularity (Paul and Rana, 2012). In contrast, a study conducted in Poland
32 showed that the purchasing decision of young consumers is not strictly linked to concerns
33 regarding health, nor is it linked to an awareness of the health-related attributes of these products
34 (Radzaminska and Jakubowska, 2019).
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44 Vehapi and Dolicanin (2016) state that, even among interested individuals in Serbia, only a small
45 percentage actually go shopping regularly, suggesting that there is a gap between consumer
46 preferences and actual purchasing decisions regarding organic products. Furthermore, research
47 conducted among consumers in other countries has shown similar results – rare purchasing of
48 organic products, despite maintaining a positive attitude towards them (Tsakiridou et al., 2007;
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3 Teng and Wang, 2015). In line with this research, Smith (2010) states that over half of millennials
4 demonstrate that they make an effort to buy green products sometimes, while about 10% indicated
5 that make the effort often.
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10 Past research shows that, even though organic products are perceived to be expensive and hard to
11 find, most consumers judge them positively as they are associated with good health and taste
12 (Zanoli and Naspetti, 2002). However, some studies have highlighted safety and animal welfare
13 as factors that determine and affect purchasing decisions (Wee et al., 2014). Additionally,
14 supporting the local economy has previously been observed to be one of the factors influencing
15 purchasing decisions concerning organic products (Hughner et al., 2007).
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25 The following table summarizes the identified factors influencing the purchasing decision in the
26 previous literature.
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34 Considering the gap identified in existing academic literature, as well as the motivations for this
35 research, the authors have created a conceptual model based on three research questions.
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38 **Conceptual framework**

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41 As previously noted, existing research supports the thesis that health characteristics are a decisive
42 element affecting the purchase of organic products, both among the general population and young
43 people. Therefore, the results of previous research have provided motivation for the first of our
44 **research questions**. On the other hand, previous literature suggests that price, consumer distrust,
45 and the inaccessibility of organic products are the main barriers preventing customers from
46 purchasing them. Considering the current level of consumer awareness and market development
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3 in Montenegro, and taking into account the level of living standards, we posit that it is to be
4 expected that the price should be recognized as the main obstacle limiting the purchase of organic
5 products by young people in Montenegro.
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12 In previous literature, organic food is perceived to be better than traditionally grown food, which
13 is the reason why health is most often a primary factor in purchasing decisions (Pearson, 2001;
14 Chinnici et al., 2002; Hill and Lynchehaun, 2002; Tregear et al., 1994). In line with this, concerns
15 in terms of health and the environment are cited as important factors that influence attitudes
16 towards organic products and their degree of desirability among consumers (Qasim et al., 2019;
17 Çabuk et. al., 2014; Basha et al., 2015; Marangos et al., 2014; Hughner et al., 2007). Irianto (2015)
18 confirmed this thesis, pointing out that health and environmental concerns are particularly
19 important considerations for female consumers. The attribution of a "healthy product" is also
20 dominant among Romanian respondents (Oroian et al., 2017) in as many as 85% of cases (Petrescu
21 et al., 2013). In the neighbouring countries, concern for health is also important: it is listed as the
22 primary motivation for organic produce consumption in Croatia (First and Brozina, 2009), as well
23 as in Serbia (Grubor and Djokic, 2016). In accordance with the above, the following **research**
24 **questions** have been formed:
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42 *RQ1: Is health care a primary motive in young people's decision to buy organic products?*
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47 Inflated prices are often cited as one of the significant barriers in the purchasing decision process
48 when it comes to organic produce (Asadi et al., 2008; Millock et al., 2002; Nedra, et al., 2015; Lee
49 and Yun, 2015). This barrier is identified by several authors researching this problem in
50 neighbouring countries or countries with a similar development level to Montenegro, such as
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3 Serbia (Vehapi, 2015; Trandafilović and Živković, 2015), Romania (Petrescu et al., 2013), and
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5 Poland (Bryla, 2016; Maciejczak and Grzelak, 2013). In accordance with the above, the second
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7 **research question** has been created:

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12 *RQ2: Is the higher price of organic products a primary barrier limiting young people's propensity*
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14 *to purchase the goods?*

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16 Existing academic literature has demonstrated that young people in developed countries have
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18 developed positive attitudes concerning the importance of organic products (Hamilton and
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20 Hekmat, 2018) while, in less developed countries, young consumers do not differentiate between
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22 “healthy” and “organic” products (Beck et al., 2019), and are generally not very well informed on
23
24 the topic (Barbosa et al., 2017). Furthermore, Irianto's (2015) research suggested variations in
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26 attitudes and decision-making processes regarding purchasing, depending on the gender of
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28 respondents, with female respondents showing a higher tendency to focus more on health and the
29
30 environment. **In accordance with the above, the following research question has been formed:**

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37 *RQ3: Do young people have developed attitudes/opinions concerning the importance of organic*
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39 *products and their characteristics?*

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44 A conceptual model, based on these **research questions**, is shown in the figure below.

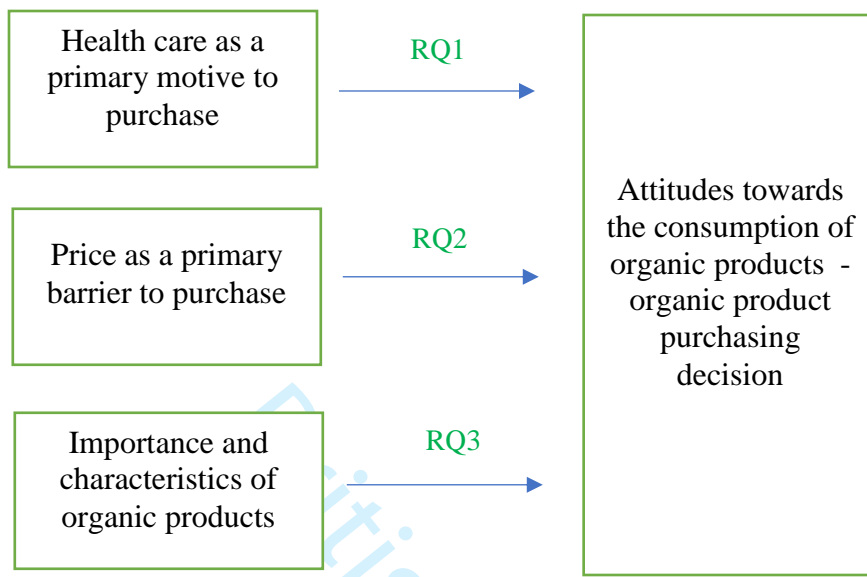


Figure 1. Conceptual model of research

Insert figure 1 about here

In order to obtain objective answers to the research questions, a multivariate analysis was applied to the survey data collected.

