The Attitudes of Hungarian Consumers Towards Organic Food

Anano Kushashvili
MSc in Marketing
2019

Thesis Supervisor: Agárdi Irma, PhD
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1. Introduction

The aim of this thesis is to gain insight into attitudes and interest to buy organically produced food among Hungarian consumers. Thus to investigate main influencing factors which form the general attitude and purchase intention.

The market of organic food in Hungary has high potential and strategic importance (Szakály, 2004). Although the demand for organic food is quite low, 65% of Hungarians consider organic food as an ideal food for future consumption (GFK Hungaria, 2005). According to Szente (2009), 40.1% of consumers are willing to pay a price premium for organic products in order to preserve their health. Due to emerging concerns about conventional (non-organic or processed) food being harmful and low in quality, the trend of organic food consumption in the world increases rapidly and has already made a huge change in the food industry. Previous empirical research regarding organic food has examined what are the main motives and barriers for organic food consumption (e.g., Apaolaza, Hartmann, D’souza & López, 2018; Aschemann-Witzel & Zielke, 2017; Lee & Yun, 2015; Mazzacano D’Amato & Falzon, 2005).

One of the important influencing factors is a health concern. Consumers started to desire more and more healthy and natural product, as concerns of potential buyers towards healthiness, freshness, safety and nutrition value have grown (Vega-Zamora, Torres- Ruiz, Murgado-Armenteros & Parras-Rosa, 2014). More and more people are worried about the increased number of diseases caused by genetically modified food (Shafie & Rennie, 2012; Ruiz de Maya, López-Lópe & Munuera, 2011; Pearson, Henryks & Jones, 2011).

Moreover, consumers started questioning the content, taste and nutrition values of the organic products. Due to the lack of trust in this type of food, they are less inclined to make a purchase decision. Research showed that labelling and certification of organic food has a positive impact on consumer attitude since it creates trust and facilitates buying decision (Teng &
Wang, 2015; Meixner, Haas, Perevoshchikova & Canavari, 2014; Manuela, Manuel, Murgado-Armenteros Eva & Jose, 2013).

Research showed that the main preventing factor from buying organic food is a relatively high price (Konuk, 2018; Petljak, Stulec & Renko, 2017; Akman & Tongprasert, 2011). Due to lack of supply, low competition and low demand and with other factors related to production costs of the organic food, the price of organic food is usually higher than conventional food price.

In order to investigate how these influencing factors affect attitudes and buying behaviour, quantitative (also known as descriptive) research method was applied. Results were structured and analyzed using SPSS Statistics 25 and Amos 25 Graphics software.

The thesis work is structured as follows. In the second chapter of this thesis, existing definitions and classifications of organic food will be discussed and literature review will focus on the concept of organic food and related consumer behaviour theories. The third chapter will introduce the main factors which form attitudes toward organic food consumption. Last part of the third chapter will focus on European organic food market with its characteristics and statistical information regarding organic farming land size, demand and supply of organic goods. Later, Hungarian organic food market will be examined and compared with other European countries based on the market perspective and development opportunities. The fourth chapter focuses on the research methodology and hypotheses formulation. Subsequently, the fifth chapter will be devoted to the research itself, the main topics of the survey, focus group and responses. In the final section analysis and results of the research will be disclosed and interpreted. In the sixth chapter the results of the research will be summarized and thesis work will be concluded. Furthermore, the limitations and possibilities of further avenues of research will be discussed.
2. Literature review

In this chapter, the literature regarding organic food and the theoretical framework regarding organic food consumption will be introduced. Different concepts will be examined and compared in order to provide a better understanding of organic food consumption, attitudes and buying decisions among consumers. Finally, the Hungarian organic food market will be examined. In order to see what the known characteristics of consumer behaviour are and what the previous research found out about attitudes toward organic food.

2.1 The definition of organic food

There are a couple of products covered by EU Organic rules, which apply to a product from the crop to the production process and final product as well. Rules differ between production, livestock, food chains, wine, aquaculture and hydroponics. Based on the regulation (Regulation (EU), 2018) the main goal of organic production is to respect the rules of organic farming and enhance environmental protection while building consumer trust and maintaining biodiversity.

Organic production is an overall system of farm management and food production that combines best environmental and climate action practices, a high level of biodiversity, the preservation of natural resources and the application of high animal welfare standards and high production standards in line with the demand of a growing number of consumers for products produced using natural substances and processes. Organic production thus plays a dual societal role, where, on the one hand, it provides for a specific market responding to consumer demand for organic products and, on the other hand, it delivers publicly available goods that contribute to the protection of the environment and animal welfare, as well as to rural development (Regulation (EU), 2018, p. 6).

In addition, “organic” and “bio” are synonyms and both emphasize the natural origin of products. These terms will be used with equal meaning in the thesis work.
To sum up, the definition mentioned above is mainly based on the way of production of organic food. It is important that organic food does not contain chemicals, is safe for the environment and contributes to public health as well as animal welfare.

Seufert, Ramankutty and Mayerhofer (2017) suggest that organic food definition is based on different “poles” (see Figure 1.), which are split in the paper into consumers, legal authorities, producers and academic researchers influence how we define organic food production today. Consumer demand is one of the main drivers of organic production, the producer is the one who shapes the practical meaning of organic food since they are the ones who produce it. The authors who create a central theory discuss ideas about organic food and they have an important role in the history of the definition of organic food. Finally, legal authorities define what should be organic practices and rules. This relationship between the aforementioned poles is illustrated in Figure 1.

Figure 1. The different poles of influence defining organic food production today. Seufert et al, 2017, p. 2

Since the term “organic” has already been defined and main stakeholders have been introduced, in the following part of the thesis the consumer behaviour theories in terms of
organic food consumption will be discussed. Based on theories, the formation of attitudes toward organic food will be explained.

2.3 The formation of the attitudes toward organic food

Speaking about the formation of attitudes toward organic food, it is important to define the precise meaning of attitude. Based on Solomon (2017):

“An attitude is a predisposition to evaluate an object or product positively or negatively. We form attitudes toward products and services, and these attitudes often determine whether we will purchase or not” (Solomon, 2017, p. 324).

The very important part of this definition is “attitudes often determine whether we will purchase or not” as attitudes do not always predict the purchase behaviour. Previous research showed that there is a gap between intention and actual buying behaviour (Pearson et al, 2011; Padel & Foster, 2005).

Based on Lee and Yun (2015) stimuli first appear which contain different attributes of organic food and these attributes are influencing factors on hedonic and utilitarian attitudes, which later lead to buying intention. The utilitarian attitude refers to functional benefits of organic food, such as nutritional value or a good influence on one’s health, while hedonic refers to emotional gratification or belief that the purchase behaviour will have a positive environmental impact. Utilitarian attitude refers to a cognitive decision and hedonic attitude corresponds to affective decision.

Lee and Yun (2015) propose the conceptual model of Stimulus-Organism-Response (S-O-R) which is illustrated below in Figure 2. As it might be apparent this model is modified from the original version, since organism was built on three parameters: pleasure, arousal and dominance (PAD). However, research showed that this is too narrow scope for explaining emotional processes and too easy to use. For example, it could be successfully used while evaluating consumer responses to store environment (Richins, 1997). Because of the
marginal relevance of the PAD dimensions to the central topic of this thesis, it will not be elaborated here further.

Based on the conceptual model of S-O-R each of the stimuli can have a direct influence on both types of utilitarian and hedonic attitudes, except sensory appeal. The sensory appeal is connected only to hedonic attitudes and there is a reason behind this, as consumers emotional affect seems to be caused by the sensory attributes (smell, texture, visual and taste).

![Conceptual S-O-R model](image)

Figure 2. Conceptual S-O-R model. Lee and Yun, 2015, p. 3

The research by Lee and Yun (2015) was conducted among people who buy organic food in the grocery shop. Their findings showed that the key influencers of consumers’ attitudes are perceptions of the nutritional content, ecological welfare, sensory appeal, and price attributes of organic food. Thus they influence their behavioural intentions to purchase organic food. Price had a negative influence on buying intentions, therefore the higher the perceived price of the organic product is, the less favourable the attitude towards purchase intention becomes. It is interesting that natural content perception did not have a significant appeal on any of the pillars of the organism, neither on utilitarian nor on the hedonic attitude. Therefore, it is not an important influencing factor on buying decision (Lee et al, 2015).
2.4 The influence of the positive attitude toward an organic food buying decision

Although a very few theoretical frameworks have been employed in organic food studies, an attitude-behaviour model such as Theory of Planned Behavior (TPB) has been used in previous researches (Al-Swidi, Mohammed Raful Huque, Haroon Hafeez & Noor Mohd Shariff, 2014; Ruiz de Maya et al, 2011). It is worth to mention that TPB is an extended version of the Theory of Reasoned Action (TRA) which was modified by Ajzen (1985). The TPB suggests that the intention is the main antecedent of behaviour and refers to three main behavioural drivers: perceived attitude toward the behaviour, subjective norms and perceived behavioural control (Ajzen, 2012).

The main focus of TPB in terms of organic food is the individual’s intention to engage in final buying behaviour (Al-Swidi et al, 2014). Therefore, consumers expressing an attitude with a greater conviction towards products are more likely to act on it and make a buying decision (Solomon, 2017). The perceived behavioural control is named as an important influencing factor which concerns an individual's own judgments regarding buying behaviour. Meaning that perceived barriers (such as price or scarcity) and perceived ability to buy organic food influence final buying decision (Al-Swidi et al, 2014; Tarkiainen & Sundqvist, 2005). The third focus of TPB is related to subjective norms, which refer to the perceived social influences, pressure or judgments. In other words, what the individual thinks others say about him/her.

