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INFLUENCE OF HEALTH AND ENVIRONMENTAL CONSCIOUSNESS ON ORGANIC FOOD PURCHASING INTENTION WHEN THE MODERATING FACTOR IS PRICE

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INTRODUCTION

The organic food and organic farming sector have been growing rapidly over the years due to increased demand. The Growth of organic farmland can be observed in almost all regions. Organic goods sales will soon reach the 110-billion-euro milestone and organic agriculture does not fall behind (FiBL and IFOAM, 2021). According to a report on international organic agriculture statistics and emerging trends done by "Research Institute of Organic Agriculture" (FiBL) and „International Federation of Organic Agriculture Movements" (IFOAM) (2021), in 2019, the production of organic goods worldwide has increased to more than 72 million hectares, representing 1.5 % of all agricultural land in the world. Geographically, Europe had a share of 23% of all the world's organic agricultural land with 16.5 million hectares. Europe comes as the second highest owner of farmland dedicated to organic products (3.3% of all world's organic farmland). The biggest producers of this region were mainly members of the European Union. As stated in Council Regulation (EC) No 834/2007 on organic production and labelling of organic products and repealing Regulation (EEC) No 2092/91, the share of the organic sector has increased in most Member States with markable growth in consumer demand. The increase could be linked to different strategies implied by the European Commission (for example European Green Deal). Currently, the European Union is aiming to become the first climate-neutral continent by becoming a resource-efficient economy and increasing organic farming to 25% by 2030 (European Commission, 2021).

As the rapidly growing sector is relatively new, it poses questions for new or existing farmers and retailers planning to enter the market. The exact sociodemographic characteristics of a consumer of organic food are still being researched. Organic production is still an unknown concept to the general public, who often mistake it for "green" or "natural" foods. Due to the increase in the organic market and ongoing interest from customers, it becomes important to analyse possible drivers and barriers, such as price, health and environmental consciousness and their effect on organic food purchasing and the sociodemographic of consumers. With the rise of global awareness of one's health and the rapidly changing climate, motivational factors are gaining weight on consumers' decision to purchase organic products. However, in various research, price is considered to be a huge barrier rappelling customers from making purchasing decisions. The expensive price of organic food could pose difficulties and hinder purchases (Janssen, 2018). By addressing the issue of how motivational factors (health consciousness and environmental consciousness) influence the intention to purchase organic food and if such

connection is moderated by price, entering a new market could pose less risk, as specific customers are targeted.

Aim of the research is to determine the impact health and environmental consciousness have on customers' intention to buy utilitarian organic food by considering the possible moderating effect of price.

Object of research is the influence health and environmental consciousness have on utilitarian organic food purchasing intention when the moderating factor is price.

Research question is how health and environmental consciousness influence utilitarian organic food purchasing intention when the moderating factor is price.

Objectives of the research:

1. By conducting a systematic literature analysis, to reveal the main consumers' motivational drivers and barriers of intention to purchase utilitarian local organic food in different European countries.
2. By analysing the concept of utilitarian organic food presented by different authors to identify the connection between health and environmental benefits and utilitarian organic food.
3. By analysing the relevant literature, to reveal if the perceived price influences utilitarian organic food purchasing intention.
4. By analysing the results, to determine if health and environmental consciousness positively influence the intention to buy organic products.
5. By analysing the results, determine if the perceived price has a moderating effect on the connections between health consciousness and utilitarian organic food purchasing intention, environmental consciousness and utilitarian organic food purchase intention.
6. After carrying out the online survey, to reveal a sociodemographic profile of a health and environmentally conscious utilitarian organic food consumer.

The course of scientific work:

1. Systematic literature analysis on organic food purchasing intention drivers and barriers was conducted. The systematic literature analysis results revealed the main motivational factors and barriers driving and deterring organic food purchasing in Europe overviewed in past quantitative research. The systematic literature analysis was performed in three stages:

Research defining stage. The first stage was dedicated to raising the aim of systematic analysis - to analyse and systemize the different motivational and demographic drivers and

barriers affecting purchasing of organic goods and the link of those factors with price and purchasing of organic production. At this stage, research selection criteria were created.