3. Materials and methods

Keeping in mind the motives of this research, its overall aims, the research questions, and results of previously published articles on organic products, along with assessments of theoretical models, the authors developed a questionnaire. The questionnaire was prepared in Montenegrin and was distributed to young people. As such, in this study on perceptions and attitudes concerning the consumption of organic products in Montenegro, a total of 300 young people aged 19 to 26 participated. Of these, 121 (40.3%) were male and 179 (59.7%) were female. Most of the

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3 respondents were students of several faculties within the University of Montenegro. The sample
4 included young people from all three regions (Northern, Central, Southern) to make it as
5 representative as possible. Therefore, in terms of geographical spread, the demographic of the
6 respondents was as follows: 50% were from the central region, 30% were from the southern region,
7 and 20% were from the northern region. The structure of the sample thus allowed for a relatively
8 balanced representation of the youth of the country and it can be considered a stratified random
9 sample. The survey was undertaken in the first quarter of 2018. The poll lasted for 30 days and
10 300 completed surveys were returned, giving an answer rate of 63.15%. The questionnaire
11 consisted of 10 questions and it can be seen in the Appendix. A pilot survey examining the validity
12 of the questionnaire's content was conducted on a sample of 15 students. Based on their
13 suggestions, the final form of the questionnaire was created. In order to ensure the comprehension
14 of the survey, it was pilot tested and checked by a proofreader.

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33 Cronbach's alpha was used to test the reliability of the study. The calculated values were at a
34 satisfactory level of 0.713, meaning that the data was suitable for further analysis.

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40 The research questions were tested using multivariate analysis and the method of the main squares
41 on the data collected during this research, with a level of significance of 5%. The identification of
42 these factors was an important tool in understanding the behavior of young people when
43 purchasing organic products, which is very important from the perspective of planning marketing
44 activities.

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3 Multivariate factor analysis was used to identify the crucial characteristics in deciding to purchase
4 organic products. The application of factor analysis was based on two basic strategies: explorative
5 factor analysis and **confirmatory** factor analysis. The condition for applying the method of the
6 main components was the existence of a high degree of correlation between the variables, which
7 were checked by generating a correlation matrix. Responders could express their attitudes on a
8 scale of 1 to 5 (1 - completely disagree; 5 - completely agree). According to results of each of the
9 17 characteristics of organic products, we tested the justification of the application of the main
10 component methods.
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24 The next step in the analysis was to determine which factors needed to be retained. For this we
25 relied on three techniques: the criterion of characteristic values, the scree plot, and the parallel
26 analysis simulation technique based on the randomly generated matrix of the coefficient of
27 correlation. The first estimate of the number of factors was obtained from the values of the inherent
28 factors. The value of a factor was based on the sum of the squares of factor loads across all
29 variables for that factor and this showed how much data was scattered in relation to the direction
30 determined by the inherent vector. The component with the highest value was considered the main
31 component, as the highest percentage of total variance was dictated by it. According to this
32 technique, components with a characteristic value larger than 1 were retained for subsequent
33 analysis, while components with a characteristic value of less than 1 were rejected as, from the
34 perspective of variance, they were not as significant.
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3 After establishing the number of factors to be retained, it we needed to see whether or not the
4 factor loads were sufficiently significant. An absolute load value of over 0.5 is considered to be
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8 indicative of a well-structured factor analysis.
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12 The first test used to indicate the validity of a model in CFA is the Chi-square test. The starting
13 hypothesis of this test states that the model must be well set up. This means that the associated
14 probability of this test should be greater than the risk of error when conducting the test. With a risk
15 of error of 5%, the associated probability would have to take a greater value than 0.05. In large
16 samples, that is, in cases where the sample size is $n > 200$, the corresponding probability of Chi-
17 squared statistics has been shown to be very small. In this situation, instead of the value of the Chi-
18 square statistic and the corresponding probability, the quotient of the Chi-square statistic and the
19 number of degrees of freedom are taken to decide upon the validity of the model. A model is valid
20 if this quotient value is less than 3.
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35 In this study, the sample consists of 300 respondents and so n is larger than 200. The results of the
36 Chi-square statistic were: $\chi^2 = 287,231$; $df = 109$; Probability level = 0.000. The following ratio
37 was used to ascertain the model's validity:
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$$\frac{\chi^2}{df} = \frac{287.231}{109} = 2.635 < 3$$

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47 Therefore, based on the Chi-squared CFA statistics, we were able to conclude that the analysis was
48 properly conducted. The values of several other indexes, which should show the validity of the
49 previous claim, are listed, such as the GFI, AGFI, and RMSEA index values. Specifically, in order
50 for a model to be valid, the AFS must take a value greater than 0.9, the AGFI indexes must be
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greater than 0.8, and the RMSEA value must be less than 0.08. In this analysis, the GFI value was 0.902, the AGFI value was 0.862, and the RMSEA value was 0.074. All three values indicated that the model was well placed, that is, the CFA was well implemented.

We processed the collected data in the SPSS program (*Statistics 20*) and, during the analysis, we used descriptive statistics, chi-square tests, T-tests, Pearson's correlation coefficient, and the methods of the main components.

The methodology used to identify factors influencing the perception and attitudes of today's youth towards the consumption of organic products is as follows:

- Data collection by survey;
- Responding to research questions by multivariate analysis and the method of the main squares;
- Determining which factors needed to be retained. For this we relied on three techniques: the criterion of characteristic values, the scree plot, and the parallel analysis simulation technique based on the randomly generated matrix of the coefficient of correlation.