Another model of buying intentions (Figure 3) of organic food is proposed based on TPB by Tarkiainen et al. (2005). Health consciousness and subjective norms are introduced as influencers on the attitude, whilst price importance and perceived availability are introduced as the direct influencers on buying decision. Positive influence on the buying intention leads to the purchase decision. Tarkiainen et al. (2014) modified the actual TPB, by assuming that subjective norms have an indirect effect on buying intention, by influencing attitude in the first place. This study has led to different results compared to TRA (Fishbein & Ajzen, 1975), as it claims that subjective norms directly influence attitudes. Original theory proposed that
attitudinal and subjective influences might be dependent on each other. Another important finding of this study was that health consciousness does not explain the general attitude toward organic food. However, the study carries limitations, as among organic products only organic bread and flour were examined. However, the results might vary in different product categories.

In conclusion, positive attitude towards organic food does not always lead to a buying decision. The decision is influenced by different factors and in the next chapter, the thesis will focus on social influence and cultural differences in terms of attitude towards organic food.

2.5 Social and cultural factors influence on attitude toward organic food

In this chapter, the TPB will be integrated with Schwartz’s value scale in order to see how the attitude towards organic food is influenced by cultural values among countries.
Cultural values have great influence and trigger discrepancy between purchase behaviour across countries (Ruiz de Maya et al, 2011; Seegebarth, Behrens, Klarmann, Hennigs & Scribner, 2016). The article by Ruiz De Maya et al (2011) analyzed the organic product market in 8 European countries, based on Values Theory and Theory of Planned Behavior. Figure 4 illustrated the three main pillars of TPB under the influence of values and finally, they impact the buying intention.

Schwartz (1994) framework is based on basic cultural values, which are distinguished by their motivational values. Although Schwartz suggested 10 main values (power, achievement, hedonism, stimulation, self-direction, universalism, benevolence, tradition, conformity and security), they were slightly modified by Ruiz de Maya et al. (2011) and only 7 of them were adapted for organic food consumption. They are defined as follows: conservatism (interdependent social relations where security, conformity and tradition are priorities), affective autonomy (interest in promoting and protecting the attainment of positive affective experiences — pleasure, exciting life, varied life), harmony (harmonious fit with nature and the environment — unity with nature, protection of the environment, world of beauty), hierarchy (legitimacy of the hierarchical ascription of roles and fixed resources—social power, authority, humility and wealth), intellectual autonomy (values that situate the person as an autonomous entity who pursues his or her goals of intellectual interest — curious, open-minded, creative), competency (values give priority to the dominance of the surroundings through self-affirmation — ambition, success, risk), and egalitarian compromise (concern for the well-being of others — equality, social justice, responsibility, help) (Ruiz de Maya et al, 2011).

Participant countries were aligned on Schwartz’s value scale. Main findings of Ruiz de Maya et al. (2011) emphasized that cultural values mentioned above have great influence and trigger discrepancy between purchase behaviour across Europe. Citizens of countries which score the highest on Schwartz’s value scale tend to care more about what other’s think and their subjective norms define buying intentions. Therefore subjective norms are the main driving factor to the purchase intention.
Referring to influence of social norms, previous research by Vermier and Verbeke (2006) found out that social norms cause a desire to comply with other members of the society, therefore purchase behaviours are being influenced. Vermier and Verbeke (2006) introduce a premise that a positive attitude caused by social influence towards organic food does not always lead to positive intention and often, the consumer does not make the purchase decision. It has been examined that products, which are promoted regarding ethical and environmental benefits, are more appealing for people who identify themselves among organic consumers (Bartels, 2014).

Since the subjective norms are important for people, it is likely that trendiness of organic food is one of the influencing factors. If people want to eat organic food to be seen as a part of the desired community, they would perceive it as a fashionable product. The research in Romania showed that people perceive organic food as fashionable (Petrescu & Petrescu-Mag, 2015).

In addition, cultural norms and social influence can form an attitude toward organic food and it is important to know what the country-specific social values are. This is relevant for this
thesis as there might be different social norms in Hungary which trigger various attitudes toward organic food consumption.

In conclusion, the theories and concepts regarding attitude formation in terms of organic food has been discussed. The following chapter will focus on the important influencing factors such as healthiness perception, price perception and knowledge about organic product benefits.

3. Main influencing factors of organic food consumption

As the aim of this thesis is to examine main factors which form attitudes toward organic food consumption, it is essential to discuss the factors which previous research found important. In this chapter, healthiness perception will be discussed as a positive influencing factor on attitudes which leads the consumer to the buying decision. As a second influencing factor the information and knowledge regarding organic food will be examined. Furthermore, the effect of nutrition information availability and influence of the term “organic” on the label will be evaluated. Finally, the influence of price perception will be introduced, as the barrier for purchasing organic food.

3.1.1 The influence of the healthiness perception

Increasing concern regarding food being harmful to personal health and environment, raised demand for organic and environmentally friendly food. Research by Apaolaza et al. (2018) focuses on finding out what is the relationship between organic food consumption and subjective well-being. H1 proposed the following: “Organic food consumption leads to an increase in subjective Wellbeing”. Another question arising regarding this hypothesis is that if the relationship between increased subjective wellbeing and organic food consumption exists, what the reason is; It is caused by physiological or psychological aspects. As subjective wellbeing is more related to individual perception, it could happen that the emotional aspect is a bigger influencer in this case (Apaolaza et al, 2018).
Based on the paper, there is a difference in behaviour based on deliberate cognitive decision making and emotional processes. There are different types of consumers, ones who have a feeling of achievement by making healthy food choices and others who just believe in product features leading to well-being. Hypothesis 3a and 3b were introduced for analyzing the direct effect of organic food consumption and indirect positive effects by health beliefs on subjective well-being food (Apaolaza et al, 2018).

Main findings showed that by including organic food in their healthy diet, consumers can positively increase their subjective well-being perception. Hypothesis, stating that there is a label effect on perception, has been justified as well. The influence on wellbeing is higher among consumers who are more health conscious. In the end, authors recommend that by educating consumers regarding the health benefits of organic food, consumption can be fostered, as this would be appealing for more people (Apaolaza et al, 2018).

In addition to the health perception topic, there are differences between the actual health benefits of organic food consumption and the superiority of perceived advantages by consumers. Scientific evidence regarding results derived from the consumption of such products is in divergence from actual benefits (Pearson et al, 2011). While talking about what are positive motivations for purchasing organic products, negative motivations or aspects should not be neglected either. Such as purchase intention and increased demand caused by health issues, such as rising of lifestyle disorders, heart diseases and depression (Rana & Paul, 2017). The concerns of potential buyers towards healthiness, freshness, safety and nutrition value have been grown. More and more people are worried about the increased number of diseases caused by genetically modified food (Shafie & Rennie, 2012).

In contrary to the research discussed above, the study by Mie and Wivstad (2015) claims that there is no evidence of pesticides contained by conventional products are harmful to humans' health. Authors explain that a certain amount of pesticides are essential for humans' health. Choosing organic food instead of conventional products lowers the dietary exposure of pesticides. Authors claim that there is evidence that there are health benefits derived from pesticides and complimentary food should not be fully replaced by organic food. Hereby,
they mention that there is uncertainty regarding risks caused by pesticide consumption, as there are some types of effects (e.g. endocrine disruption - that hinders hormonal system) which are disregarded due to the difficulty to detect them.

Referring to the importance of healthiness perception in terms of organic food consumption, it is certain that previous research showed a positive impact on the attitude toward organic food. However, there are opposite opinions by scientists who claim that a certain amount of chemicals in conventional food are essential for consumers’ health. One of the main scopes of this thesis research will be to find out how the healthiness perception of organic food shapes the attitude towards organic food among Hungarian consumers.

The following chapter will be devoted to education and knowledge regarding organic food, as one of the important factors which have a role in forming attitudes.

3.1.2 Influence of knowledge regarding organic food on attitude

Since consumers are uncertain regarding the benefits of the product, they step back when it comes to buying decision. Consumers do not trust organic products since their knowledge is low or the information given on packages is not enough to give precise nutrition facts such as ingredients and health benefits (Teng et al, 2015). There is a positive relationship between perceived and actual knowledge regarding food. However, regular consumers of organic products have better knowledge and higher purchase rate compared to non-users, whose attitude is positive regarding organic food (Aertsens, Mondelaers, Verbeke & Van Huylenbroeck, 2011).

Thinking about educating consumers regarding organic food and the influence of the nutrition information, studies have shown that there is an influence on buying decision by labels and information on packages (Cranage, Conklin & Lambert, 2004; Manuela et al, 2013; Teng et al, 2015). Consumers trust the word “organic” more and they buy it based on
the healthiness perception that is triggered by given information on the package (Krystallis & Chryssohoidis, 2005).

In order to provide transparency in organic production and contribute consumer trust, there is an EC regulation 834/2007 on organic production and labelling of organic products. The definition of labelling is introduced in the document as follows: “labelling” means any terms, words, particulars, trademarks, brand name, pictorial matter or symbol relating to and placed on any packaging, document, notice, label, board, ring or collar accompanying or referring to a product” (EC, 2007, p. 5).

