

The consumption of organic products according to a survey

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Abstract: The history of organic agriculture started in the 1920s, the ever-expanding production method has taken even greater momentum by the health conscious customers of the 80's. Thus we now see that it accounts for 3-4% of all food consumption, accounting for more than 5% of all agricultural production areas. Initial researches have shown that they have begun to consume such products for fashion, health or the recovery of health. Today, awareness and environmental protection have also come to the fore. Production is scattered throughout the world. Australia, South America and Europe show the highest volume of production, while consumption is most typical in North America and Western Europe. In the latter countries, the rate of consumption increases year by year. What do customers expect from these products? What factors should producers show to their demand for their products? In Hungary, this growth in consumption and production has stopped in the last 8-9 years. What are the reasons for these? What does a consumer motivate to look for and buy this product scope. Firstly, I asked students from our university through a targeted questionnaire on what features, motivational factors, what they know about organic products, whether they are consumed or not, and why not why or why they do it. After answering a number of questions, he states that the health of the students is not of paramount importance. Typically, they do not look for this product scope. They think these are too expensive, there is mistrust. The products are sold in small quantities, rarely buy and mainly with their everyday shopping. To boost trust, lower prices and, above all, strengthening information. At this point, there is a chance that we will get a little closer to the western trends in the consumption of organic products.

Keywords: organic products, consumption, organic markets, motivation, mistrust, high price.

1. Material and methodology

I used the domestic and international literature of recent years to write, but it was also my own research. In addition to a questionnaire survey by consumers, deep

interviews with producers were also given. Based on these lessons learned, we have analyzed changes in recent years to find the underlying causes.

My hypotheses are the following.

H1 One of the main causes of the downturn is the decline in household spending on food, with particular reference to the prices of organic products. That is, in terms of household income / consumer price, organic products are in a worse position.

H2. Another major obstacle to the procurement of domestic organic products is the scarcity, time and distance of purchasing opportunities, especially in rural areas.

H3 Another important cause of low consumption is mistrust and related ignorance. Awareness could improve the consumption of this product range.

2. Introduction

Approximately 20 years ago, the growth of organic farming was significant. Then, according to several authors and surveys, it seemed that, besides significant traffic growth and production growth, this alternative farming method has taken a significant part in the agri-food trade and its related food trade. Despite this great expectation, it did not happen. More to say, it only took place in a few countries. From the side of production, in the countries with large free pastures (Argentina, China, Australia), there has been great gains in sales, while in the developed countries with more knowledgeable and prosperous purchasing layers.

The crisis appeared in 2008 had a great impact onto the food consumption, especially the organic farming products, which was mostly negative. (Csiszárík-Kocsir-Medve, 2014., Csiszárík-Kocsir-Fodor-Medve, 2014.) But after 2013. there was an increase again in the food consumption in the world.

We have stastical data from 2015. That year 50.9 million hectares of organic farming were cultivated worldwide of the total 48.626,4 million hectares. (data.worldbank.org) This means 0,1% of the total. And it is 6.5 million hectares increase compared to the previous year and 20.7 million hectares increase compared to 2005 figures. We can see the largest territories in Australia and Oceania and Europe. But today the recordes is Australia. Australia has achieved this large growth, involving 97% of organic areas, with large-scale pastures. Significant land area growth of 17% was found in free pastures, which make up 2/3 of the organic areas. So, not a high-tech horticulture or cereal production is a major part of the area, but the easy-to-expand, accessible, migratory pastures. There are typical in

this continent and South America. The proportion of areas is 20% of all organic areas, typically with rice growing, green fodder, oil seeds and cotton, and seed production. The share of the permanent crop is 4 million hectares, accounting for 8% of the total area. It includes coffee, olive oil, walnuts, grapes and tropical fruits. Australia and Oceania has almost half of the world's organic rated areas, while Europe has one quarter and Latin America with 13%. The size of the wilderness areas amounts to 39.7 million hectares. This means that these areas may not be owned by the farmer, but are typically in the hands of a forestry, and the collection and collection of crops (eg mushrooms, forest berries, raisins, etc.) sell or process and so on. This activity is typically a way of earning income for the poorer countries. For these people, their own land is impossible to own in many cases, but owners of large land or forest areas contribute to the exercise of this activity, they can offer herbs and forest crops.