4. Results

The results showed that young people in Montenegro most often cite a conversation with family or friends (47%), followed by web portals or specialized websites (38.7%), and social networks (36%) as their main motivators for buying organic produce. A slightly lower percentage of 29.7% and 23.3% refers to newspapers and magazines, as well as TV commercials, respectively. As a less-used source, the young people listed books (11.3%), promotional/educational events (9.7%),

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3 and radio programs (4%), while 6% could not state with certainty their source of knowledge on
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5 organic products. In addition to this, the conclusions suggest no significant differences in the
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7 sources of information in relation to the gender of the sample.
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12 There was no difference in opinion in terms of the definition of organic food between male and
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14 female respondents. The highest percentage of young people (31%) identified organic food with
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16 the term "healthy food", 29.3% considered organic food as natural food, 27% considered it to be
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18 food without chemicals, while 9% considered it to be pesticide-free food. Only 2.7% of young
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20 people identified organic food as traditional food, and 1% identified it as food that is grown with
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22 fertilizers.
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28 The correlation matrix for the 17 observed variables is given in the table 2.
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31 **Insert table 2 about here**
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35 Description of variables: 1) Organic products do not have artificial colors and flavours; 2) Organic
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37 products do not contain artificial ingredients (e.g. preservatives); 3) Organic products have no
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39 traces of pesticides and fertilizers; 4) Organic products do not contain genetically modified
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41 organisms (GMO); 7) Organic products are rich in minerals and vitamins; 8) Organic products are
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43 healthy; 9) Organic products are rich in proteins; 10) Organic products contain natural ingredients;
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45 11) Organic products have a nice scent; 12) Organic products are tasty; 13) Organic products are
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47 easily and quickly prepared; 14) Organic products have a low fat content; 15) Organic products
48
49 contain fewer calories; 16) Organic products are luxury products; 17) Organic products are trendy.
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3 In order to justify the application of the main component methods, we carried out a Bartlet test, on
4 the basis of which the significance of the correlation between at least some of the variables
5 involved in the analysis were checked. We also conducted the Kaiser-Meyer-Olkin (KMO) test to
6 measure the similarity of the correlation matrix for factorization.
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$$14 \quad KMO = \frac{\sum \sum r_{ij}^2}{\sum \sum r_{ij}^2 + \sum \sum a_{ij}^2}, \text{ za } i \neq j$$

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21 **Insert table 3 about here**
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25 Looking at the results shown in Table 4, we can see that the conditions for the application of the
26 PCA method for the 17 analysed variables are fulfilled, while the values of the KMO test can be
27 considered acceptable in the assessment of sample adequacy.
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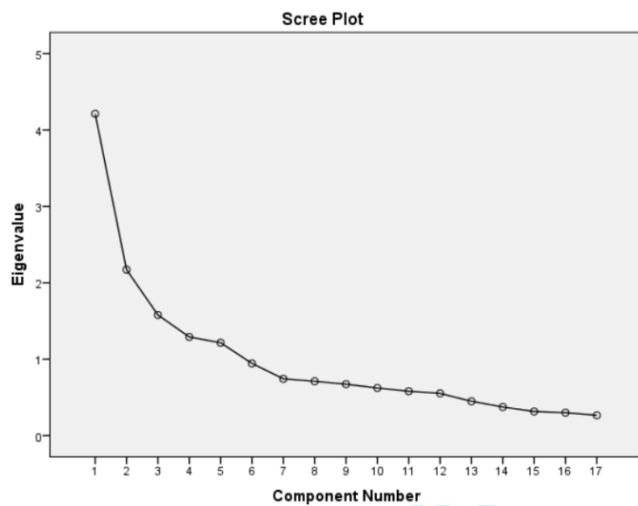
34 According to the data concerning the ratings of organic product characteristics, the specific values
35 shown in Table 4 have been obtained.
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39 **Insert table 4 about here**
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44 The results suggest that the optimal number of factors need to be kept equal to 5, and that 61.583%
45 of the total variance is explained by them.
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48 The criterion of the inherent values sometimes indicates that it is necessary to retain a higher
49 number of factors than may be needed and so, for this reason, as a supplementary technique, we
50 used a fracture diagram alongside a parallel analysis simulation technique.
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Figure 2. Fracture diagram



The fracture diagram (Graph 1) presents the inherent values of the components starting from the largest. We can see a point where the line suddenly changes direction, i.e. point of fracture. In line with the relevant factors which must be controlled, we use only those above this point.

The fracture diagram clearly shows that the fracture point is in the sixth component, which means that it is necessary to keep the first five components in the analysis, explaining 59.293% of the variance. The same number of factors were determined through a parallel analysis of the simulation technique on a sample of 300 subjects.

Insert table 5 about here

Observing the isolated factors, we note that most variables have high correlation coefficients with separated factors, with the first established factor being general. It is therefore expected that each

1
2
3 variable has a high load on it. As each subsequent factor explains an ever smaller part of the
4
5 variance, it is desirable to execute the rotation of factors for the redistribution of the variance,
6
7 which changes the relationship between the variables and the factors. In this analysis, we used a
8
9 "varimax" rotation method to maximize the sum of the variance of the square of the factor loads.
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11
12 The results are shown in Table 6.
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17 **Insert table 6 about here**
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19 Table 6 shows that, within the first factor of the dominant variable with the highest factor load,
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21 there are positive signs, such as: 1) Contains high nutritional value; 2) Rich in minerals and
22
23 vitamins; 3) Healthy; 4) Rich in proteins; and 5) Contain natural ingredients. Taking into account
24
25 the dominant variables, we can name the first component (factor) as "healthy and natural products".
26
27 This factor explained 15.884% of the total variance. For each of the five variables, using the chi-
28
29 square test, we examined whether or not there was a significant variation in attitudes with regards
30
31 to the gender of the respondents.
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37 The higher the number of women compared to men, the more positive the opinion was that organic
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39 products are rich in proteins ($\chi^2 = 15.445$; $df = 4$; $p = 0.004$) while, according to all other
40
41 variables of the first component, the attitudes of the female and male populations are fairly
42
43 uniform: organic products contain high nutritional value ($\chi^2 = 4.065$; $df = 4$; $p = 0.397$); are rich
44
45 minerals and vitamins ($\chi^2 = 6.179$; $df = 4$; $p = 0.186$); are healthy
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 $\chi^2 = 1.646$; $df = 4$; $p = 0.801$); and contain natural ingredients ($\chi^2 = 3.687$; $df = 4$; $p = 0.450$).