Based on EC regulation 834/2007 document, in order to avoid misleading of consumers in the organic origin of the product, food should be labelled as organic when most of the ingredients used during production are organic, say 95% of ingredients should be organic.

Another interesting obstacle was that the term “organic” is important for respondents and for those who were positive regarding this issue local origin was a key as well. But in comparison, they would disregard the organic origin of the product and would choose food products which might are not organic but have a local origin (Szente & Torma, 2015). Authors refer to another study by Costanigro et al. (2011) “An in-store valuation of local and organic apples: the role of social desirability” conducted in 2011. These researchers concluded that customers’ attitudes in the U.S are similar to Hungarian consumers’ and they reveal a more positive attitude towards local food products than organic ones (Costanigro et al, 2011).

Apaolaza et al. (2018) suggest that products which are labelled as organic lead consumers to assume that organic is healthier, tastier, lower in calories and appetizing. Although the actual physical benefits might not be apparent as a consequence of the organic food consumption, the emotional aspect triggered by labels convinces consumers that their health condition has been improved (Apaolaza et al, 2018).
The opposite side of the educational factor arises because of new technologies being used for food production, since people do not have knowledge how safe novelty food products are, they demand to switch back to natural/organic food production (Cattaneo, Lavelli, Proserpio, Laureati & Pagliarini, 2018). Since the organic food market is relatively small in Hungary knowledge and perceived benefits are low. Relative knowledge regarding organic food and quality goods scarcity are one of the reasons why customers buy mostly imported or low-quality food (Szente & Torma, 2015). As the supply of these goods is low, demand occurs to be low as well (Rana & Paul, 2017).

Talking about general education regarding organic food, knowledge regarding organic farming and labelling has been examined in Russia. As you can see in Figure 5. 58% of this group had knowledge about the definition of organic production itself. Another significant result of this research was that 79% of respondents at least heard about “organic farming” (Meixner et al, 2014).

![Figure 5. Consumers’ opinions about which definition of organic production is correct. Meixner et al, 2014, p. 5](image)

Apart from this, education regarding existing eco-labels was another main concern in the research by Meixner et al. (2014). Authors found out that knowledge about certificates,
quality signs and labels is relatively low among respondents. Results are presented in Figure 6.

Based on Figure 6, consumers recognized USDA organic label more than any of the others. Authors explain this result by term “organic” being in the description of the label. Similar results were derived in research of customer knowledge regarding organic products in Poland by Zakowska-Biemans (2011). In the same research, authors divided respondents into 5 groups (see Figure 7.) and they found that out of 5 categories, conscious and pragmatic consumers paid more attention to the information regarding the origin of food and whether or not there are any genetically modified ingredients.

<table>
<thead>
<tr>
<th>Labels</th>
<th>Label description</th>
<th>Known label</th>
<th>Unknown label</th>
<th>... is an organic label</th>
<th>... is not an organic label</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Agrosophia’s (Moscow) eco-label “Pure Dew”; standard developed according to EU Regulation 2092/91 (<a href="http://www.biodynamie.ru">www.biodynamie.ru</a>)</td>
<td>35.0%</td>
<td>65.0%</td>
<td>26.3%</td>
<td>73.7%</td>
</tr>
<tr>
<td></td>
<td>St. Petersburg sign of quality; voluntary certification on quality; no organic label (<a href="http://quality.spb.ru">http://quality.spb.ru</a>)</td>
<td>29.7%</td>
<td>70.3%</td>
<td>3.3%</td>
<td>96.7%</td>
</tr>
<tr>
<td></td>
<td>Voluntary life-cycle, eco-labeling program “Vitality Leaf” based on ISO 14024 (<a href="http://www.echounion.ru/en/site.php?&amp;blockType=251">http://www.echounion.ru/en/site.php?&amp;blockType=251</a>)</td>
<td>25.0%</td>
<td>75.0%</td>
<td>16.7%</td>
<td>83.3%</td>
</tr>
<tr>
<td></td>
<td>Sign of quality “Natural Product,” issued by Council of Public Quality Control of Saint Petersburg; no organic label</td>
<td>17.0%</td>
<td>83.0%</td>
<td>15.0%</td>
<td>85.0%</td>
</tr>
<tr>
<td></td>
<td>EU organic label</td>
<td>16.0%</td>
<td>84.0%</td>
<td>17.0%</td>
<td>83.0%</td>
</tr>
<tr>
<td></td>
<td>USDA organic label</td>
<td>10.3%</td>
<td>89.7%</td>
<td>29.7%</td>
<td>70.3%</td>
</tr>
<tr>
<td></td>
<td>JAS label; organic certification system for Japan</td>
<td>5.3%</td>
<td>94.7%</td>
<td>9.3%</td>
<td>90.7%</td>
</tr>
</tbody>
</table>

Figure 6. Respondents’ knowledge about organic labels Meixner et al, 2014, p. 5

Uncommitted, traditionalists and careless people do not reveal any interest in information regarding organic food and its nutrition facts and values. In addition, a reason which prevents
Polish consumers to buy organic food is that they can not recognize it and this response has been recorded as the highest result between other 9 barriers, consisting of 21% of the total 794 responses (see Figure 8) (Żakowska-Biemans, 2011).

<table>
<thead>
<tr>
<th></th>
<th>Uncommitted (%)</th>
<th>Traditionalists (%)</th>
<th>Careless (%)</th>
<th>Conscious (%)</th>
<th>Pragmatist (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Declare to buy organic food</td>
<td>16.7</td>
<td>25.5</td>
<td>9.9</td>
<td>28.7</td>
<td>22.2</td>
</tr>
<tr>
<td>Do not buy organic food</td>
<td>83.3</td>
<td>74.5</td>
<td>90.1</td>
<td>71.3</td>
<td>77.8</td>
</tr>
</tbody>
</table>

Figure 7. The share of organic food consumers across the identified segments, n=216. Źakowska-Biemans, 2011, p. 11

In conclusion, based on previous research discussed in the chapter above, it is important to educate consumers and give the most trustworthy information regarding organic food, so their awareness about the benefits of such products increases. In the following chapter one of the most important aspects—the influence of price perception on organic food consumption will be examined based on previous research.

3.1.3 Influence of price perception on organic food consumption

Price of organic products is higher than the price of conventional products. The reason behind it is the unavailability of economies of scale and additional costs in the production process (Konuk, 2018). Thus, knowing about consumers' price fairness perceptions and their consequences are crucial for the better understanding of attitude formation toward organic food.

Research showed that the main reason for avoiding purchasing organic food in Hungary is a relatively high price (63.3%) (Szente & Torma, 2015). Commercialization struggle is serious for companies as consumers still doubt the quality of high-priced organic food (Shafie & Rennie, 2012). Aforementioned research in Poland by Żakowska-Biemans (2011) discusses that price sensitivity differs between different segments in Poland. The researchers divided a group of 1010 Polish consumers into 5 segments and results derived from the quantitative
study were varied from one segment to another. The conscious segment showed openness to innovative products and due to high interest in health-related information, they were the ones who are less price-sensitive ($p<0.05$) out of 5 other categories. Overall results showed that price is not the main barrier preventing consumers to buy organic food, however, it has resulted in 13% among other 9 barriers, consisting of 13% of the total 794 responses (see Figure 8.) (Żakowska-Biemans, 2011).

Figure 8. Barriers to buying organic food in Poland Żakowska-Biemans, 2011, p. 13

Referring to the price is an important preventive factor from buying organic food, the price has been reported to be an important measure of perceived risk for consuming organic food in Sweden as well. As you can see in Figure 9, for 123 respondents price has medium or above medium importance, such as important and most important (Akman et al, 2011).

Figure 9. Importance of organic food price for buying decision. Akman et al, 2011, p. 30
Research regarding consumers’ willingness to pay for organic food in Croatia was conducted in 2017 (Petljak et al, 2017). Responses regarding organic food perceived more expensive than conventional food products had the highest mean score. As you can see on the table on Figure 10. the mean score for the statement “Organic food is more expensive than conventional food” it resulted in 4.24, while other statements have a relatively small score.

<table>
<thead>
<tr>
<th>Statement</th>
<th>M</th>
<th>sd</th>
</tr>
</thead>
<tbody>
<tr>
<td>Conventional food is the food without the organ label</td>
<td>3.44</td>
<td>1.145</td>
</tr>
<tr>
<td>Organic food is tastier than conventional food</td>
<td>3.26</td>
<td>1.177</td>
</tr>
<tr>
<td>Organic food is more expensive than conventional food</td>
<td>4.24</td>
<td>0.939</td>
</tr>
<tr>
<td>Organic food is healthier for me and my family than conventional food</td>
<td>3.94</td>
<td>0.992</td>
</tr>
</tbody>
</table>

It was obvious that price-sensitive people would not pay a high price premium for organic farming products. However, research showed that there are people, who are willing to pay a bit more than they pay for conventional products since a higher price premium for organic products means more safety for them. The Figure 11 shows that 40.2% of respondents declared that they are ready to pay a 10% premium, whilst 38.8% does not want to pay any price premium for organic food (Petljak et al, 2017).

![Figure 11. Willingness to pay an extra price for organic food. Petljak et al, 2017, p. 8](image)
It is also very interesting if there is any correlation between income and price sensitivity of the consumer. Based on Aschemann-Witzel and Zielke (2017) mention income and price perception relationship have an influence on consumers’ willingness to pay in case of purchasing organic food. In the previous research in the UK, price and value for money appeared to be important pillars of the answers derived from 96 participants (Padel & Foster, 2005). The willingness to pay higher price depended to the value promise of the product:

“The main important thing is quality if people can see what they are paying for and can taste the difference . . . and as with any other product, they will be willing to pay slightly more for that” (Padel & Foster, 2005, p. 15).