The number of producers reached 2.4 million in 2015. Producers typically come from Asia, Africa and South America. This also indicates that Africa and Asia have smaller plant typically, and South American producers do not have large areas on average, apart from livestock farming. Not surprisingly, most organic farmers came from these continents. India (585,000), Ethiopia (203,000), Mexico (200,000) are counted as leaders. Compared to the previous year, there was a 7% increase in the number of growers, which numbered more than 160,000 plants. It is typical that only a quarter of the territorial growth, but 89% of the producer increase is affected by the developing countries and their respective markets. That is, these producers can sell their products on a non-domestic market but are typically exported and the developed markets and consumers can buy them. (Willer, Arbenz 2018)

The World of Organic Agriculture 2015

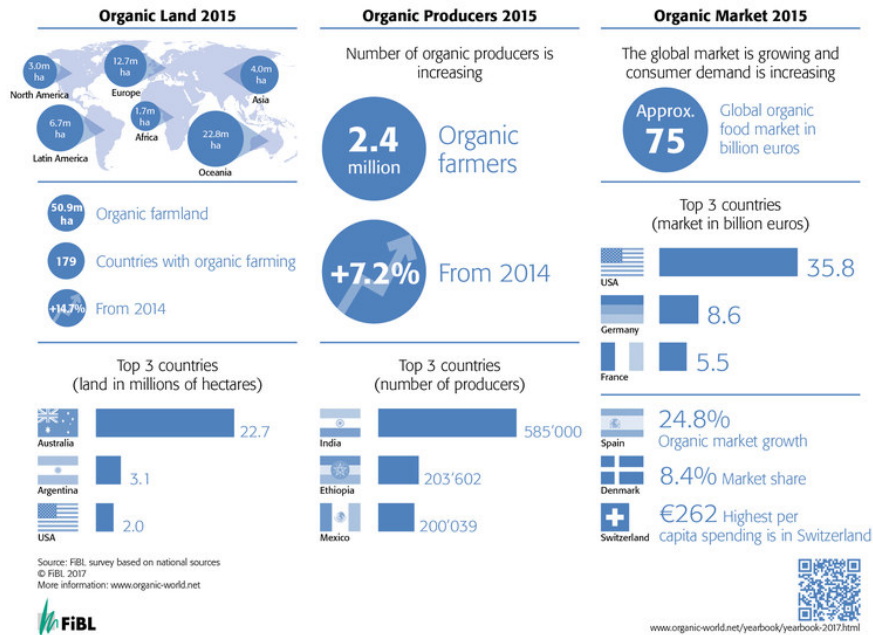


Figure 1.
The world of organic agriculture 2015.
Source: FiBL in Willer, Arbenz 2018.

The conclusion is that organic agriculture can only contribute to world's food supply if there will be some conditions realized. It is necessary a well designed food system in which reducing the number of animals and using feed and food wastage. In global level reducing animal product consumption in human diet is a strategy for more sustainable food systems to help the strengthen of natural resource use, human health and environment protection. If the production side reduce the animal product output we would be able to affect this system. organic agriculture can contribute to providing sufficient food and improving environmental impacts but it is important to use high level of legumes and reduce the food competing feed use, livestock product quantities and food wastage. But changes in the side of consumption are important because these changes can help to reduce the important of the need for yield increases. It can help to provide an optimal food system. The main tasks are increasing yields, organic production and reducing wastage and animal numbers and product consumption. And we need these to combine to reach these goals. (Muller et al. 2017.)

3. Markets in the world

In 2015, organic food and beverage sales amounted to \$ 81.6 billion in global markets. Not surprisingly, North America and Europe accounted for 90% of this. Help of the solvency demand. So, production is scattered across the globe, while consumption is concentrated on two continents. The other is that the number of consumers in these countries is not large, that is, the solvency of the narrow layer and the change in their consumer preference affects demand and supply. If we look at the country's turnover, we can see that the United States has a turnover of 35.8 billion euros, followed by Germany (8.6 billion euros) and France (5.5 billion euros). The European Union's turnover is below the US's total turnover, but it is still significant, as it accounts for 35.1% of the world's total organic turnover by 27.1 billion euro. China is next with its 4.7 billion euros turnover. It is also worth examining the per capita consumption. It shows what countries are concentrated on consumption. In this indicator, we are not examining the countries with the highest consumption in the absolute value but the magnitude of individual consumption. We have more than € 170 average personal consumption per year in Switzerland, Denmark, Luxembourg and Sweden. In these countries, the market share of organic products is well above the 7% in the world. 8.4% in Denmark and 7.7% in Switzerland, for example.

