

Health food consumption

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Abstract: The relationship between health and food consumption is already proven by more and more research. What you eat you will be the old saying says. The purpose of our research is to examine how university students are thinking about it in the present and how they are developing. We analyze this question in different point of view. For example according to genders, age groups, occupations. We would like to know the consumption habits of the students and their motivation in the consumption of health food and how can the producers and traders of health food can affect of their habits and consumption. Analyzing the results of our questionnaire survey by statistical methods, We can conclude that this issue among young people is not of paramount importance, no matter. This may, in the long run, have consequences of some parameters.

Keywords: organic food, consumption, survey, attitude.

1 Introduction

According to Council Regulation (EC) No 834/2007, " Organic production is an overall system of farm management and food production that combines best environmental practices, a high level of biodiversity, the preservation of natural resources, the application of high animal welfare standards and a production method in line with the preference of certain consumers for products produced using natural substances and processes. The organic production method thus plays a dual societal role, where it on the one hand provides for a specific market responding to a consumer demand for organic products, and on the other hand delivers public goods contributing to the protection of the environment and animal welfare, as well as to rural development."(Council Regulation 834/2007 / EC)

It is the main rule that chemicals and fertilizers are not used in farming, but also include many animal welfare measures. In the common language, the meaning and use of organic and bio words are often confused, which means that if there is a concept of meaning of the term, using is not strictly bound to one or the other word. Over the last 20 years the spread of organic farming has been remarkable. Several authors and surveys (Müller et al., 2017; Willer et al., 2017; Willer et al., 2018) reported that in addition to significant traffic growth and production growth, this alternative farming has played a significant role in agri-food production and related food trade. Despite this great expectation, this did not happen. This fulfillment took place in only few countries. On the production side, countries with large free pastures (Argentina, China, Australia) showed great growth, but in many places there was a big change in sales, especially in more developed countries with a stronger customer base.

In the United States in 2014, organic fruits and vegetables accounted for about 12% of all food products sold. That was \$ 39 billion in consumer sales. Most of the production has shifted to organic products produced in large-scale farming. At the same time, an organic market has traditionally labor intensive products that are still produced by smaller family farms. (Fitzmaurice & Gareau, 2016).

In the northern neighboring country of Hungary, in Slovakia, 355 organic farmers were registered in 2013. The organic farming itself has existed since 1991 (Palšová et al., 2013). The market is still underdeveloped and therefore counts on state involvement, which is, on the one hand, an adequate regulatory system and, on the other hand, it is active in advising and assisting in the deployment of sales systems.

The crisis in 2008 also affected food consumption, including the consumption of organic agricultural products. (Csiszárík-Kocsir et al. (2014), Csiszárík-Kocsir et al. (B), 2014). However, as cyclicity is observed in world economic performance, food consumption in the world has started growing after 2013.

In Melinda Majláth's (2017) book, it shows that in the context of organic products businesses have significant CSR activities. Eco-friendly products and services are so important that some of these, including food products, use a separate logo from 1992 (eco-flower - European Ecolabel). "The label helps consumers identify organic food." (Majláth, 2017: 86)

2 Material and method

In this article, besides a review of the literatures, the questionnaire survey conducted in 2017 will be evaluated at the University of Óbuda. The original questionnaire was used by Mária Hofer in 2005 and 2006, she first interviewed students of higher education, and expanded the circle of respondents and called people randomly on the street. Our questionnaire is a quasi-repetition of this research, as the questions have not been copied one by one, but by omitting some, some of them rewording, but so that the two researches can be compared. The questionnaire was questioned on a paper basis, then we summarized the results in Excel. In addition to demographic data, the questionnaire questioned the household size and its income, but how much households spend on food. For other questions, using Likert scales (1-5 and 1-7), we have obtained results along a range of issues such as the advantages of organic products and their disadvantages. Do you eat organic food and, if yes why, if not, what is the reason for not? In addition, We asked about the frequency, the forint amount, the place of the choice, the location selection. The contents of the consumer basket and its motivation. An important issue was the extent of the premium for the organic product and the acceptability of organic products. The last question examined the possibilities of greater dissemination. The results were analyzed using basic mathematical methodology (% , means, etc.). For deeper analyses we use the IBM spss softver (version 25) for the analysis of data and to explore the correlation of variables. The methods we used were cross table analyses, means, one-way ANOVA, chi square test and correlate calculation. From those we could draw conclusions. Compared to Hofer's research, we looked at a narrower issue. In 2009, Hofer investigated the relationship between the state of health and eating habits of the population and the creation of conditions for nature conservation and sustainable development. Knowing this, our research questions were the following.