As the present chapter examined, price perception is very important for attitude forming and buying decision making in terms of organic food consumption. It is a very sensitive topic especially when they are not certain about the actual benefits of the product. Most of the people are not willing to pay a high price premium for organic food and prefer to consume conventional food products.

In conclusion of chapter 3, it is apparent that for those consumers who perceive organic food product’s price as high, the purchase intentions towards this food product will be decreased. In addition, healthiness perception and fair knowledge about product leads to trust and may enhance consumers' purchase intentions towards organic food.

In the following chapter the European market for organic food will be examined in order to have a fair understanding of the market characteristics. In section 4.1 the Hungarian organic market will be analyzed. The actual market situation and conditions will be introduced based on the data that is provided by the Research Institute of Organic Agriculture (FiBL) and IFOAM – Organics International.
3.2. European organic food market overview

European consumers have been increasing their average spending on organic food considerably and the organic food market is an important growth area in the EU grocery retail market. The recorded European organic market growth rate is 10.5% during the 2008-2017 years. The highest growth was observed in France (18%), however, Denmark has the highest organic market share (13.4%). Per capita spending on organic food has doubled in the last decade. European consumers spend 47 euros on organic food per person (FiBL and IFOAM, 2019).

Europe has been reported as the second largest market in terms of revenues from consuming organic food, due to increasing concern about food being harmful to personal health and environment, raised demand for organic and environmentally friendly food. (Ruiz de Maya, 2011). High nutrition values derived from these type of products can fix the problems caused by conventional food products which contain a lot of chemicals and environmentally unfriendly additives (Bilali, 2018). The key commodities of European organic agriculture are the following: crops (cereals, citrus fruit, cocoa beans, grapes, oilseeds, and vegetables etc.), wild collection and beekeeping areas, beehives, aquaculture, organic livestock (bovine animals, sheep, pigs and poultry) FiBL and IFOAM, 2019).

Figure 12 presents the most recent information regarding the organic farmland size and organic food market growth in Europe and the European Union. More specifically growth of organic farmland and retail sales are compared. There is a steady growth of organic farming area from 2000 until 2017 years. Thus, retail sales growth is even more significant, which is the result of increased demand for organic food (FiBL and IFOAM, 2019).
There are some countries, which are very dedicated to organic farming, for example Spain, Italy and France own the highest number of organic producers in Europe (Figure 13).
Therefore Hungary is on the 20th place between other European countries by owning 199,684 Hectares of land for organic agriculture. Based on the statistical data, it is clear that more and more countries engage in organic food production since the demand is increasing from the consumer side.

It is important to mention that Hungary is converting agricultural land to organic agricultural land very quickly and it is among countries with largest conversion areas in Central Eastern European countries, notably Romania (109,365 hectares), Poland (108,655 hectares), Hungary (95,200 hectares) and Bulgaria (88,166 hectares) (FiBL and IFOAM, 2019).

3.2.1 Overview of the Hungarian organic food market

As it was already mentioned Hungary is converting its agricultural land to organic farming land, which is a predictor of future growth as well. Thus, the government also initiated to encourage a healthy lifestyle among young people by creating “Healthy Hungary 2014-2020” document that was prepared by the State Secretariat for Health of the Ministry of Human Capacities (EACEA National Policies Platform, 2018). If this program is successful, people will join social events and groups and participate in competitions. This kind of change in lifestyle and behaviour might be a trigger for organic food consumption.

Regarding the issue of increased demand, the actual supply of organic food should be discussed. Based on Dezseny and Drexler (2013) organic products in Hungary have only a small market share (less than 1%). Apart from this, 90% of consumed organic food in the retail market is imported, while 85% of organic food produced in Hungary is exported to different countries (Dezsény and Drexler, 2013).

However, the lack of supply seems to be one of the barriers to purchasing organic food. Hungarian organic food which originates from Hungary itself scarcely appears in retail; consumers can only buy imported, sometimes lower quality products (Szente et al, 2015). The lack of availability of locally produced organic food might be a reason why most of the
consumers do not take organic origin into consideration, as based on Szente et al (2015) the majority of the consumers prefer local origin food.

It is interesting where the consumers buy organic food, which is their most favourable outlet for shopping for such products. Szente and Torma (2015) asked this question to 1000 Hungarian households and the results are presented in Figure 14.

As Figure 14 demonstrates Hungarian organic food consumers mostly prefer to purchase goods directly from the producer, it is followed by Hypermarkets and Supermarkets. Specialized shops seem to be popular among Hungarian organic food shoppers as well.

Based on Szente, Szakály and Tarnavölgyi (2007) the increasing demand for organic food is mainly directed towards foods such as milk and dairy products, vegetables, fruits and bakery
products. This is reflected by the variety of choices of these products in the shops, including local and imported products as well. In line with this statement in previous research by Szente (2009) majority of consumers who were aware of the existence of organic products responded that they have never bought such products (59.2%, 710 respondents out of 1200). Out of those who had bought organic products before the most frequently purchased product list looked as follows:

- Fruits and vegetables - 14.4%
- Milk and dairy products - 6.9%
- Bakery product - 3.4%

According to Szente (2009) 40.1% of respondents who had already purchased organic food before, are willing to pay price due to the belief that organic food decreases the risk of diseases and protects health.

As a conclusion of this chapter, it is apparent that there is a positive attitude toward organic food however purchase habits are not clear. Unfortunately, there is no reliable data in Hungary regarding organic food traffic; participation of sales channels are only estimated. Based on these estimates, the traffic of organic food in Hungary is about 30-35 million Euros. This amounts to less than 1% of national food market traffic (Szente and Torma, 2015).
4. Methodology

The aim of this chapter is to present the research methodology and detail the research question. As well as justification of the chosen research method and introduction of the hypotheses.

4.1 Research aim and questions

The main research question is the following: “What are the main influencing factors of the attitude toward organic food and how does it influence the purchase intent among Hungarian consumers?”

As the previous research showed, there is a gap between attitude and buying intent (Pearson et al, 2011; Padel & Foster, 2005), which means that positive attitude does not always lead to positive purchase intention. Having this in mind, in order to investigate the main research question and examine what the influencing factors are, which influence the attitude and purchase intent, the main research question is broken into 3 sub-questions:

RQ1: What are the main influencing factors on attitude toward organic food?
RQ2: How does the attitude influence purchase intent?
RQ3: Do the socio-demographic factors influence consumers’ purchase intent?

Figure 15 introduces the framework regarding influencing factors on attitudes, purchase intention and buying behavior. This framework is created based on the influencing factors disclosed in chapter 3, such as knowledge and trust regarding product, price and healthiness perception. These factors are named as the most influential by previous research (Aertens et al, 2011; Szente & Torma, 2015; Rana & Paul, 2017), however there are more factors to be investigated.
As the Figure 15 demonstrates, there are various influencing factors that shape attitudes. Past experience might be influencing the attitude towards organic food, based on how positive consumers’ perception is after consuming organic products. The knowledge and trust regarding organic product is important to see how educated people are regarding organically produced food in Hungary and if they trust the labels and information which is on the product. Alternatively if they have enough knowledge which label is trustworthy. Price perception is important preventing factor, since organic food is overpriced compared to non-organic alternatives. Healthiness perception will be examined, to see if people are aware and admit the health benefits delivered from organic food. The tastiness perception and sensory appeal of the organic food will be evaluated to see if these factors have influence on the attitude of consumers. The last factor that will be examined in the scope of this thesis is trendiness perception, in order to evaluate how the trendiness perception of organic food influences the attitude of organic food consumers.

Furthermore, the evaluation of the influencing factors on attitude will be followed by examining the attitude itself, if organic food consumers have positive or negative attitude towards these type of products. In addition, the influence of attitude on purchase intent will be examined, to find out if the positive attitude positively influences purchase intent. Finally, the influence of the socio-demographic factors on purchase intent will be evaluated. In order
to do so, the relationship between age, gender and income of the respondents will be examined towards purchase intent of organic food.

4.2 Research hypotheses

Research is based on the hypotheses, which focus on the influencing factors such as past experience, knowledge about product, price perception, healthiness perception, tastiness and trendiness perception.

As previous research examined, healthiness perception of organic food is the main factor, which leads to purchase intention (Padel & Foster, 2005; Shafie & Rennie, 2012). In addition to healthiness, sensory appeal such as tastiness and texture of the organic food has an influence on consumers’ attitude as well (Lee and Yun, 2015). As for the healthiness perception as the main influencing factor and tastiness as the important aspect of the healthy product characteristics, hypotheses are developed as follows:

H1. Healthiness perception has a positive effect on the attitude toward organic food.
H2. Tastiness perception has a positive effect on the attitude toward organic food.