North America has the largest organic product market in the world. With an annual turnover of 43.3 billion dollars (39.03 billion euros). The United States is the largest market for which the market for organic products accounts for up to 5% of total food turnover. Indeed, in the category of fresh vegetables, fruits reach 10% of organic food. This is followed by the turnover of dairy products, with a similar percentage, of which milk and yogurt are the leading products. As domestic supply does not reach demand levels, organic products are imported from almost all continents. Only vegetables and fruits can satisfy demand, and for all other products the import is decisive. At the same time, both the US and Canada have appeared in international organic trade, typically with EU, Swiss and Far Eastern exports. Major commercial units are characterized by their own branded products in the organic product market. (Willer, Lernoud, 2017.)

In Europe, the organic product range was 31.1 billion dollars (28.03 billion euros). Typically, Germany, France, Italy and Switzerland have the highest turnover, but Denmark has the largest market share, with 8.4% of organic food being harvested. Europe is also characterized by the fact that its largest retail company stands out with its own branded organic products with its own label. For example, Dennree has more than 200 units in Germany and Austria, or Biocoop with approximately 400 stores in France, but 300 Collobora B'io units in Italy, while many large chain stores have opened an organic supermarket such as REWE or Auchan. It can be seen that the markets of organic products are developing very dynamically, and we can see that this development seems to be unbroken.

At present, the following trends are observed in EU organic products markets.

- Dynamically strengthening retail markets. This market is growing steadily every year in Europe. It accounts for 3-4% of all food consumption today.
- Consumers spend more and more on organic food in absolute terms. For example, between 2005. and 2014. this increase was 110% and from EUR 22.4 (2005) to EUR 47.4 (2014) on average per person. During this time period, all food and non-alcoholic beverages consumed by households remained virtually constant, rising by only 13%.
- Some premium organic products have achieved more than the average market share in their product categories. Organic eggs have 11-22% share in Austria, Belgium, Finland, France, Germany and the Netherlands.
- Milk products have a 5-10% share in Austria, Germany or the Netherlands, for example. Biotech alone reached 15.7% in 2014 in Austria.
- In the fruit and vegetable market, 20% of the products in many countries are organic products. Italy, Ireland, France, Germany and Sweden, for example.

If we want to combine the size of organic areas with the size of the market, we can state the following. Organic cultivation accounts for 5.7% of the EU's total cultivated land. So the size of the cultivated land is higher than the turnover. Average area growth has fallen to 1.1% in 2014. The number of producers increased by 0.2% over the same period. In many countries we find stagnation in the number of producers, especially in pioneering countries such as Denmark, Austria, or Germany, the United Kingdom. (Meredith, Willer, 2016)

This is also confirmed by Luczka, which is behind the spatial growth of traffic growth. Many organic farmers in Poland are forced to sell their product as a conventional one because they do not meet demand for supply. In Central and Eastern Europe, the main reason for this is the average price of high ecological products. (Luczka, 2016)

In Hungary we can see a stable situation in the turnover of this kind of production. Hungarian cultivation territories and turnover have not changed largely for last years. There is no market gap in the western European countries for the Hungarian products because their quality and process level of these products is not too high. In the domestic market, import is typical. There are fresh vegetable and fruit producers with premium prices and large exporters, but there are no producer supplying the middle class consumers with not too expensive organic food.

Table 1.
Organic production and market by country groups Source: Meredith, Willer, 2016.

Country group	Retail turnover (billion euro)	Consumption per person (euro)	The number of producers	Area (million ha)	% of whole area
EU-28	24	47.4	257 525	10.3	5.70%
Europe	26.2	35.5	339 824	11.6	2.40%
World	62.6	8.3	2 260 361	43.7	1%
EU-15	23.5	58	194 979	7.8	6.10%
EU-13	0.5	4	62 546	2.4	4.70%
CPC	0.005	0.1	73 375	0.5	1.50%
EFTA	2.1	154	8 500	0.2	4.40%
Other european countries	0.1	1	424	0.7	0.20%