Data collection stage. The second stage was dedicated to collecting and systematising research from automated databases “EMERALD” and “Science Direct”. The search for articles used three main keywords in English, reflecting the main purpose of systematic analysis: "organic goods", "organic food" and "organic food purchasing". A total of 2,230 works were found in both databases using the keywords and year restriction filter. The article selection process consisted of three main stages. The selection process for the systematic literature analysis of publications is graphically illustrated in **Annex 1**, according to the PRISMA Flow chart.

Systemization and analysis stage. In this stage, the data of 16 articles were assessed according to quality, systemized and analysed. The most important data of the studies included in the systematic analysis were listed in a table for convenience, analysis and summary **(Annex 3)**. A summary table of the study quality assessment is provided in **Annex 2**.

2. Quantitative survey analysis using IBM SPSS. Data was prepared using Excel and poorly executed questionnaires were removed. Data was assessed with the SPSS tools: descriptive statistics, normality testing and multicollinearity testing. Hypotheses were tested using SPSS tools: multiple regression analysis, PROCESS by Andrew F. Hayes, Spearman’s rank correlation and Mann-Whitney U test. By conducting the analysis, the main aim of the study was achieved and recommendations for retailers and farmers were provided.

1. LITERATURE ANALYSIS

1.1. The influence of motivation on consumer organic food purchase intention

While shopping, many customers are faced with the challenge to select the "right" product among several different alternatives in the market (Dhar and Nowlis 2004). Price is only one of many reasons behind selecting or declining to purchase organic goods. Purchasing behaviour is a complex phenomenon including multiple factors (Pagell, 2004).

According to Sheth, Newman and Gross (1991), those factors could be called values, as they perceive utility acquired from an alternative, functional and utilitarian performance. Those values are highly independent and make different contributions according to the characteristics of the goods. Reasoned action theory, developed by Fishbein and Ajzen in 1967, explains that consumers' behaviour is a function of their attitude towards behaviour and subjective norms (Madden, Ellen and Ajzen, 1992). Functional, social and emotional values are highly important depending on the characteristics of the product. Utilitarian productions are more likely to be judged by their physical features, such as price. While hedonic consumption tangles into emotional aspects and a "good" feeling. Although, social values are highly important irrespective of the type of good. Social value associates goods with stereotypes, demographic and cultural aspects (such as environmental outlook or an image of a socially responsible business) (Sheth et al., 1991).

In addition, consumers' choice to buy can depend on individual goals and marketer-initiated strategies (such as labelling). Compared to different options (for example conventional and organic), the two modes might trigger different effects on consumers. In other words, purchasing choice depends on the situation as well (Dhar and Nowlis, 2004). The choice depending on the situation could be explained by conditional and epistemic values. New experiences, an alternative that provides a change of pace (such as a new type of coffee) and conditional associations (Christmas cards or wedding gowns) drive consumers from their usual purchasing pattern (Sheth et al., 1991).

However, specific situations trigger the purchase of an alternative product, such as financial burdens, unavailability or negative attitudes. Depending on the product, the type and information acquired, the purchasing choice could differ drastically for individual consumers.

1.2. Systematic literature analysis

To grasp the concept of organic goods, qualitative research was conducted. Research in the form of systematic literature analysis overviewed 16 quantitative studies to find out how Europeans react to and value organic utilitarian food products. Such a method was selected as, according to various research, it allows a clear and comprehensive overview of available evidence on a given topic, identifies best practices and reveals reliable and accurate results (Mallett, Hagen-Zanker, Slater and Duvendack, 2012; Pericic and Tanveer, 2019). Various research has analysed the drivers and barriers behind purchasing choice of organic food in different regions. However, Europe has one of the largest markets and strict regulations for organic food. The systematic analysis could help to develop a more complete understanding of the motivational and socio-demographic factors behind consumers' choice to purchase organic food in Europe. The role of price could be better explained by taking into consideration not one, but multiple possible drivers and barriers. The systematic analysis aims to analyse and systemize the different motivational and demographic drivers and barriers affecting purchasing of organic goods and the link of those factors with price and purchasing of organic production.

1.2.1. Research methods and materials

Scientific publications included in the systematic analysis were considered according to predefined criteria. The systematic analysis included research that met the following criteria: 1) the motivation of consumers to purchase or consume “organic food” was investigated, 2) the possible barriers to purchasing organic food were studied, 3) the survey covered consumers in a geographical European area, 4) the organic foods were studied. Other inclusion criteria: only full-text articles in English available for Vilnius University students are included in the analysis. The search was restricted to the year of publication by selecting only relevant articles published no earlier than 2010 that present empirical quantitative and qualitative research. The systematic analysis did not include studies that did not meet the inclusion criteria, access was restricted and the summary was unavailable. Conference summaries and theoretical articles (literature reviews, meta-analysis, scientific textbooks, and books) were not included.