Even if the scientific evidence regarding results derived from the consumption of such products is in divergence from actual benefits, people still perceive organic food as healthy (Pearson et al, 2011). In addition, there is no proof that pesticides contained by conventional products are harmful to humans' health (Mie and Wivstad, 2015). For this reason, it is important to see if there are any examples of experience among Hungarian consumers when they actually found positive consequences due to organic food consumption. If yes, then it is important to check what is the influence of the past experience on the organic food consumption:

H3. Past experience has a positive effect on the attitude toward organic food.
Various studies have shown that there is an influence on buying decision by labels and information on packages (Cranage, Conklin & Lambert, 2004; Manuela et al, 2013; Teng et al, 2015). Consumers trust the word “organic” more and when they see trustworthy information on the package, they are more positive about it (Krystallis & Chryssohoidis, 2005). Research by Zakowska-Biemans (2011) even showed that people cannot recognize organic food and they do not know where to buy it. Having all the above information in mind, it is appealing to examine if the higher knowledge level regarding organic food form a positive attitude toward organic food:

H4. Knowledge about organic food has a positive effect on the attitude toward organic food.

In contrary to the influencing factors discussed above, price has been reported as the preventing factor from purchasing organic food (Konuk, 2018; Petljak et al., 2017; Akman & Tongprasert, 2011). Consumers are not willing to pay price premium due to the lack of trust, they still doubt the quality of high-priced organic food Shafie & Rennie, 2012). Although price as a negative influences has already been examined in Hungary, it will not be ruled out from the scope of this thesis since there is a chance of different results in various sample of respondents:

H5.Price perception has a negative influence on the attitude toward organic food

Even if price has been reported as a barrier of purchasing organic food, there are people who perceive organic food as trendy (Petrescu & Petrescu-Mag, 2015). There is a chance that people are ready to pay price premium to be seen as trendy. Research showed that in order to be seen as environmentally conscious people are ready to pay higher price for environmentally friendly products (Griskevicius, Tybur & Van den Bergh, 2010). Therefore, it is interesting if this case is relevant for organic food consumption as well. Having this in mind another hypotheses for the research is formed as follows:

H6. Trendiness perception has a positive effect on the attitude toward organic food
All of the hypotheses listed above are related to the influence on the attitude, however, positive or negative attitude has an influence on the organic food buying intention. Intention might be influenced by all of the above indirectly, through forming the attitude or directly by attitude or other factors. Therefore H7 serves the examination of the influence of positive attitude toward organic food buying intention:

H7. Positive attitude increases the purchase intention of organic food.

As for other factors, socio-demographic factors should not be disregarded. As the age, income and gender might have a significant influence on the purchase intent. As the research showed, young and older consumers have different motivations for purchase intention, young consumers are less engaged in purchasing organic food in Romania as they are careless regarding healthiness and environmental preservation (Petrescu & Petrescu-Meg, 2015). Whilst, youngsters in Belgium care about sustainable food consumption (Vermier & Verbeke, 2006). H8 has formed as follows:

H8. There is a direct impact of socio-demographic aspects on purchase intention of organic food.

4.3 Research design

In order to investigate how these influencing factors affect attitudes and buying behavior, quantitative (also known as descriptive) research method will be applied. Quantitative research method is “A research methodology that seeks to quantify the data and, typically, applies some form of statistical analysis” (Malhotra, 2010, p. 139).

The quantitative research is chosen for this thesis because it deals with high number of respondents. Larger sample size makes conclusions generalizable. Furthermore, statistical methods are used for measuring the results, which gives possibility to quantify results and draw reliable conclusions, which are based on numbers. Since the aim is to see what is the
general attitude of Hungarian population standardized comparisons are enough to see the big picture of what Hungarian consumers think and how do they behave in terms of organic food.

As a descriptive research method, survey research is chosen. The online survey will be launched using social media. As the main goal of the research is to understand beliefs and attitudes of the general population of Hungary, a convenience sampling method will be used and the criterion by which respondents are chosen is that they should be native Hungarians who have consumed organic food before.

4.4 Questionnaire development and measuring

The data was collected using an online survey in order to answer research question and test the hypotheses. The terminology used in the questionnaire was very simplified. Since the survey was translated into Hungarian language, it was important to find proper terminology to be understandable for everyone. For example, for organic food the term “bio” and “organic” were used. As for conventional food products the term “non-organic” was used.

In order to identify organic food consumers and their attitudes, questionnaire contains questions regarding socio demographic factors, such as age and gender. With this part, it is possible to examine the influence of the socio-demographic factors towards buying intention. These are an open questions and respondents had to type the value.

In the following part of the survey, the question regarding the specific product categories is asked. The aim is to find out the purchase habits, what kind of organic food have they consumed and what is the most popular choice out of different categories such as fruits and vegetables, milk and dairy, meat, grains and bakery products. For this question, constant sum measurement scale is used. “Constant sum scaling is a comparative scaling technique in which respondents are required to allocate a constant sum of units such as points, dollars, chits, stickers, or chips among a set of stimulus objects with respect to some criterion” (Malhotra, 2010, p. 260). This tool is very advantageous when consumers are asked to allocate 100% based on their preferences,
The next part of the questionnaire focuses on the monthly spending on food in general and it is followed by asking what the amount of spending on organic food is. Responses will help to examine what is the share of organic food in their food basket. At this point, survey already gives the details regarding past experience of organic food consumption and gives possibility to ask about future plans regarding organic food consumption, are they going to buy such products in the nearest future or not. By collecting responses regarding future buying plans, purchase intent will be examined.

The subsequent part of the survey focuses on trendiness and influencers, such as role models, important people and society in general. As for this part, 5 point Likert-scale is used (from 1 = “totally disagree” to 5 = “totally agree”). This measurement type was chosen due to the advantages of this tool, since it is appealing for measuring attitudes, is easy to construct, administer, and understand (Malhotra, 2010). 5 point Likert scale is applied to all the following parts of the survey.

In the next section, healthiness perception of organic food is examined. The main focus is on comparison of the organic and non-organic food healthiness and nutritional value of the organic food is emphasized. Last question of this part focuses on the tastiness perception of organic food, compared to non-organic alternatives, to see how do people evaluate taste characteristics of organic food and if they like it.

In order to investigate price perception, different statements are proposed and examined with 5 point Likert scale. The thesis aims to examine how people perceive the price of organic food compared to non-organic alternatives. For instance, do they believe that organic is more expensive or it has a reasonable price compared to the delivered value. Thus, if they can afford to buy organic food has been asked separately, to find out more about their attitude towards price. By this part of the questionnaire, price as a preventing factor from purchasing organic products will be examined.
Following section of the questionnaire focuses on the knowledge and trust regarding organic food and labels. The aim is to investigate how knowledgeable consumers feel regarding organic products and how much attention do they pay on the nutritional labels. Therefore the trust level in labels and the recognition will be examined. By this section the questions regarding influencing factors are completed and in the final part of the survey the general attitude regarding organic food is examined. Respondents were asked to agree or disagree statements which express how they feel after consuming organic food. For instance:” Buying organic food instead of non-organic food makes me feel good”. By this kind of statements, the positive attitude towards organic food is investigated.

5. Research results

The sample size of the collected responses was 152. The data was gathered and organized into IBM SPSS statistics version 25 in order to evaluate the data and run various statistical analysis. Finally, the hypotheses will be tested with Structural Equation Modeling using IBM AMOS software.

5.1 Structure of the sample

*Demographic profile of the sample*

At the beginning of the survey, respondents were asked to provide information about their gender and age. Finally, the share of the female participants was 62.5% while a number of male respondents was relatively small, only 37.3%.

The age of the respondents in the sample was quite diverse. As Figure 16 shows, respondents were grouped into 6 different age groups and the biggest group consists of people from 25 to 35, reported as 54.5% of the whole sample. It is followed by 36-45 (13.9%), 18-24 (10.6%), 56-65 (9.2%), 46-55 (8.6%) and finally, the smallest age group reported as people older than 65 years old (3.3%).
Based on the demographic sample, it can be concluded that people who are represented in the age group 25-35 are more interested in consuming organic food. In addition, females are more actively purchasing organic food products than males.

The following question was focusing on the share of organic food in their food consumption, to see how the general spending on food and organic food respectively. The mean was 20.1% with the deviation of 19.6% which indicates that respondents gave very different answers. The minimum share of organic food was 1% while the maximum scored as high as 85%. Since the sample of respondents is relatively small it is worth to check the mode as well, which is 10%. 43 persons out of 152 answered that organic food has a 10% share in their food consumption. It is apparent from the results that some people are heavy users of organic food and their food consumption consists of around 85% of organic food. However, some people consume only a very small amount of these type of products. Based on the mean score, overall consumption in the sample is very low (mean=20%).

In order to find out the actual purchase habits and to which product categories do they buy the most, respondents were asked to allocate 100 points based on the product categories they buy. Final results showed that most frequently people buy organic fruits and vegetables with...
the highest share of 50.51%. As Figure 16 shows it is followed by milk and dairy (16.88%),
grains (12.29%), meat (10.79%) and bakery products with the lowest percentage (9.54%).

Since the food expenditure is relevant for the thesis, respondents were asked how much do
they spend on food in general. The average spending in a month among respondents was 76
710 HUF, with a standard deviation of 54 179. The standard deviation is high compared to
the mean since the answers were spread between 10 000 and 400 000 HUF.

Figure 17. Organic food purchase by categories (n=152)

The next question was focused on spending on organic food. Respondents were asked to
write approximately how much do they spend on organic food per month. The average
spending on organic food was 16 222 HUF, with a standard deviation of 18 185 HUF. Since
there is a big difference between the minimum (500 HUF) and maximum (100 000 HUF)
spending on organic food. In conclusion, results showed that respondents do not spend much
on organic food compared to non-organic alternatives.