At the beginning of our questionnaire I applied biographical questions (gender, age, schooling, occupation). These were the main variables.

- Q1. Do the students have thorough and reliable information on organic products?
- Q2. Are there differences the answers of genders and what is the difference?
- Q3. How does the age define the answers to questions?
- Q4. What is the role of occupation in organic product consumption?

3 Results

Over the last decade, more and more researchers have been involved in organic farming. Below are some of these researches, without the need for completeness. The significance of the subject is not even better than the fact that organic food production and consumption are gaining ground in traditional food-economical journals, and more and more conferences and other scientific activities are in the spirit of this.

Rock et al. have elaborated a large amount of scientific papers on the subject: 18296 articles, of which 4,018 studies were concerned with organic food and health. Their starting point was to look for evidence of the effect of organic food consumption on health (Rock et al., 2017). Based on the resources and research available to them, the health impact of organic food needs to be further explored.

Other authors are trying to prove that organic food consumption has a good effect on human health (eg Barański et al., 2017).

A German researcher couple are researching in the field of families with children sought to find out why the consumption of organic foods diminishes when the kids become adolescents. Analyzing the causes, it was concluded that the commitment to consuming organic food in adolescents should be strengthened, just as they do not choose confectionery and over-salt products (Riefer & Hamm, 2011).

Su-Huey Quah and Andrew K.G. Tan (2009) investigated Malaysian organic food consumption patterns by ethnic groups. Recently, there have also been significant changes in Romania: Petrescu et al. (2016) measured new trends in organic food consumption in their research. Germany's consumer habits were analyzed by Johanna Lena Hasselbach and Jutta Roosen (2015), using a sample of 720 German consumers. Vietoris et al. (2016) analyzed Romanian consumer habits on a sample of 350 respondents. Kádeková et al. (2017) investigated their organic food consumption in Slovakia in their recent research based on 227 respondents' responses.

Xie found that consumers know very little about organic food meaning, especially about regulation and brand awareness. (Xie, 2013) Several authors (Ellen, 2011, Haghjou, 2013) have studied whether consumers are willing to pay more for organic food, but this is up to 30-40%. Consumer attitudes can be affected by the place of purchase, education, age, consumer beliefs, the quality of organic food and these factors. (Lockie et al., 2004) While health consciousness has a positive influence on the consumption of organic food, social consciousness has a negative effect on it. There is no link between environmental consciousness and

consumption, according to a research. (Hansen et al., 2018). According to Mondelaers et al. (2009), health research is more important in decision than sustainability. (Mondelaers et al., 2009) Hansen et al. (2018) represents the same opinion. Choosing organic foods has had a positive effect on food behavior by having a low impact on change in openness. The involvement of organic products has a positive relationship with both organic food and consumption's behavior, and women are more likely to build positive organic food identities than men. The social environment of consumers and the types of food all influenced the willingness to buy organic food. (Hansen et al., 2018).

In our analysis, we also called for statistical methods for more complex phenomena, besides elementary statistical analyzes. Research primarily seeks to find out what is different from the literature findings, and whether answers to questions differ according to gender, age and occupation. The partition of the qualification was not examined because the majority of the students have not yet finished the university, so we would not have found valuable findings. Furthermore, we investigated whether there is a relationship between household income and expenditure on food and expenditure on organic products.