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3 The second component that characterizes organic products is "absence of artificial ingredients,
4 pesticides, fertilizers and GMOs" as its structure predominantly determines the following variables
5
6 with negative signs: 1) No artificial colors and flavours; 2) Does not contain artificial ingredients;
7
8 3) No traces of pesticides and fertilizers; 4) Does not contain genetically modified organisms. The
9
10 negative sign indicates the abandonment of artificial colors, flavours, ingredients, etc., positively
11
12 contributing to the formation of an attitude towards organic products. The second component is as
13
14 important as the first, as it accounts for approximately the same amount of variance (15.284%).
15
16 For each variable of the component, the positions of the male and female populations are fairly
17
18 uniform, as indicated by the values of the chi-square test: no artificial colors and flavours (
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20 $\chi^2 = 1.904$; $df = 4$; $p = 0.753$); contains no artificial ingredients ($\chi^2 = 4.186$; $df = 4$; $p = 0.381$
21
22); no traces of pesticides and fertilizers ($\chi^2 = 3.181$; $df = 4$; $p = 0.528$
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24); and doesn't contain GMO ($\chi^2 = 3.897$; $df = 4$; $p = 0.420$).
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35 The third component, which accounts for 11.974% of the total variance, determines a group of
36
37 variables that refer to low levels of fat and calories in organic products, as well as the ease and
38
39 speed of preparation. Three variables, which were identified as "low calories and fats", have a
40
41 positive sign, indicating that these characteristics are significant in the formulation of a positive
42
43 attitude towards organic products. At 5% significance, we concluded that there was no difference
44
45 in attitudes between the male and female youth populations with regards to the variables that
46
47 determine the third component: ease and speed of preparation ($\chi^2 = 6.423$; $df = 4$; $p = 0.170$);
48
49 have low fat content ($\chi^2 = 8.745$; $df = 4$; $p = 0.068$); and are low in calories (
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51 $\chi^2 = 6.560$; $df = 4$; $p = 0.161$).
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5 The fourth component consists of variables related to "taste and smell". Young people generally
6 awarded high grades to organic products and decided on their purchase partly because of the
7 products' taste and smell. Although this component accounts for 10.108% of the total variance, the
8 highest percentage of young people, both male and female, declared that they were indifferent in
9 terms of the color and taste of the food. A positive attitude on this issue was demonstrated by a
10 large number of young people who believed that color and taste were not dominant characteristics
11 of organic foods. There were no differences in attitudes between male and female respondents.
12 This was confirmed by the chi-square tests results for both variables of the fourth component, with
13 a level of significance of 5%: organic produce has a nice smell ($\chi^2 = 8.383; df = 4; p = 0.079$
14); and has a nice taste ($\chi^2 = 3.856; df = 4; p = 0.426$).
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31 Finally, the fifth component, accounting for 8.514% of the total variance, consisted of two
32 variables with positive signs: 1) organic products are luxury products; and 2) organic products are
33 trendy. Most young people consider organic products to be luxury products and products that are
34 trendy. Most young people consider organic products to be luxury products and products that are
35 trendy but, given that these characteristics determine only the fifth component, they do not appear
36 to greatly influence young people when making purchasing decisions. The attitudes of the male
37 and female are fairly uniform: organic products are luxury products (
38 $\chi^2 = 3.506; df = 4; p = 0.477$), and organic products are trendy ($\chi^2 = 7.035; df = 4; p = 0.134$).
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51 In the sequel, using the T-test, we determined whether or not there were differences in attitudes
52 between the male and female youth population for each of the components individually (Table 6).
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3 Levenov's equality of variance test, which is least sensitive to assumptions concerning the
4 normality of the schedule, indicated a variance for 4 out of 5 defined components for both male
5 and female populations and therefore does not differ statistically. This also revealed that the
6 attitudes of young people are uniform in all components, except for the low calorie and fat
7 components. Although we have seen that the differences between these two groups for each
8 variable that determines the "low calorie and fat component" does not exist, the difference at the
9 component level occurs due to the higher the number of women in comparison to men observed
10 for all three variables together. These characteristics seem to significantly influence the decision
11 to purchase organic products (Table 7).
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24 **Insert table 7 about here**
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28 The results also showed that a high number of young people buy organic produce, and that this
29 purchase decision is not determined by the gender of the respondents. This was demonstrated
30 through the application of the t-test; the results of which are shown in Table 8.
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36 **Insert table 8 about here**
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40 The results were confirmed by a non-parametric Mann-Whitney test, with a value of 10367.00,
41 with $p = 0.479 > 0.05$. Of the total number of respondents, 59% said that they bought organic
42 products (56.2% male and 60.9% female), 16.7% did not buy but had thought about buying (19%
43 male and 15.1% female), 18% were not sure whether or not they would buy organic produce
44 (17.4% male and 18.4% female), while only 6.3% did not intend to buy organic products (7.4%
45 male and 5.6% female).
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3 We also found that barriers that deter consumers from purchasing organic products (price,
4 unavailability, relatively modest offer, etc.) significantly affect purchasing decisions. Young
5 people identified that the main barrier limiting their purchase of organic products was the price
6 (55.7%), followed by inaccessibility of products (12.7%), relatively modest offer (12.7%), and
7 other reasons that were considered almost irrelevant. The percentage of young people that declared
8 the price to be the main obstacle when buying organic products was approximately the same in all
9 categories of young people, i.e. those who had previously bought organic food (57.1%), intended
10 to buy an organic product (66%), were unsure (40.7%), or did not intend to buy organic products
11 (57.9%).
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26 Analysing the motivations of purchasing organic products has led to the following results. The
27 highest percentage of young people (76.3%), assigned health to grade 1, considered it to be the
28 most important motive. In second place was quality (67.3%), while third place was product safety
29 (56.3%), followed by product freshness (51.3%), taste (38%), environmental protection (36%),
30 and supporting local/small producers (35%).
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40 We also examined the attitudes of current and potential consumers of organic produce in terms of
41 their willingness to buy organic products if the price were much higher, lower, or approximately
42 equal to the price of inorganic products, which has previously been the subject of research by other
43 authors (Heeres et al., 2013, Hsu et al., 2016). The results of the chi-square test showed that there
44 was a significant difference in attitudes between the observed consumer groups
45 ($\chi^2 = 14.474$; $df = 6$; $p = 0.025$). In the current consumer group, a percentage of 52.5% said they
46 would buy an organic product if its price was approximate or equal to the price of the non-organic
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3 alternative, and a slightly lower percentage of 42.4% said that they would buy an organic product
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5 even if it was significantly more expensive than inorganic. In the group of potential consumers,
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7 the results were approximately uniform, observed individually for the three aforementioned
8
9 subgroups. If we were to observe a group of potential consumers in aggregate, we would conclude
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11 that, on average, the largest percentage (72.36%) commented that they would buy an organic
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13 product only if its price was approximate or equal to the price of inorganic products while, on
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15 average, only 22% expressed willingness to buy the product even if it was significantly more
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17 expensive than non-organic. Therefore, the results of the chi-square test of the aforementioned
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19 points are justified. At the same time, we have confirmed that the high price of organic products
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21 is a major factor that discourages potential and even current customers from consuming them.
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28 **5. Disussion**