In order to investigate the past experience of the organic food consumers, respondents were
asked to indicate how many times per month do they purchase organic food. Results showed
that on average people purchase organic food 4.15 times per month, with a standard deviation
of 3.95. Since the mean score and standard deviation are close to each other, it is worth to check other parts of dispersion as well. The maximum purchase frequency was as high as 1, while the maximum was 20 times a month. The low purchase frequency does not necessarily mean low consumption. Since there is a chance that some of the respondents may produce their own supply at home. For example, some respondents responded that their food consumption consists of 40% organic food, however they purchase it only once in a month. This can be explained with the place of living, people in the countryside often have a possibility to grow/produce organic food.

**Organic food purchase intent**

To investigate the purchase intent, respondents were asked if they are considering to purchase organic food in the next month. Results showed that 88.2% of the total sample is going to buy it. Only 11.8% responded “No” to this question. Since the number of people who responded “No” is relatively small (18 respondents), it was easy to examine what were their previous answers regarding organic food consumption habits. Such as what is the percentage of organic food in their food basket or how much do they spend. As expected, they appeared to be people who consume the least amount of organic food and their purchase frequency (“How many times a month do you purchase organic food?”) is very low as well.

5.2 Results regarding influencing factors

As the aim of this thesis is to examine main factors which form attitudes toward organic food consumption, it is essential to discuss the factors which previous research found important. In this chapter, research results regarding healthiness, tastiness, price, trendiness perception will be disclosed.

**Perception of the healthiness of organic food**

In order to investigate the attitude towards healthiness of organic food, respondents were asked to agree or disagree to the statements which were focusing on healthiness and the
related benefits of the organic food. The research results showed that people find organic food healthier than non-organic food. As Figure 18 demonstrates the highest mean score 4.02 (std. deviation: 0.917) was achieved in case of the statement: “Organic food is healthier than non-organic food”. The results reveal that people perceive organic food healthier than a non-organic one. The second highest mean score 3.81 with a standard deviation of 1.069 was recorded for the statement which provides insight about investment to preserve health. Followed by 3.80 mean scores (Std. Deviation=0.990) which indicates that organic food provides consumers with nutrients. The lowest mean score 3.36 with a standard deviation of 1.145 was recorded for the statement “I feel healthier after consuming organic food” which is more related to the actual health benefit which should be delivered after consuming organic food. Based on the result from this sample with a mean score of 3.36 indicates that the health benefit delivered from organic food is not apparent for these consumers. However, it is doubtless that more people agree that organic food makes them feel healthier (78.3%) rather than disagree (21.7%).

Figure 18. Perception of the healthiness of organic food (SPSS output)
Perception of the tastiness of organic food

In order to investigate the perception of tastiness, respondents were asked to choose to what extent did they agree or disagree with the following statement: “Organic food is tastier than non-organic food”. 9.3% of respondents answered that they strongly disagree with this statement, followed by 10.6% of those who disagree with the statement. The highest number of respondents are indifferent regarding this statement as they answered: “Neither agree or disagree”. This answer consisted of 36.4% of the total sample. The number of respondents who think that organic food tasted better than non-organic one consisted of 29.1% who agree with the statement and 14.6% of those who fully agree that organic food tastes better. The mean score was 3.29 with a standard deviation of 1.129, which means most of the respondents are more likely to be indifferent regarding the tastiness of organic food.

Perception of the trendiness of organic food

The next influencing factor, is the perception of trendiness and its effect on the attitude towards organic food. Respondents were asked to agree or disagree with the statements focusing on the factors such as trendiness in general and different kind of social groups. For instance, important people, famous people, need for belongingness to environmentally concerned groups and etc. society in general. The results showed that trendiness is not among the strongest influencing factors. As Figure 19 shows respondents do not follow well-known people and the responses resulted in the lowest 1.48 mean score with the standard deviation of 0.851. Other statements have higher score compared to the one discussed above however they do not distinguish with very high results. Seemingly, people more care about people who are important for them however the overall sample does not agree (mean=2.49, std. deviation=1.292) with the statement: “People important for me (other than family and friends) eat organic food so I think I should eat organic as well”. One of the main statement in this block of the survey was the one which directly emphasizes on the importance of following the food trends: “I consume organic food because I am following food trends”. However, results showed that Hungarian organic food consumers do not tend to consume organic food due to trends. The mean score has been recorded as 2.05 with a standard
deviation of 1.126, which means they disagree with this statement. In the total sample, there was only 17 person who agreed to this statement, however the number of people who totally disagree dominated and apparently had a huge influence on the final result. Moreover, respondents do not get influenced by the opinion of the general society, since they disagreed with the statement “I intend to eat organic because society says it is a good choice” with mean score 2.34 and standard deviation of 1.142.

The highest mean score 3.75 with a standard deviation of 1.078 was recorded under the statement “I think I am the part of the environment-conscious society by consuming organic food”. This result might be interpreted as people tend to be motivated by relating themselves to a specific group of people, who have similar goals. Such as being environmentally conscious. Referring to the previous research (Falguera, Aliguer, & Falguera, 2012; Gilg & Ford, 2005) environmental concerns were mentioned as motivational factors for organic food consumption. The overall result showed that trendiness is not rated positively in terms of organic food consumption.

Figure 19. Perception of trendiness or organic food (SPSS output)
After examining the perception of trendiness of organic food, the price perception was investigated. The respondents were asked to indicate to which extent did they agree or disagree with the statements regarding price.

As the Figure 20 shows respondents strongly agree that price of organic food is too expensive. The mean score for the statement “I think organic food is too expensive” is 4.13 with a standard deviation of 0.751. Furthermore, respondents indicated that they think organic food is overpriced compared to the value it delivers to them (mean=3.36, std. deviation=1.026).

![Figure 20. Perception of the price of organic food (SPSS output)](image)

The statement “I think organic food is overpriced compared to the value it delivers” measured how overpriced organic food is perceived, whilst “Organic food price is reasonable compared to the value it delivers” measured how reasonable the price is perceived (mean=2.61, std. deviation=0.914).
deviation=0.914). Based on the results people perceive that organic food is overpriced compared to the value (Mean=3.36, std.deviation: 1.026).

The influence of knowledge and trust

Next, the respondents’ knowledge and trust has been examined. The statements were mostly focused on the nutritional information on the product, labels and trust which is derived from official labels. The results showed that people tend to read nutritional information provided regarding organic food before making a purchase decision (mean=3.55, std. deviation=1.178). Thus, they think that labels on the organic food package provide information about origin, content and other important information. The mean score is 3.87 with a standard deviation of 0.811 which indicates that respondents care about provided information on the label.

The highest mean score in this block of the survey was recorded as high as 4.26 with the standard deviation of 0.890, for the statement: “I trust products which carry nutritional labels more”. Which can be explained with the importance of the labels and information on the food package. In contrary, people expressed that they do not have information about trustworthy labels (mean=3.35, std. deviation=1.192).

Referring to the previous research by Meixner et al. (2014), people do not have enough knowledge regarding labels and respectively, do not reveal trust. The mean score of the statement “I feel knowledgeable about organic food” was 3.00 with the standard deviation of 1.048, which means people “either agree or disagree” with this statement. They are not sure if they know enough about organic products. Referring back to the first statement, they tend to read the information before buying can be related to this result as well, since they do not feel confident and knowledgeable they try to get more information regarding the product.
5.3 The attitude towards organic food

The important section of this research focused on examining the general attitude towards organic food. In order to be able to find out the influence of the previously discussed factors on the attitude, it is important to know how people feel regarding organic food. Respondents were asked to agree or disagree statements which were focusing on the general well-being such as: “Buying organic food instead of non-organic food makes me feel good”. As Figure 22 demonstrates they had to agree or disagree with 3 different statements.

Based on the mean score of 3.32 with a standard deviation of 1.187 respondents agree on the first statement that buying organic food instead of non-organic. On the contrary they disagree the second statement, which is related to their personality perception while consuming organic food. Seems like they do not feel like a better person when they consume (mean=2.70, std. deviation=1.157). It can be explained as they do not have information on what is the global positive impact on the environment and nature when people consume bioproducts.
This result is in line with the previous result (see Figure 21) regarding the perceived knowledge regarding organic food. Respondents were not sure if they know enough about organic food. The third statement focused on benefits derived from consumption of bio/organic products. Respondents answered that they agree to this statement and they perceive organic food as beneficial for them with the mean score of 3.51 (std. deviation: 1.016).

To summarize the results regarding the attitude towards organic food, it is apparent that respondents are positive about it because organic food delivers personal benefits like it is beneficial and makes them feel better. Overall mean score of the attitude toward organic food was 3.17.

5.4 Analysis of the research framework and measurement model

The aim of this thesis is to gain insight into Hungarian consumers' perceptions, attitudes and interest to buy organic food. In accordance with this aim, the Structural Equation Model (SEM) was conducted using Amos software. Figure 23 illustrates previously proposed
framework of the influencing factors on attitudes and purchase intention. For each of the influencing factors regression weights are indicated. In order to evaluate direct effects on attitude and purchase intent, standardized regression weights were examined.

It is important to mention that model fit was not high as important measures scored low results. The result can be explained by the low degree of freedom level, due to the small sample size for the estimation of the parameters in SEM. The most important model fit measures have been evaluated. Comparative Model Fit (CFI: 0.713) did not indicate a high fit, since the best size of this indicator should be close to 1. The CMIN value was 711.7 which is very high and indicates a poor fit. The Root Mean Square Error of Approximation (RMSEA: 0.09) also indicated poor model fit. However, the factor and regression analysis reported strong effects in the model, therefore poor model fit can be disregarded.