4. Subsidies

Support for organic production can be found in the new Rural Development Program. This rate varies from one country to another. We can observe a big scattering. 0.2% in Malta and 13.2% in Denmark, for the total Rural Development Program for organic agriculture. The purpose of the support is to encourage the conversion of conventional areas into organic areas and, secondly, to preserve it in areas already organically cultivated. The purpose of the support is twofold. On the one hand, the protection of the environment is a guarantee of beneficial effects, for example preserving biodiversity, protecting the soil from lower environmental loads, protecting the water bases and promoting higher nutritious foods. Until 2020, Hungary intends to allocate a total euro 207,589,705 in the amount of HUF 64.4 billion. 80% of this can be used for ÖKO support. The supporting intensity is 100%, no degression is applied. Support is a field-based, non-refundable subsidy. The purpose of the aid is to compensate for over-costs and to compensate for lost profits and revenues. (NAK 2016)

5. Issues of the efficiency of organic supply chains

Supply chains suffer from shortcomings in supply and demand, logistical problems that do not allow supply and demand to be coordinated. Studies on organic supply chains address a number of issues that include:

- characterized by high operating costs,
- the lack of consistency between supply and demand, not meeting the two,
- poor reliability of supply
- lack of cooperation between the members of the chain
- different values and motivations between different actors in the chain
- lack of information flow. (Meredith, Willer, 2016)

Organic farming developed primarily at the level of primary production, since at the beginning of the 20th century it started to use cereals, vegetables, fruit and vegetable raw foods, and the regulation was associated with it. At this level the regulation is detailed and traditional. For example Hungarian producers can use surely these kind of regulations in the practice. In the product level, the processing is less regulated than the primary production level. This unregulation cause insecurity and the system can be easily circumvented. Since control fees in this sector are a compensation for rating, producers and traders would be more vulnerable as a result of detailed disclosure. However, retail chains with existing detailed data will treat this information as business secrets, and will not voluntarily outsource it restore confidence while reducing costs.

Further development of the agri-food systems and the development of knowledge transfer require additional private and public investment in the field of agri-ecological research and innovation. Systems that follow the deepened practice of organic farming can achieve 20% higher profits, so innovation returns in the results. (Dinis et al., 2015)

6. Sales and marketing channels

Channels in different countries differ from country to country. France, Italy and Germany have achieved strong market growth in recent years. Typically, specialized retailers perform a larger sales slice. Expertise and the size of sales space play an important role in sales. Nevertheless, we can see that the supermarket countries have been able to continually increase the sales of organic foodstuffs (eg Austria, Denmark, Sweden, Switzerland and the United Kingdom). At the same time, in countries such as Germany, specialist marketing channels (organic shops) have grown significantly, while the sale of supermarkets has stagnated before 2014.

Almost half of retailers engaged in the trade in mass products increased the turnover and supply of natural products. The most successful merchants have developed their own labeling product line to designate and differentiate their natural products. (Richman, 1999)

There are many products that have a significant share of the entire sales market (some examples):

- In many countries, organic eggs are one of the success stories of the entire retail market. For example, Switzerland and France have a market share of more than 20%. In most other countries where data is available.
- Organic fruits and vegetables continue to be very popular with European organic-consumers. After the egg, organic vegetables have the highest market share, which is 9 to 15% of the sales volume of all vegetables sold in Switzerland, Austria and Germany. For example, fresh carrots have only 30% market share in Germany.
- In some countries, organic dairy products account for about 5% of all milk production. In Switzerland, they still reach 10%. (Meredith, Willer 2016)

7. Consumer' habits and trends

The habits of different consumers were reported recently. But only some research tests the consumers of organic farming. Xie found that consumers knew very little about the organic food in the aspect of knowledge of concept, law and brand. (Xie, 2013) More writers (Ellen, 2011, Haghjou, 2013) studied that the consumers are willing to pay more for organic food but not more than 30-40%. The attitude of consumers can be affected by the place of the purchase, the education, age, religion of consumers, the quality of organic food and their emotional factors. (Lockie et al, 2004.) Health consciousness affects positively to organic food's consumption and social consciousness has negatively affect to it. There is no connection between environmental consciousness and consumption. (Hansen et al, 2018). According to Mondelaers et al, (2009) health is more important in the choice than sustainability. (Mondelaers et al., 2009) Hansen et al. (2018.) has the same opinion. Organic food identity had a positive influence on food behaviour with low levels of openness to change. Organic food involvement was positively connected to both organic food and its behaviour and female are more likely to build a positive organic food identity than males. Age negatively influenced intentional organic food behaviour. Females and younger people are more likely to intend to be a positive attituders toward organic food behaviour. Consumers' social surroundings and food types affected the willingness of purchase of organic food. (Hansen et al, 2018).