Here, two analytical sequences could be followed, either by looking at the analytical aspects of each question, or by selecting an analytical viewpoint, along with going through the questions. We follow the last one. First of all, we look at whether the answers given to each gender are different in the case of any question and what can be the background to this.

With respect to gender averages on basic demographic issues such as age, gross income, number of people living in households, etc., there appears to be a difference in gender responses in some cases, but the ANOVA test shows that there is no significant difference. Although approaching the 5% level for some factors, it has not yet reached. For example, age, number of children or education.

There are also questions in the answers to the questions, where there is an obvious difference in gender responses.

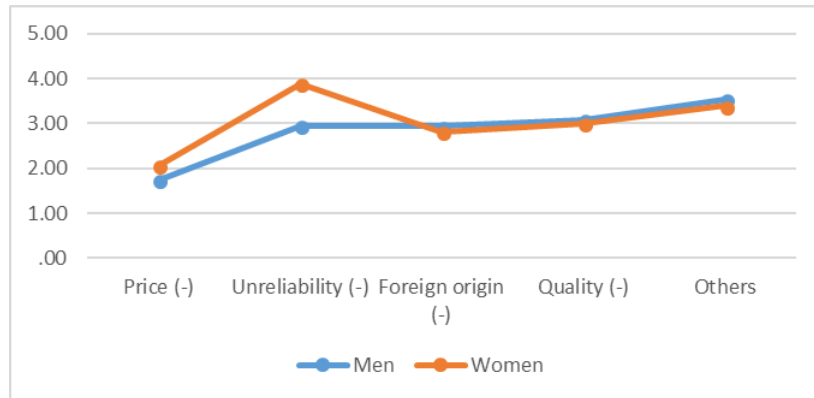


Figure 1
The disadvantages of organic products by gender

In the case of the disadvantages of organic products, the unreliability of the product is less important to women than men. The difference appears to be large but does not reach the 5% threshold on the basis of the ANOVA test, so we can not claim that this pattern shows a real difference between the genders. In the case of other answers, it is clear that the two non-respondents have the same opinion. Processing as the benefit of a product is the question where the result of the test shows a value of 7.5% for men, that is an advantage of a product rather than according to women. However, since this value does not go below 5%, we can not make such a statement. The next issue, where there is a discrepancy between the average gender-based question of place of purchase. Here, not only the average figure, but the ANOVA test also shows a difference between men and women. Women are much more likely to buy in an organic shop than men. Virtually they are the target audience of the organic shops.

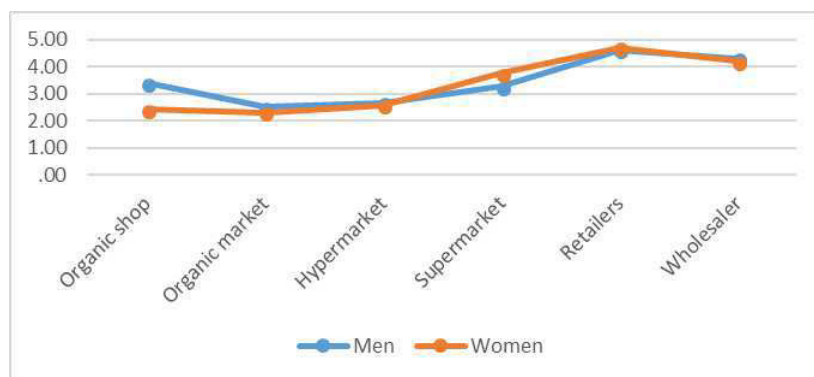


Figure 2
The preferences of place of the shopping by gender

Looking at the most typical purchasing locations, we can see from the averages that „I'm here to buy in general and here I buy organic products as well” more typical for male buyers than ladies. Behind this there is laziness, spontaneity, and loving of comfort. This is confirmed by a deeper study with a significance level of 1.3%.