The Figure 23 represents the strengths of the relationships between factors using standardized regression coefficients. The highest coefficient was scored in case of perception of healthiness (std. regression coefficient: 0.710). All of the statements which measured this factor had equally strong effect. The statement with the strongest effect was “I believe
organic food is a good investment to preserve health” (std. regression coefficient: 0.918), followed by “I feel healthier after consuming organic food “(std. regression coefficient: 0.811). The other two statements had a somewhat more tempered effect, with “Organic food is healthier than non-organic food” (std. regression coefficient: 0.697) being the third and "Organic food provides me a variety of nutrients” (std. regression coefficient: 0.576) being the least strong effect in the healthiness group.

Perception of healthiness is followed by the trendiness perception (std. regression coefficient: 0.301). In this group, the strongest effect was associated with "People important for me eat organic food so I think I should eat organic as well" (std. regression coefficient: 0.723), followed by "I intend to eat organic because I follow well-known people" (std. regression coefficient: 0.662). The strength of the effect of the third statement, "I intend to eat organic because society says it is good choice" (std. regression coefficient: 0.626), did not fall very far from the second one. The least strong effects in this category belonged to "I consume organic food because I am following food trends" (std. regression coefficient: 0.548) and "I think I am the part of the environment conscious society by consuming organic food"(std. regression coefficient: 0.442).

The knowledge and trust regarding organic food had strong influence on attitude as well (std. regression coefficient: 0.239). The most important statement of this group was "I always read the nutritional information about products before considering to buy it" (std. regression coefficient: 0.747). The second one was "The labels of organic foods provide information about organic origin, nutrients and other important information" (std. regression coefficient: 0.645) and "I trust products which carry nutritional labels more" (std. regression coefficient: 0.615) lagging not much behind. The next effect in strength was "I do not have information which nutritional label is trustworthy"(std. regression coefficient: 0.334), was examined after reverse coding, so that the higher number represented more knowledge, as in the other questions.
The price perception of organic food did not show any significant influence on the attitude (std. regression coefficient: -0.099). Reverse coding was used for testing this hypothesis as well. The strongest statement was reversed: “Organic food price is reasonable compared to the value it delivers” (std. regression coefficient: 0.773). The reason behind this was that all the other statements (see Figure 20, note that mean and standard deviation on this figure represent statement before reverse coding) except for this one, were worded in a way that larger number indicated higher price perception. A close second in strength was "I think organic food is overpriced compared to the value it delivers" (std. regression coefficient: 0.740), while the third strongest effect belonged to "I think organic food is too expensive" (std. regression coefficient: 0.539).

The perception of tastiness was measured only with one statement “Organic food is tastier than non-organic food”. It had significant effect on the attitude towards organic food (std. regression coefficient: 0.198).

Past experience was measured by the question “How many times a month do you purchase organic food?” which did not have an effect on attitude towards organic food (std. regression coefficient: -0.072).

The attitude had a strong significant effect on the purchase intent (str. regression coefficient: 0.265). Here, the strongest effect belonged to the statement "Buying organic food instead of non-organic food makes me feel good" (std. regression coefficient: 0.867), with "Buying organic food instead of non-organic ones is beneficial for me" (std. regression coefficient: 0.674) and "Buying organic food instead of non-organic ones make me feel like a better person" (std. regression coefficient: 0.618) being the second and third, respectively.

Socio-demographic factors did not have any significant influence of purchase intent (std. regression coefficient: 0.193). The effect of gender of respondents was very low (std. regression coefficient: -0.007), while age factor reported higher effect (std. regression coefficient: 0.391). The spending on organic food was one of the most influencing factors
(std. regression coefficient: 0.490) after spending on food in general (std. regression coefficient: 0.751).

5.5 Testing of the hypotheses

**H1. Healthiness perception has a positive effect on the attitude toward organic food**

The influence of healthiness on the attitude towards organic food was measured to test H1. Healthiness has a strong, positive effect on attitude (std. regression coefficient: 0.71, p=0.001), therefore H1 is supported. Referring to the previous research, it has been examined that healthiness perception of organic food is the main factor, which influences the positive attitude (Padel & Foster, 2005; Shafie & Rennie, 2012).

**H2. Tastiness perception has a positive effect on the attitude toward organic food**

There is a significant positive relationship between tastiness perception and attitude towards organic food (std. regression coefficient: 0.198, p=0.002). Based on the result of the statistical analysis, H2 is supported. However, tastiness effect is not as strong as healthiness effect. Referring to the previous research, Lee and Yun (2015) found similar relationship between tastiness and attitude toward organic food.

**H3. Past experience has a positive effect on the attitude toward organic food**

The positive relationship between past experience and attitude toward organic food could not be proved (std. regression coefficient: -0.07, p=0.254). Consequently, H3 is rejected. In addition, this results might be caused by the negative past experience, people who had higher actual experience with consuming organic food, their opinion regarding benefits were modified after consumption. There is a chance that they did not like a product, or the expected value was not satisfying. Referring to the findings of Pearson et al. (2011), there are differences between the actual health benefits of organic food consumption and the superiority of perceived advantages by consumers. Scientific evidence regarding results
derived from the consumption of such products is in divergence from actual benefits. That means consumers expect more benefits, and after consumption results are the same as expected.

**H4. Knowledge about organic food has a positive effect on the attitude toward organic food**

“I do not have information which nutrition label in trustworthy”. The reason behind this was that all the other statements (see Figure 21. Note that mean and standard deviation on this figure represent statement before reverse coding) except for this one, were worded in a way that larger number indicated stronger knowledge and trust. The results showed that trust and the knowledge regarding organic food has a positive significant effect on attitude (std. regression coefficient: .24, p=0.002). Higher level of knowledge results in more positive attitude toward organic food. This finding is in line with the research of Aertens et al. (2011), they showed that organic food users have better knowledge compared to non-users. Since the thesis work focuses on only users of organic food, it cannot be compared to non-users, however, the important influence of knowledge on consumer’s attitude could be justified.

**H5. Price perception has a negative influence on the attitude toward organic food**

Although the results showed that the price of organic food is perceived as high by the most of the respondents (see Figure 20), analysis showed that there is no significant effect on attitude towards organic food. Therefore, the price perception does not have an effect on the attitude towards organic food purchase. Based on this finding, consumer’s attitude can be positive or negative despite the perception of higher prices.

**H6. Trendiness perception has a positive effect on the attitude toward organic food**

The analysis proved that trendiness has a significant, positive effect on the attitude towards organic food (std. regression coefficient: 0.30, p=0.001). In conclusion, the more trendy organic food is perceived, the more positive is the attitude of consumers toward organic food. Therefore, H6 can be accepted. Griskevicius et al. (2010) drew similar conclusion, they found
that people purchase organic food in order to be seen as following trends and being environmentally conscious. The influence of environmentally conscious society in this case is very high. As the results on the survey showed that people feel as they are part of environmentally conscious society by consuming organic food (see Figure 19).

H7. Positive attitude increases the purchase intention of organic food

Based on the analysis positive attitude has a significant effect on the purchase intent of organic food (std. regression coefficient: 0.27, p=0.002). Therefore, H7 is accepted. This research finding has a high importance since it justifies the relationship between attitude and purchase intent that was questioned by previous researchers (Padel & Foster, 2005) claimed that there is a gap between attitude and purchase intent. This research finding suggests that factors influencing the attitude towards organic food have an indirect effect on the purchase intent.

H8. There is a direct impact of socio-demographic aspects on purchase intention of organic food

In order to test the H8 the age, gender and spending on organic food was analyzed. The results showed that these factors do not have impact on the purchase intent (std. regression coefficient: 0.19, p=0.081). Therefore, hypotheses is rejected. In conclusion, the socio-demographic background of the organic food consumers has no measurable effect on their purchase intent.

In conclusion, H1, H2, H4, H6 and H7 were accepted and H3, H5 and H8 were rejected based on the SEM analysis. In the following chapter conclusions regarding the overall research results will be given.
6. Conclusion

6.1 Summary of findings

The aim of this thesis was to answer the following research question: "What are the main influencing factors of the attitude toward organic food and how do they influence the purchase intent among Hungarian consumers?"

The results showed that Hungarian consumers believe that organic food is healthier compared to the non-organic food and provides nutrition benefits. Thus, they perceive organic food as healthy and it has significant positive influence on the attitude towards organic food. The tastiness of organic food is also perceived positively by Hungarian consumers compared to the non-organic substitutes. The better knowledge and higher trust level have a positive effect on the attitude toward organic food. Hungarian consumers tend to read the information provided on the product packages, they pay attention on the labels and know that organic food provides them with many different nutrients for better health. When food has a trustworthy label, they trust the product more. However, they do not have enough information regarding labels. In addition, Hungarian consumers perceive organic food as trendy and it has a positive influence on the attitude towards such kind of food.

Although organic food price is perceived as high by Hungarian consumers, they think that it is reasonable compared to the provided benefits. Research showed that it does not lead to positive attitude. The next factor, which was analyzed in terms of influence on attitude, was past experience in organic food consumption. Results showed that past experience does not have an influence on the attitude toward organic food. The positive attitude towards organic food has a positive influence on the purchase intent. However, socio-demographic factors did not show any significant influence on purchase intention.