My research wants to repeat Hofer's research from 2006. and analyse whether there would be differences and changes according to 2006. research, I compared what happened and what has happened in the past 11 years. In addition to the

demographic data, the questionnaires examined household income and the typical consumer and consumption habits. The questionnaire asked about the qualification of organic products, such as their beneficial and disadvantageous properties. She has been researching what kind of foods typically are placed in the basket of consumers and what are the main purchasing locations. She also looked at the motivations of consumption, and sought out the possible even more acceptable surcharges. In 2017 102 students of Óbuda University were reported in this research.

Table 2.
Basic data of the survey Source: own research

Age	23,29
The number of persons living in the household	3,02
Children under 18 age	0,40
Net income of the household in thousand HUF	326,60
Consumption of food in thousand HUF	53,84

The target consumers of Hofer's research was habitants around Győr and students of Győr. 571 persons were asked in 2006 by Hofer's group. Hofer supposed that the low level of the consumption of organic food was caused by the lack of knowledge of consumers and the consumption of organic products also plays an important role in the health and environmental aspects of economic competitiveness. However, he adds that the cause of health is due to the consumption of organic products, while the other two aspects are the consequence. Because of the health reason, consumption can be increased, with the consequence of increasing production, which calls for the product structure to improve, with which competitiveness also increases. This also implies a more environmentally friendly technological presence, which will improve the environmental performance of production. Hofer thinks that the main motivation factor of consumption is health protection and the environment protection and economical competitiveness is consequence. (Hofer, 2009)

The survey consisted of a questionnaire of 20 questions, both on the one hand and on the other by selected consumers. The topics of the questions were environment pollution, healthy nutrition, awareness of consumers, self sufficiency, marketing tools. The survey is still ongoing, so at the time of writing this article only the processing of 102 questionnaires was possible. Over time, this number will increase and reach the hundreds of magnitude. The survey is true that it can not be considered representative at this time, but its results are similar to those of Hofer's research conducted 11 years ago.

Table 3
Some basic data from the 2 difference surveys
Source: own research and Hofer 2009.

Category	2006. Hofer	2017. Óbuda
Ratio of gender	29,6 % male	50% male
Average age	28,8	23,3
Ratio of organic consumers	56,40%	74,50%

My research consisted of more males and younger responders. Today higher ration of responders try the organic food than in 2006. This would mean openness and the easier achievement of this kind of food, better supply chain. What are the main factors for consumption of organic food. Hofer's answer is health, prevention and marketing tools. But health protection and children health protection are the main answers. According to this survey marketing tools can affect lower level for the consumption. Our research said that the better quality (marketing tool possibility) and health reason are the main causes. The reason of the difference would be increase of awareness and higher knowledge of organic food compared to 2006. The next question is the motivation of organic consumption. As the responders in 2006 are older than in Óbuda's survey and therefore most of them have family having children and child's health was more important than today. Own production, food security, healthy life, offer of a doctos was similar in the 2 surveys. In Hofer's survey the responders thought that organic food is healthier, having good price-value ration and they know producers and trust them. The only one different is that Óbuda's survey shohs me that the good supply in supermarkets can help the organic consumption. Hofer showed the knowledge of consumers about organic meaning is incomplete and misunderstanding. This causes confusion and the consumers do not appreciate this kind of food properly. The consumption basket of 2 surveys is similar. Cereals, fruits and vegetables, meat, dairy productions.

The main problem of organic products was the higher consumer price according to the respondents in both of survey. She followed the question of reliability and non-domestic affiliation. Among its benefits, it is clear that its chemical non-chemical properties and its environmental impact are considered. So the positive effect on health has come out in this case. Reliability and quality are also important for consumers. So, an important aspect of the consumption of organic products is how far the producer and the goods are trusted. So there is not enough certification here, credibility and confidence in the qualification process and in the qualifiers are important for the consumer.