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33 The results of this research, conducted in Montenegro, largely correspond to the results of the
34
35 previous studies conducted in other countries the served to formulate our research questions. The
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37 first research question, which deemed health care to be the dominant factor in influencing the
38
39 purchase of organic products, was confirmed - this factor accounted for 15.88% of the total
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41 variance of the dependent variable. In addition to this, health is considered to be the primary
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43 motivation for purchasing in 76.3% of cases. This result was consistent with the results of previous
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45 research (Vlahović and Šojić, 2016; Petrescu et al., 2013; Vehapi, 2015; Amvrosiou et al., 2017;
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47 Irianto, 2015), confirming that global trends in healthy lifestyles are also current in Montenegro.
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3 On the other hand, the obtained results differ greatly when considering environmental motivations.
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5 In some of the previous studies, the environmental motivation is dominant (Basha et al., 2015;
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7 Nedra et al., 2015; Voon et al., 2011;), however this is not the case in our research. Respondents
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9 highlighted this motivation in only 36% of cases, which places the motive in sixth place out of the
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11 total of seven presented. Given that, in Montenegro, the organic production market is in its early
12
13 stages of development, insight into the attitudes of young consumers, as a critical target group, is
14
15 important in anticipating demand and formulating effective marketing strategies. A similar survey
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17 was conducted in Bosnia and Herzegovina to help organic food producers to understand the
18
19 behavior of different market segments. In this research, one of the segments identified as important
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21 was environmental care (Peštek, Agić, and Cinjarević, 2018), which constitutes one of the
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23 differences between consumers in Montenegro and Bosnia and Herzegovina as, in Montenegro,
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25 this factor did not manifest a statistically significant influence. Additionally, De Magistris and
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27 Gracia (2008) found that environmental and health concerns were both key determinants
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29 influencing consumer behavior in the organic purchasing process.
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38 Considering the results pertaining to the barriers and the basic factors that prevent young people
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40 in Montenegro from buying organic products, we have come to the conclusion that price is the
41
42 most important factor. This conclusion is made in accordance with previous research conducted in
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44 countries with a similar level of development - Serbia (Vehapi, 2015; Trandafilović and Živković,
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46 2015), Poland (Bryla, 2016; Maciejczak and Grzelak, 2013), and Romania (Petrescu et al., 2013).
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48 In this study, young consumers were found to be aware of the importance of organic health
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50 products, however price remained a significant barrier. On the other hand, the results of a survey
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52 conducted in Spain showed a correlation between a person's degree of knowledge on organic
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3 products, and their willingness to pay a premium price for these products. In this regard, the
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5 recommendations of Mesías Díaz et al. (2012) refer to the need to build consumers' confidence in
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7 the superior quality of these products over conventional foods.
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12 It is important to emphasize the role of diet quality in the prevention of obesity. Research shows
13
14 that there is a significant relationship between the frequency of organic food consumption and the
15
16 risk of obesity in young people (Kesse-Guyot et al., 2017). According to data from the New
17
18 England Journal of Medicine, in Montenegro, 22.5% of the population is classed as obese (The
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20 GBD 2015 Obesity Collaborators, 2017). This problem is evident in many countries, and one of
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22 the solutions is a more frequent consumption of organic produce, which could be facilitated by
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24 educating young people.
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31 Finally, the results show that "supporting local / small producers" is the motive of least significance
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33 when it comes to purchasing decisions, in which this study differs significantly from the results
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35 presented by Hughner et al. (2007).
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41 Leading on from these findings, we are able to compile a generic profile of young organic produce
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43 buyers covered in this study. The results showed that most are driven by egoistic considerations,
44
45 considering that the dominant driving motivator is health care. Caring for the environment and the
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47 community (small and local producers) does not affect purchasing decisions. Thus, we can
48
49 conclude that altruistic motivations do not have a significant impact on this group of consumers.
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53 **6. Conclusion**