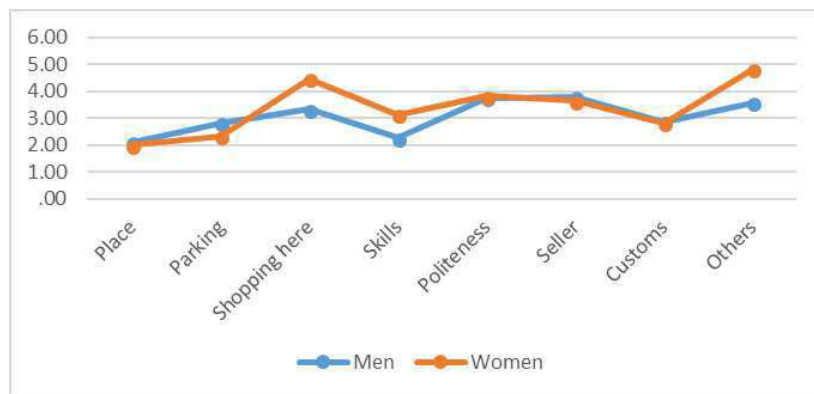


Figure 3
The preferences of reasons of the shopping by gender

In examining the causes of consumption, we find that ladies are more likely to mention health reasons than men. This is demonstrated by the ANOVA test. So ladies are more aware of the positive health effects of the organic product range, and are more concerned with their health than their male counterparts. This is also reflected in the age expectancy.

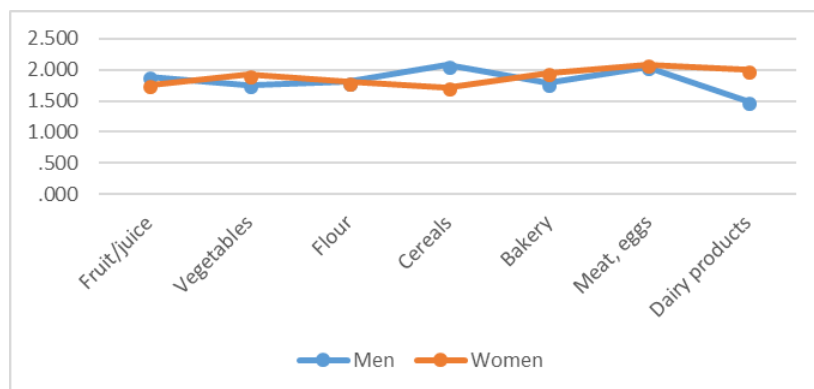


Figure 4
The plus price of products by gender

In terms of food consumption, how important to produce their own production and lifestyle, men consistently gave stronger responses than women, so there is a difference between them. Men are less concerned with their own production and

their lifestyles, that is, they show that they take less account of health reasons and are less inclined to self-reliance and self-care.

With advertising opportunities that promote the product line, ladies consider ads for specialized stores, leaflets and free newspapers more important than men, so they can be better achieved in this way while men are less likely to do so. This is also confirmed by the significance level.

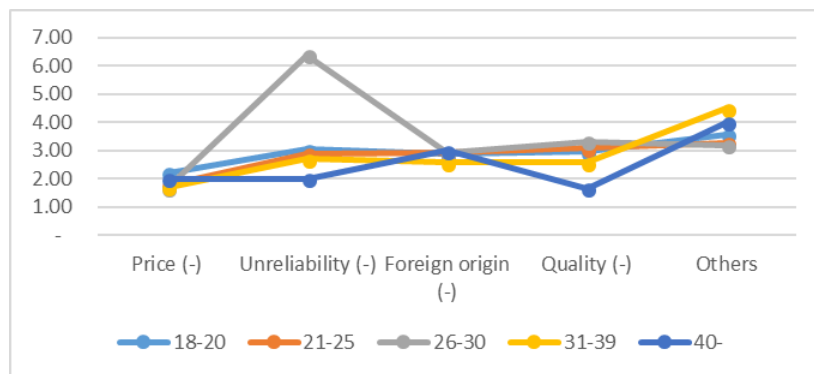


Figure 5

The disadvantages of organic products by age groups

If we look at the responses from age groups, we can see that the 26-30. year-olds consider organic products less unreliable, as over 40, ie there is a difference in age group responses. Such differences can be seen in responding to the advantages of organic products and in examining the causes of consumption. In the last case, there are significant differences between age groups in all questions, but not always consistently among the same groups. While there are benefits and this difference, the age group over the age of 40 is consistently prioritizing all of the benefits. It looks to be more informed than other age groups.