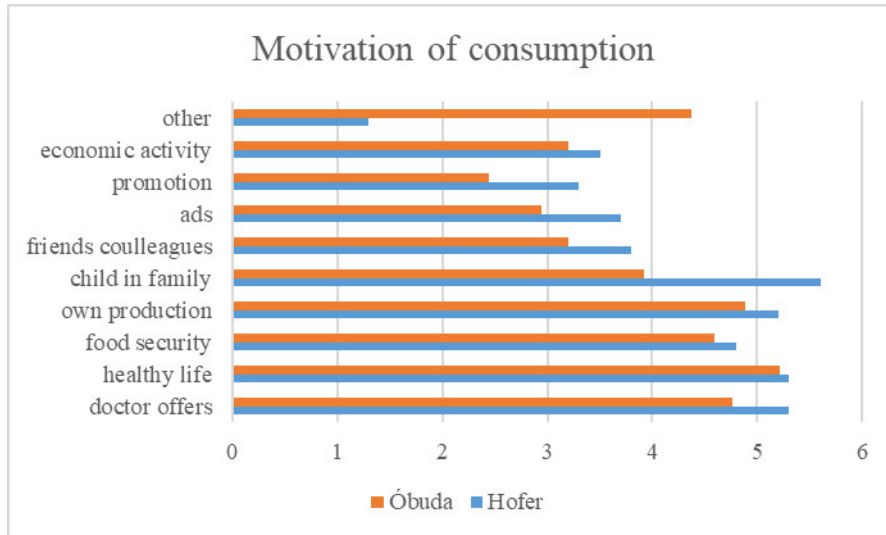


Figure 2.
motivation of consumption
Source: own research and Hofer 2009.

The location of the place of purchase for the interviewees was of the utmost importance and, accordingly, many people buy hyper- or supermarket products if they are consumed at all. These were similar in both of survey. Typically, they only consume organic products on a monthly basis and the amounts to be paid for them did not reach 10,000 HUF (35 euros) per month in 2017. The role of specialty shops in Germany seems to be negligible. Typical purchase of organic products is that when shopping in the shopping cart is sold in the basket.

What would the plus price be what the consumer is willing to pay for the organic food? According to Hofer it would be 15-20%. in 2017 it was 23%. But the sense of plus price was more. The average was 88% plus price. What they would tolerate for consumers is very similar to the 20-30% premium known according to the literature. So the interviewees are very price-sensitive about this product range. In order to spread the product range to lower prices, confidence-building and a good example of friends and acquaintances are needed to make these products more appropriate.

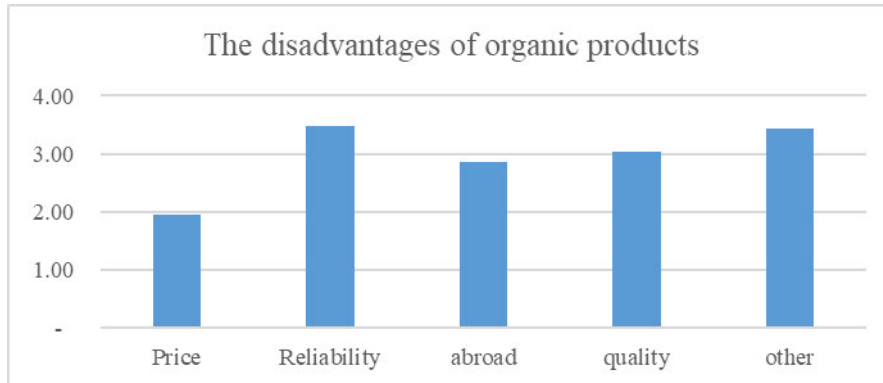


Figure 3.

The disadvantages of organic products (where 1 means most typical value 4 the least typical value)

Source: own research

Indeed, it is also apparent from consumers' inquiries that, in order to promote better distribution, it is essential to broaden and deepen awareness, to strengthen and apply advertising campaigns. In addition, with the help of unique marketing tools, the consumer can be increased by using more modern, digital means of marketing. (Cairns, 2013)

Conclusions

The health factor of domestic organic-products is the great importance, but the consumer price of the product range is one of the biggest obstacles to widespread use of these products. The role of mistrust is significant. The surveyed consumers are skeptical as to whether the product is truly organic or not reliable. This fits in with the fact that consumers do not have reliable and thorough knowledge of organic production, its rules and procedures. Developing awareness should definitely be given more emphasis if we want to exploit the market potential of this segment in our country. Indeed, over the past decade, consumption of organic food has not increased in terms of quantity and turnover in HUF, in proportion to domestic food consumption. This was also confirmed by the questionnaire results. One of the main reasons for the downturn in particular a decline in food expenditure of households on organic products. This is partly true, as the respondents were not justified by the income situation as reducing their spending, but with the scarcity of sales channels, excessive consumer prices and the scarcity of knowledge on organic products was still the cause of the decline. Another major obstacle to the procurement of domestic organic-products is the scarcity, time and distance of purchasing opportunities, especially in rural areas. This is true in the region, the capital is becoming less and less. Hyper- and supermarkets are becoming increasingly popular in these products.

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