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5 Organic produce's long evolution from garden to commodity production has been supported by
6 numerous scientists, research institutions, environmental movements, and governments. Today,
7 organic production is more widespread than ever before and has become a trend amongst
8 consumers across the world. The development the general awareness of healthy nutrition has
9 positively influenced the development of the organic production market.
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19 A food product is given a host of new qualities when it is labelled as organic. Its general attributes
20 are added to several perceived connotations that customers associate with organic food, giving the
21 consumer further justification to make their purchase. According to Levy-Bruhl (cited in Massey
22 et al., 2018), in giving the product new significance by virtue of its organic status, it is somewhat
23 glorified and is considered to be of more importance than its inorganic counterparts. This altered
24 product, enriched with new meanings is, in the authors' opinions, the primary motivation behind
25 organic food purchases. In accordance with existing literature concerning attitude/behavioural
26 intentions, a gap can be seen to exist between positive attitudes towards organic food and the
27 subsequent intention to buy this food (Padel and Foster, 2005).
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42 In their meta-analysis, Scalco et al., (2017) examined the consumption of organic products and
43 commented that, in spite of the fact that intention is widely believed to be the most reliable
44 predictor of actual behaviour, it does not always progress into action. There can be many reasons
45 why action is not taken. While supply-based variables are often to blame, such as high costs and
46 insufficient supply (Aschemann-Witzel and Niebuhr Aagaard, 2014; Yadav and Pathak, 2016),
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3 consumer-based factors should also be taken into account, such as subjective norms and values
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5 (Aschemann-Witzel, 2017).
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10 The authors aimed to identify the factors that influence the formation of attitudes, perceptions, and
11 knowledge about organic products in the minds of young people. Individualistic motivations (e.g.
12 health, quality) are stronger motivating factors behind the consumption of organic food; with
13 health constituting the primary focus, followed by taste and safety. While differing connotations
14 exist in terms of intentions and the act of purchasing, the perceived quality of the produce seems
15 to be the only attribute which serves both.
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26 In addition to the motivations discussed, the authors have recognized the major barriers
27 discouraging the purchase of organic products: high prices, relatively modest supply, and the
28 inability to check the origin of products.
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35 Based on the interpretation of the results, a positive response has been given to all three research
36 questions. Specifically, we have confirmed that one of the primary motives for purchasing organic
37 products is health care, and that high prices are a key obstacle inhibiting the purchase of these
38 products on a larger scale in developing countries. Unlike the first two research questions, the third
39 research question, which refers to the development of young peoples' attitudes towards organic
40 products, potentially implies that there are certain specificities in relation to the given
41 characteristics of the products, which generally suggest that young people are aware of and have
42 a positive attitude towards organic products.
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3 Given that the percentage of obese people in Montenegro is at a lower level compared to other
4 countries within the European Union (The GBD 2015 Obesity Collaborators, 2017), the absence
5 of this health problem could be related to a decreased amount of interest of young people in this
6 product category. When we subsequently factor in the high price, which has been confirmed as the
7 primary barrier in this research, we come to the conclusion that it is necessary to develop proactive
8 practices and initiatives that can lead to lower prices and thus encourage young people to consume
9 this type of product.
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21 Furthermore, our study shows that egoistic (e.g. personal health) considerations can predict
22 consumers' purchase intentions, while altruistic considerations (e.g. environmental concerns and
23 the drive to support local producers) do not have a significant effect. These results differ to those
24 of previous studies (McEachern and McClean, 2002).
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33 Based on the conducted research in Montenegro, we can conclude that young peoples' knowledge
34 on organic products is still rather low. Even among more interested individuals, only a small
35 percentage buy organic food on a regular basis, which means that there is a gap between
36 preferences and purchasing behavior. In order to increase knowledge and awareness of organic
37 food and its benefits, consumer education must become a primary initiative of organic producers
38 and decision-makers.
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49 Preference for a small number of organic products, as outlined by consumers, necessitates the
50 adaptation of the range of organic products available on the national market in terms of a higher
51 production of fruits, vegetables, dairy products, and meat. Attitudes towards the price suggests that
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3 a lower pricing strategy could be a significant means of attracting new customers and turning
4 occasional buyers into loyal customers.
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10 The results obtained may serve as guidelines for economic policy makers in Montenegro,
11 providing a basis for the sector of agriculture, as well as businesses in this field, to formulate a
12 successful marketing strategy, allowing them to better understand their target consumers.
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19 **Managerial and Social implication**

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21 These results support the theoretical conclusions of previous research conducted in different
22 countries (Trandafilović and Živković, 2015; Maciejczak and Grzelak, 2013). These conclusions
23 can provide valuable potential implications for decision-makers in this area. It is important to
24 highlight the practical implications of this research for manufacturers and distributors, and the
25 results obtained can serve as a guide for these people when making decisions concerning the
26 implementation of an organic food development strategy, or when making decisions about future
27 activities related to organic products. So, for example, future promotional strategies should be
28 based on the increasing presence of organic products on social networks and specialized web
29 portals. In terms of tackling the price barrier, it may be necessary to introduce consumers to the
30 process of organic production and explore potential ways of increasing production efficiency.
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47 The findings of this research will prove to be of use to both producers and sellers, allowing them
48 to implement marketing strategies that involve exploration, experience, and credence attributes. If
49 a marketing strategy aims to highlight the differences between organic and conventional food, than
50 credence attributions should be the primary focus of the marketing message. Our results and
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3 recommendations can be applied to other emerging markets, i.e. developing countries, where
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5 organic production and product awareness are on a similar level.
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10 This research therefore provides practical support for former theoretical statements which imply
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12 that “turning local” can lead to enlarged social and political awareness, encouraging customers to
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14 continue to question current food systems and change their purchasing strategies (Megicks et al.,
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16 2012; Hashem et al., 2018).
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21 The fact that there are differences in the attitudes of young people, as well as in their preferences
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23 and buying behavior, reveals to decision-makers the need to create and implement a strategic
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25 organic practice policy.
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30 Results showing discrepancies in individual variables, such as young people’s lack of concern for
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32 the environment, suggests a lack of awareness of certain aspects of the observed topic. Decision-
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34 makers should keep this in mind when making choices, and they must be aware that this issue
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36 should be addressed on an ongoing basis.
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41 Professional support must be present at all stages of the development of organic food practices,
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43 especially when developing young peoples’ awareness of these products (pro-environmental
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45 behavior and sense of community). Decision-makers should consider that young people are
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47 prerequisites to the development of good practices in society but, without understanding their
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49 views and motives as well as the tools necessary for the integration and implementation of organic
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51 practices and initiatives, they are likely to be unsuccessful.
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5 Finally, in addition to its practical implications, the authors believe that this paper provides
6 theoretical contributions. In addition to expanding the empirical research base on organic produce,
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8 our results expand upon existing scholarly literature by analyzing this concept in a less developed
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10 market, exploring it through the eyes of the young people who represent the future of society's
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12 development, and bringing the topic into context with issues of obesity, environmental protection,
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14 and support for local producers. This paper emphasizes the importance of the concept of organic
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16 food, among young people and older generations, through various aspects of observation. In this
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18 way, this analysis emerges from the narrower context of organic food and ultimately becomes a
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20 multi-context analysis contributing to the broader theorizing of organic food.
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28 **Limitations and further research**