The search for scientific literature has been carried out from October 28th, 2021, until November 7th, 2021. Two relevant online scientific databases Emerald and ScienceDirect, subscribed by Vilnius University, have been selected for the search of articles. The search for articles used three main keywords in English, reflecting the main purpose of systematic analysis: "organic goods", "organic food" and "organic food purchasing". A total of 2,230 works were found in both databases using the keywords and year restriction filter. The article selection

process consisted of three main stages. The selection process for the systematic literature analysis of publications is graphically illustrated in **Annex 1**. according to the PRISMA Flow chart. In the first step, unavailable studies, which did not include any of the keywords "organic goods", "organic food" or "organic food purchasing", or were unsuitable by title, were rejected. 188 studies were selected after the first review phase. In the second phase, research without summary, non-empirical and non-European studies were rejected. Following the secondary review, 36 articles were selected. In the third stage, works that focused on non-motivational or non-disruptive factors of organic food purchasing and non-utilitarian organic food were rejected. After the final review, 16 studies meeting all the selection criteria were included in the systematic analysis.

The quality of the research was assessed according to clearly formulated criteria: 1) a clear product category and type was indicated (dairy products, meat products, etc); 2) clear demographic information about the tested sample is provided; 3) clear geographical information is provided; 4) the survey methods and data collection methods are clearly indicated; 5) results indicate clear barriers or drivers of organic food purchasing. The scientific publications were evaluated according to the number of relevant criteria. Fully compliant criteria were assessed as high-quality studies. A total of 10 studies are considered high quality. Studies that did not meet one of the criteria with a direct impact on systemic analysis were 5. A total of 0 studies are considered low-quality studies that do not meet two or more criteria. However, all studies were characterised by clear results and geographical information. Studies lacked information about respondents' demographics (2) and more detailed information on product type (4). A summary table of the study quality assessment is provided in **Annex 2**.

Included data were systemized and evaluated according to predefined factors. The most important data of the studies included in the systematic analysis were listed in a table for the convenience of systematic review **(Annex 3)**. The table included data on the purpose of the study, the type and category of the product under investigation, the number and country of respondents, and the data collection and research methods. In addition, the main results were included in two parts: drivers and barriers to the purchase of organic goods. The table does not include the characteristics and demographic factors of the respondents who choose to buy organic food. Those factors were analysed as well. Each study in the table is identified by the author's name and the year of publication.

1.2.2. Characteristics of the analysed studies

According to the established data inclusion criteria, 16 eligible articles were overviewed in the systematic analysis. The main characteristics of the selected research are presented in

Annex 3. Each of the studies reviewed had a clear aim of the research. Each study sought to reveal organic food purchasing motivation or barriers for a particular product category. All the studies analysed singled out utilitarian organic food as the main product category: bread, vegetables and dairy products. Two analysed studies did not detail the category and type of organic food but distinguished other product characteristics. Ngobo (2011) explored two different brands of organic food, while Scalvedi and Saba (2017) highlighted differences in motivation to buy pro-environmental and local products.

The selected studies covered only the geographical area of Europe. The largest number of studies were conducted in Germany (4) and Denmark (3). Two research studies have been conducted in Poland, Italy, Croatia and France. Two research covered more than one European country. Cerjak, Mesić, Kopić, Kovačić, and Markovina (2010) surveyed the territories of Slovenia, Croatia, and Bosnia-Herzegovina, while De Maya, López-López, and Munuera (2011) surveyed the Danish, Finnish, Greek, Italian, Spanish, Swedish, and UK markets. Most researchers used an online survey (distributed by emails or websites) or face-to-face interviews in supermarkets as the main method for collecting responses. Only Ditlevsen, Denver, Christensen, and Lassen (2020) used a mixed methods design, in which responses were collected using both a survey and a focus group. The number of respondents ranged from 200 to 8014 depending on the type of study chosen. Three studies also used panel scanner data from different supermarket chains. In this case, the data ranged from 4,500 to 22,539.