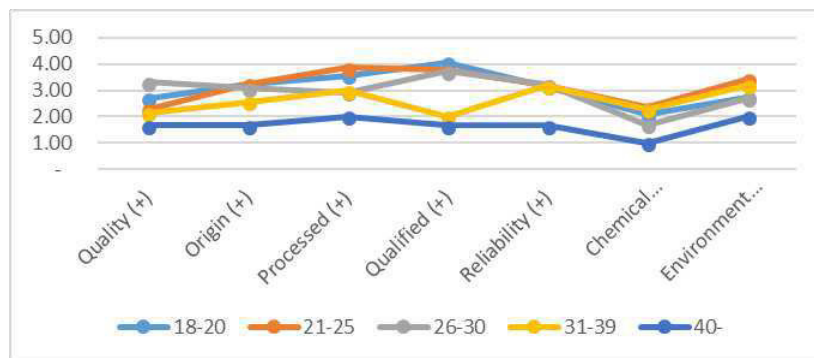


Figure 6

The advantages of organic products by age groups

For other issues where there is a significant difference between the ages and the age groups, we can ask about the causes of consumption. The lack of use of artificial fertilizer for the age group of 26 to 30 years was of paramount importance, but it had little significance over the age of 30. But with age advancing, health should be put to the fore, but it did not show up here. In the same way, for the ages of 26 to 30, the taste of the organic product is more important than the age of 30 years. Also, to be able to consume a product of its own, it is not important for older people, but for younger ones it is important. It is especially important for the age group of under 21 here.

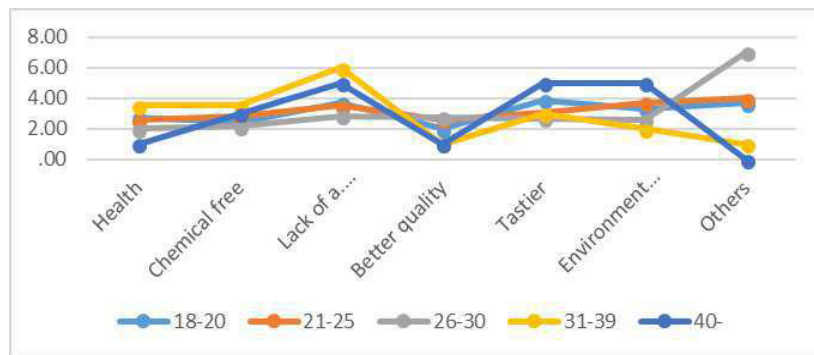


Figure 7

The reasons of consumption of organic food by age groups

The product range is also important for the consumption of organic products because it facilitates access. For 30s ages they are very important, while not for over 40's.

In the age-related composition, several factors have a strong relationship with them. For example, it is not surprising that there is a close relationship between education and age, but there is also a close relationship between occupation and age, number of children and spending on food. The older one, the less he spends on food according to this statement.

The relationship between occupation and food, the size of the income, the number of children and the household population are closely linked to the data of this questionnaire. According to the responses, entrepreneurs and public servants are of the utmost importance for non-chemical products for organic products, while for pupils and the employees of the private sector, this is less important. That is, the first groups pay particular attention to this. In the case of purchased products, it was typical for employees to buy organic honey.