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33 This study has several limitations in which opportunities for future research should be sought.
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35 Firstly, the authors stress in their final conclusions that the objective limitations of this research
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37 should be taken into account, as the research was exclusively conducted in Montenegro. Secondly,
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39 the authors believe future research should be directed to the Western Balkans, or towards the
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41 comparative analysis of other EU member state countries also in the process of differences towards
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43 their organic food consumer practice. Thirdly, this study could be expanded by analyzing the
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45 impact of cultural, geographical, and demographic factors of consumer segmentation. In this way,
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47 the cross-cultural differences of young people could be observed. Instead of identifying individual
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49 factors related to buying motives and barriers, researchers could seek to discover their interactive
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51 and combined effects at different stages of the organic purchasing decision-making process in
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3 order to build a loyal consumer base. Finally, this study does not include an analysis of the causes
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5 of all influencing factors, so this limitation may serve to encourage future researchers.
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Authors, Year	Country	Design, Sample	Relevant factors
Al-Taie et al., 2015	UAE	Survey, 226 young respondents	Health and environmental awareness, cost, availability, shelf life, taste, and a lack of knowledge (barriers)
Amvrosiou et al., 2017	Greece	Survey, 558 respondents	Health concerns, i.e. healthy lifestyle, eco-friendly approach
Basha et al., 2015	India	Survey, 50 respondents	Health and environment concern
Çabuk, Tanrikulu, and Gelibol, 2014	Turkey	Survey, 385 respondents	Concern for health and the environment
Hill & Lynchehaun, 2002	UK	Secondary data, focus groups and observation	High price, lack of distribution, limited choice (barriers), health lifestyle
Hughner et al., 2007	-	Literature review	Health, taste, environmental awareness, concern for animal welfare, supporting local economy, food safety, high price
Irianto, 2015	Indonesia	Survey, 200 respondents	Concern for health and the environment
Lee & Yun, 2015	USA	Survey, 725 respondents	Perceptions of nutritional content, ecological welfare, sensory appeal, and price attributes of organic food (barrier)
Nedra et al., 2015	Tunisia	Survey, 350 respondents	Health and environmental concerns, high prices (barrier)
Petrescu et al., 2013	Romania	Survey, 40 respondents	Health concern, i.e. healthy lifestyle, high prices (barrier)
Sa'ari & Koe, 2014	Malaysia	Survey, 235 young respondents	Product quality, environment concern, and trust
Tregear et al., 1994	UK	Survey, 150 supermarkets and 112 wholefood shops in the UK, telephone	Healthy and environmentally friendly options, misshapen or non-

		survey with 242 respondents	uniform size of products, price (barriers)
Vlahović & Šojić, 2016	Serbia	Survey, 300 respondents	Health concern, i.e. healthy lifestyle, information level, price, and income (barriers)
Voon, Ngui, and Agrawal, 2011	Malaysia	Survey, 406 respondents	Health and environmental concerns, trust of organic food claims, and desirability of organic food attributes
Yadav & Pathak, 2016	India	Survey, 220 young respondents	Moral attitude, health consciousness and environmental concern, price

Table 1. Main instigators and approaches in research on purchasing organic products.

	Artificial color and flavours	Artificial ingredients	No traces of pesticides	No GMO	Doesn't affect the environment negatively	Contains high nutritional values	Rich in minerals and vitamins	Healthy	Rich in protein	Contains natural ingredients	Has a nice scent	Tasty	Easily and quickly prepared	Has low fat content	Contains few calories	Luxury products	Trendy
Artificial color and flavours	1.00	.632	.368	.420	.310	.066	.226	.414	.144	.298	.119	.109	.011	.120	.088	.041	-.059
Artificial ingredients	.632	1.00	.478	.364	.234	.060	.157	.265	.113	.217	.134	.082	.091	.155	.141	.049	-.056
No traces of pesticides	.368	.478	1.00	.409	.257	.035	.076	.188	.013	.199	.134	.034	.117	.099	.133	.125	.102
No GMO	.420	.364	.409	1.00	.244	.031	.035	.278	-.014	.221	.039	.117	.072	.035	.064	.014	-.040
Doesn't affect the environment negatively	.310	.234	.257	.244	1.00	.253	.200	.288	.229	.240	.060	.145	.148	.183	.069	.006	.000
Contains high nutritional values	.066	.060	.035	.031	.253	1.00	.343	.296	.267	.232	.089	.095	.239	.191	.095	.138	.036
Rich in minerals and vitamins	.226	.157	.076	.035	.200	.343	1.00	.597	.525	.340	.219	.274	.178	.247	.196	.064	.036
Healthy	.414	.265	.188	.278	.288	.296	.597	1.00	.416	.517	.190	.265	.158	.211	.148	.007	-.019
Rich in protein	.144	.113	.013	-.014	.229	.267	.525	.416	1.00	.394	.288	.260	.302	.342	.241	.155	.046
Contains natural ingredients	.298	.217	.199	.221	.240	.232	.340	.517	.394	1.00	.259	.241	.154	.234	.174	.137	.042
Has a nice scent	.119	.134	.134	.039	.060	.089	.219	.190	.288	.259	1.00	.573	.337	.149	.247	.096	.052
Tasty	.109	.082	.034	.117	.145	.095	.274	.265	.260	.241	.573	1.00	.330	.141	.093	.124	.114
Easily and quickly prepared	.011	.091	.117	.072	.148	.239	.178	.158	.302	.154	.337	.330	1.00	.517	.335	.165	.168
Has low fat content	.120	.155	.099	.035	.183	.191	.247	.211	.342	.234	.149	.141	.517	1.00	.607	.169	.078
Contains few calories	.088	.141	.133	.064	.069	.095	.196	.148	.241	.174	.247	.093	.335	.607	1.00	.215	.078
Luxury products	.041	.049	.125	.014	.006	.138	.064	.007	.155	.137	.096	.124	.165	.169	.215	1.00	.388
Trendy	-.059	-.056	.102	-.040	.000	.036	.036	-.019	.046	.042	.052	.114	.168	.078	.078	.388	1.00

Table 2. Correlation matrix for 17 characteristics of organic products.