In conclusion, the effect of the significant factors should be discussed by the strength of the effect. The main influencing factors of the attitude toward organic food is healthiness perception which has a strong, positive effect on attitude (std. regression coefficient: 0.71,
p=0.001). Followed by the trendiness (std. regression coefficient: 0.30, p=0.001) and tastiness perception (std. regression coefficient: 0.198, p=0.002). The next important factor is trust and knowledge regarding organic food, which has a positive effect on attitude (std. regression coefficient: 0.24, p=0.002). Furthermore, the positive attitude influences the purchase intent of organic food (std. regression coefficient: 0.27, p=0.002). Finally, past experience did not have an influence on the purchase intention. This results can be explained by the strengths of the other effects which form the positive attitude and indirectly influence purchase intent. Similarly, the price perception did not have any significant influence on the attitude towards organic food. The reason behind this result might be a fact that people perceive organic food very healthy, nutritious and it is a good value for money. Therefore, high price does not affect attitude negatively. In addition, socio-demographic factors such as age, gender and income could not show any measurable effect on the purchase intent of organic food.

6.2 Practical implications

Based on the results of the research some recommendations can be given to the organizations and businesses operating in the organic products industry. Firstly, the responsibility of the educating consumers regarding organic food has to be taken by the government or relevant non-profit organizations. It is important to educate consumers and give them information regarding the health benefits of organic food. Furthermore, consumers should have information about trustworthy labels and importance of the impact on the environment by reducing consuming products which have harmful additives (chemicals, pesticides etc.).

In addition, from the marketing perspective, companies should not focus on using well-known people such as influencers to promote their organic food products. Insight behind this is that respondents reported that they do not follow the well-known people. They should rather focus on making organic food trendy using other the strategy based on the benefits of the healthy lifestyle. In order to do this, they should integrate the organic food consumption with the campaigns which will demonstrate how to follow healthy lifestyle by using organic food. To encourage people to consume organic food, an emphasis should be given to the
tastiness of organic food as well. This will give an opportunity to highlight the sensory appeal of the organic food and it will reinforce the positive impact.

6.3 Limitations of the research

Although the findings of this thesis provided a satisfactory answer to the question regarding the attitudes towards organic food among Hungarian consumers, there are some limitations, which should not be neglected. For instance, relatively small sample size could have an effect on the final results. In the previous research, the price has been named as a preventing factor from purchasing organic food; however, the results of the thesis could not reinforce this fact with the satisfactory significance level.

Another limitation that has been found during the research analysis was related to the socio-demographic factor. The influence of the occupation of respondents could have been a significant effect on the purchase intention. However, the online survey could not grasp the nuances of the effects of occupation. In addition, with this small sample size the result would not be trustworthy, due to the high level of heterogeneity.

Furthermore, the place of residence of respondents was not investigated. Due to this limitation, the fact that consumption of organic food is not always driven by purchase, but could be instead driven by consuming home grown organic products. People who live in the cities do not really have opportunity to consume their own home grown products and they have to purchase it from retailers.

6.4 Recommendations and future research

Future research should foremost be focused on lifting the limitations mentioned in the previous section. This means a larger sample size, coupled with investigation about the place of residence and the occupation. While place of residence can be included in a survey, occupation is better handled by a qualitative research, the findings of which should be incorporated to the results of the broader research.
Further refinement of the findings could include investigation of the gap between the purchase intent and the actual purchase behavior. The most appropriate method to achieve this would be in-depth interviews in a qualitative research, in order to uncover the preventing factors of purchasing organic food. The gap analysis would provide an opportunity to organizations and businesses operating in the organic product field to incorporate a successful marketing strategy, which might lead to increased consumption of organic food.
References


Petljak, K., Stulec, I., & Renko, S. Consumers’ willingness to pay more for organic food in Croatia. 2017. https://doaj.org/article/1e89e7eb864e44ef90c8037a79eac923


Appendices

Appendix A. Survey

1. Please choose your gender / Mí a nemed?
   - Male / Férfi
   - Female / Nő

2. How old are you? / Hány éves vagy?

3. How many percent of your food consumption is organic? / Az étel fogyasztásod hány százaléka bio/organikus?

4. How many times a month do you purchase organic food? / Egy hónapban átlagosan hányszor vásárolsz bio/organikus ételmiszert?
   ___ times/szor

5. Please allocate 100 points on which organic product categories do you buy / A bio/organikus fogyasztásod hány százalékát teszik ki az alábbi típusok?
   - Fruits and vegetables / Zöldség és gyümölcs
   - Milk and dairy / Tej és tejtermék
   - Meat / Hús
   - Grains / Gabona
   - Bakery products / Pékáru

6. How much do you spend on food in general per month? (Please insert amount in HUF) / Általában mennyit költesz egy hónapban ételre?
   ___ HUF/Ft
7. How much do you spend on organic food per month? (Please insert amount in HUF)/ Általában mennyit költesz egy hónapban bio/organikus élelmiszert?

____ HUF/Ft

8. Do you consider buying organic food next month? / Szándékodban áll a következő hónapban bio/organikus élelmiszert venni?

   o Yes / Igen
   o No / Nem

9. Please indicate to which extent do you agree with the following statements. (1: fully disagree, 5: fully agree) / Jelezd, hogy mennyire értesz egyet az alábbi állításokkal. (1: semennyire, 5: teljesen)

   1. People important for me (other than family and friends) eat organic food so I think I should eat organic as well. / Számomra (a családtól és barátoktól eltekintve) fontos emberek bio/organikus élelmiszert esznek, ezért úgy gondolom nekem is azt érdemes ennem.

   2. I intend to eat organic because I follow well-known people / Bio/organikus élelmiszert szeretnék fogyasztani, mert ismert embereket követek.

   3. I intend to eat organic because society says it is good choice / Bio/organikus élelmiszert szeretnék fogyasztani, mivel a társadalom szerint ez jó döntés

   4. I think I am the part of the environment conscious society by consuming organic food / Úgy gondolom a környezettudatos társadalom része vagyok hha bio/organikus élelmiszert fogyasztok

   5. I consume organic food because I am following food trends / Bio/organikus élelmiszert fogyasztok, mivel követem az étkezési trendeket

10. Please indicate to which extent do you agree with the following statements. (1: fully disagree, 5: fully agree) / Jelezd, hogy mennyire értesz egyet az alábbi állításokkal. (1: semennyire, 5: teljesen)
1. Organic food is healthier than non-organic food / A bio/organikus élelmiszerek egészségesebbek a hagyományosaknál
2. Organic food provides me a variety of nutrients / A bio/organikus élelmiszerek különböző tápanyagokat biztosítanak számomra
3. I feel healthier after consuming organic food / Egészségesebbnek érzem magam, miután bio/organikus élelmiszert ettem
4. I believe organic food is a good investment to preserve health / Úgy gondolom a bio/organikus élelmiszerek jó befektetés arra, hogy megőrizzen az egészségem
5. Organic food tastes better than non-organic food / A bio/organikus élelmiszerek finomabbak, mint a hagyományosak

11. Please indicate to which extent do you agree with the following statements. (1: fully disagree, 5: fully agree) / Jelezd, hogy mennyire értesz egyet az alábbi állításokkal. (1: semennyire, 5: teljesen)

1. I think organic food is too expensive / Úgy gondolom a bio/organikus élelmiszerek túl drágák
2. I think organic food is overpriced compared to the value it delivers / Úgy gondolom a bio/organikus élelmiszerek túl drágák ahhoz képest, amit nyújtanak
3. Organic food price is reasonable compared to the value it delivers / A bio/organikus élelmiszerek ára méltányos ahhoz képest amit nyújtanak

12. Please indicate to which extent do you agree with the following statements. (1: fully disagree, 5: fully agree) / Jelezd, hogy mennyire értesz egyet az alábbi állításokkal. (1: semennyire, 5: teljesen)

1. I always read the nutritional information about products before considering to buy it / Mindig elolvasom a termékek tápanyag információt mielőtt megveszem őket
2. The labels of organic foods provide information about organic origin, nutrients and other important information / A bio/organikus élelmiszerek címkeje információkat ad a számrazási helyről, tápanyagokról és más fontos tudnivalókról
3. I trust products which carry nutritional labels more / Jobban bízom az olyan termékekben, amiken van tápanyagokra vonatkozó címke

4. I do not have information which nutritional label is trustworthy / Nincsen információom arról, hogy melyik tápanyagokra vonatkozó címke megbízható

5. I feel knowledgeable about organic food / Jól informáltak érzem magam a bio/organikus élelmiszerekről

13. Please indicate to which extent do you agree with the following statements. (1: fully disagree, 5: fully agree) / Jelezd, hogy mennyire értesz egyet az alábbi állításokkal. (1: semennyire, 5: teljesen)

1. Buying organic food instead of non-organic food makes me feel good / A hagyományos helyett bio/organikus ételek vásárlásától jól érzem magam

2. Buying organic food instead of non-organic ones make me feel like a better person / A hagyományos helyett bio/organikus ételek vásárlásától job embernek érzem magam

3. Buying organic food instead of non-organic ones is beneficial for me / A hagyományos helyett bio/organikus ételek vásárlásása hasznos számomra
Appendix B. Amos path diagram – Structural Equation Model
Appendix C. Structural Equation Model output

Regression Weights: (Group number 1 - Default model)

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Model Fit Summary

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Baseline Comparisons

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RMSEA

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