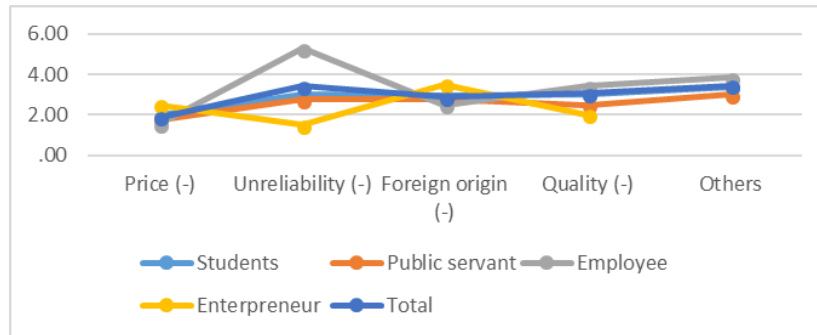


Figure 8

The disadvantages of organic products by occupation

In the question of how much the role of the individual factors in the consumption is, for example, entrepreneurs say the price is less important, while public servants say advertising does not have importance at all.

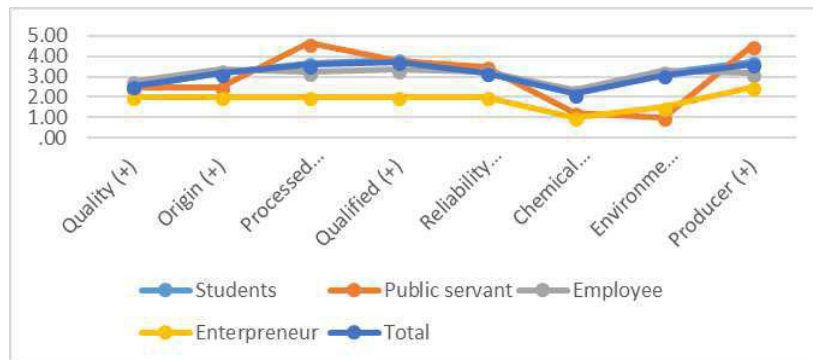


Figure 9

The advantages of organic products by occupation

In the main foodstuffs, the occupation had no distinctive role. That is, regardless of their occupation they buy from these products. Rather than the special products, such as nutritional supplement, oil seeds, there was a greater difference between the groups.

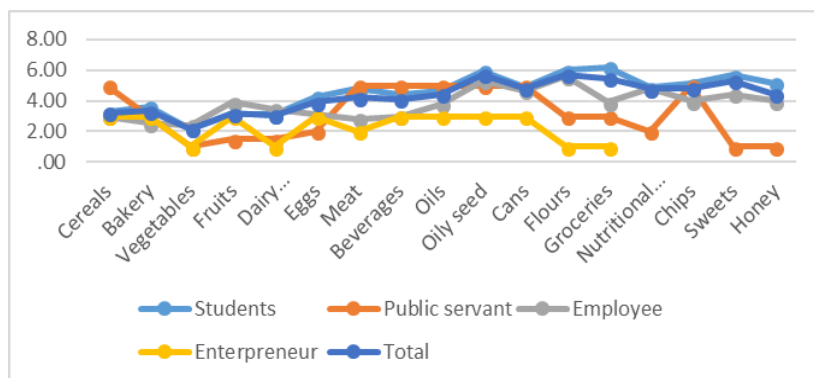


Figure 10
The consumption of organic food by occupation

Conclusions

The interviewees are aware of the two main benefits of organic products and organic production. The positive effect on chemical and environmental impacts. The role of healthcare in the consumption of domestic organic products is high but the consumer prices of the product offer are one of the biggest obstacles to the widespread use of these products. The role of mistrust is significant. The consumers surveyed are skeptical of the fact that the product is truly organic or reliable. The coverage of the sales channel within the country was not covered, but the distribution of organic products and large-scale bakeries offering organic products could in any case indicate that supply chain supply in this area is considerably worse than in Budapest.

Examining gender responses, it can be stated that ladies pay more attention to their health than man customers do. They are willing to go to an organic shop and there ads can affect to them. At the time of the editing and the occupational examination, several statements were found, but a deeper examination would be needed to establish the underlying causes.

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