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Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.749
Bartlett's Test of Sphericity	Approx. Chi-Square	1476.976
	df	136
	Sig.	.000

Table 3. KMO and Bartlett's feasibility test of the PCA method.

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Total Variance Explained									
Components	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	4.212	24.776	24.776	4.212	24.776	24.776	2.700	15.884	15.884
2	2.172	12.777	37.553	2.172	12.777	37.553	2.598	15.284	31.168
3	1.579	9.287	46.840	1.579	9.287	46.840	2.005	11.794	42.962
4	1.291	7.594	54.434	1.291	7.594	54.434	1.718	10.108	53.069
5	1.215	7.149	61.583	1.215	7.149	61.583	1.447	8.514	61.583
6	.944	5.554	67.137						
7	.743	4.371	71.508						
8	.711	4.183	75.691						
9	.673	3.958	79.649						
10	.622	3.661	83.311						
11	.581	3.415	86.725						
12	.552	3.249	89.975						
13	.449	2.642	92.617						
14	.374	2.202	94.818						
15	.315	1.856	96.674						
16	.300	1.763	98.437						
17	.266	1.563	100.000						

Table 4. Eigenvalues for 17 characteristics of organic products.

Component Matrix					
	Component				
	1	2	3	4	5
Artificial color and flavour	.539	-.601	.050	.007	-.014
Artificial ingredients	.500	-.565	.232	-.013	-.110
No traces of pesticides	.417	-.483	.419	.049	.075
No GMO	.378	-.567	.200	.093	-.026
Doesn't affect the environment negatively	.471	-.243	-.085	-.156	.097
Contains high nutritional values	.416	.176	-.260	-.273	.298
Rich in minerals and vitamins	.625	.148	-.449	-.087	.140
Healthy	.696	-.144	-.410	-.040	.114
Rich in protein	.616	.312	-.305	-.089	.053
Contains natural ingredients	.631	-.049	-.203	.042	.148
Has a nice scent	.482	.265	.036	.613	-.286
Tasty	.480	.254	-.063	.670	-.124
Easily and quickly prepared	.505	.425	.282	-.004	-.232
Has low fat content	.546	.358	.288	-.442	-.310
Contains few calories	.461	.317	.387	-.340	-.333
Luxury products	.255	.274	.467	.034	.549
Trendy	.121	.290	.439	.159	.619

Table 5. Non-rotated component matrix.

Rotated Component Matrix					
	Component				
	1	2	3	4	5
Artificial color and flavour	.248	.764	-.012	.038	-.089
Artificial ingredients	.086	.779	.124	.040	-.061
No traces of pesticides	-.030	.734	.094	.029	.204
No GMO	.028	.712	-.031	.062	-.016
Doesn't affect the environment negatively	.403	.388	.077	-.056	-.003
Contains high nutritional values	.619	-.045	.117	-.115	.155
Rich in minerals and vitamins	.778	.030	.095	.159	-.028
Healthy	.746	.315	.005	.152	-.095
Rich in protein	.675	-.054	.270	.219	.030
Contains natural ingredients	.578	.280	.059	.209	.073
Has a nice scent	.100	.075	.186	.843	.012
Tasty	.198	.048	.033	.844	.087
Easily and quickly prepared	.139	.011	.634	.350	.158
Has low fat content	.228	.068	.862	-.004	.032
Contains few calories	.074	.098	.817	.046	.058
Luxury products	.083	.051	.162	.029	.790
Trendy	.007	-.033	.011	.073	.833

Table 6. Rotated component matrix using the "varimax" method.

Independent Samples Test										
		Levene's Test for Equality of Variances		T-test for Equality of Means						
		F	Sig.	t	df	Sig.(2- tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
Healthy and natural products	Equal variances assumed	3.964	.047	-.344	298	.731	-.04059782	.11786435	-.27254973	.19135409
	Equal variances not assumed			-.339	242.324	.735	-.04059782	.11986667	-.27671142	.19551578
Absence of artificial ingredients, pesticides, fertilizers, and GMOs	Equal variances assumed	.202	.887	1.154	298	.250	.13568342	.11762549	-.09579844	.36716527
	Equal variances not assumed			1.152	256.895	.250	.13568342	.11772976	-.09615489	.36752172
Low levels of fat and calories	Equal variances assumed	.240	.624	-2.809	298	.005	-.32688624	.11635705	-.55587185	-.09790063
	Equal variances not assumed			-2.843	267.905	.005	-.32688624	.11499312	-.55329141	-.10048107
Taste and scent	Equal variances assumed	2.765	.097	.057	298	.955	.00666445	.11788717	-.22533239	.23866128
	Equal variances not assumed			0.55	228.965	.956	.00666445	.12163732	-.23300716	.24633606
Luxury and trendy products	Equal variances assumed	.019	.890	.535	298	.593	.06305525	.11783121	-.16883144	.29494193
	Equal variances not assumed			.531	249.907	.596	.06305525	.11884942	-.17101893	.29712942

Table 7. Results of t-test for 5 defined main characteristics of organic products.

Independent Samples Test										
		Levene's Test for Equality of Variances		T-test for Equality of Means						
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
Have bought or have been thinking about buying the product	Equal variances assumed	.098	.754	.639	298	.524	.073	.115	-.152	.299
	Equal variances not assumed			.635	252.217	.526	.073	.115	-.154	.300

Table 8. Results of the t-test on the purchase of organic products.

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