All work overviewed both men's and women's responses. The gender disposition in some articles (5) was evenly distributed and varied by 5%, while others had women as a majority of respondents (65-70% on average). However, in almost all studies, the percentage of women surveyed was higher than that of men (except for the study by Hansen, Sørensen, and Eriksen (2018), in which 54.8% of men were interviewed). In two works, gender segregation was not mentioned. On average, respondents aged 40-45 were interviewed. Exceptions would be the Wojciechowska-Solis and Soroka (2017) study and the Janssen (2018) work, in which the age distribution of respondents was even. In addition, a Danish study by Melović, Dabić, Rogić, Đurišić and Prorok (2020) included younger respondents (aged 18 to 26). In general, respondents were more educated and had an average or higher income. Two studies stood out and interviewed less educated respondents (Goetzke and Spiller, 2014; Ham, Pap, and Stanic, 2018).

Most studies were using different data analysis methods, for example, structural equation modelling, comparative analysis, discriminant function analysis and regression analysis. To evaluate panel scanner data, the authors built different models, such as the market-based

estimation probability model and the three-stage purchase incidence / brand choice / purchase quantity model (Monier-Dilhan and Bergès, 2016; Ngobo, 2011). Focus group analysis in Ditlevsen et al. (2020) work was analysed using qualitative analysis of categorization and conceptualization. Bryła's (2016) analysis stood out in that it was executed by a paid marketing research agency. Nine studies focused only on drivers, while six studies revealed both major barriers and drivers of organic food purchasing. Only the study by Buder, Feldmann, and Hamm (2014) focused mostly on barriers to organic food purchasing.

1.2.3. Discussion of results

The results of the systematic analysis revealed the main motivational drivers and barriers to organic food consumption. A couple of studies have strongly emphasised a positive attitude towards organic food consumption in general (Ham et al., 2018; De Maya et al., 2011; Zagata, 2012). In the study done by De Maya et al. (2011), consumers' attitudes toward organic production are the second most important variable in explaining purchase intention. The more positive the attitude, the more likely people will choose to buy organic products. How the buyer himself views organic food is particularly important and determines other motivational factors. Based on the results of the included studies, health concerns, seeking better quality food and belief in environmental issues are the main motivating factors for the consumption of organic food, discussed in almost all the analysed studies.

According to a study done by Melović et al. (2020) in Montenegro, health is considered to be a prime motivation for purchasing organic food. Environmental issues were found to be less motivating and did not affect purchasing decisions. Similar findings were revealed by Ditlevsen et al. (2020). Consumers were more likely to view organic food as "pure", better quality and safer than conventional (better for health). Contradictory to other studies, Jaeger's and Weber's (2020) research done in Germany and Monier-Dilhan's and Bergè's (2016) work done in France found that environmental issues are perceived as more important than health or other self-benefits. Analysis revealed that advertising messages targeting environmental benefits (other benefits) were more credible and had higher purchase intention than self-benefit messages targeting health. Research done by Cerjak et al. (2010) found that motivational factors differ according to region. In Croatia and Slovenia health value and care for the environment are the most important drivers in purchasing organic food, while in Bosnia and Herzegovina quality, safety and a healthy lifestyle had more impact than environmental issues. On the other hand, a study done by Scalvedi, and Saba (2018) in Italy, work by Janssen (2018) in Germany and research by Bryła (2016) in Poland stated that health concerns, quality aspect and concern for the environment had a similar (most influential) impact on organic food purchasing behaviour. Such

findings suggest that environmental impact and health concerns depend on the particular region, culture or country. Although, both of those motivational factors have the biggest impact on organic food purchasing and occur in both developing and developed countries (Wojciechowska-Solis and Soroka, 2017).

Research as well uncovered the differences between education, income and gender when choosing organic vegetables due to environmental sustainability or health motivations. Highly educated, more earning consumers were more likely to buy organic food due to investment in their personal health and environment (Monier-Dilhan and Bergès, 2016; Ngobo, 2011). Such respondents were more concerned with returning to nature and preserving the environment and animal welfare (Cerjak et al., 2010). Higher earnings and education link to higher awareness of health issues, environmental troubles and the ability to spend more on such issues by leading a more healthy and environmentally friendly lifestyle. (Wojciechowska-Solis and Soroka, 2017). Older people, especially women were more concerned and interested in a gain of organic food, especially in health benefits and environmental welfare (Cerjak et al., 2010).

Geographical traceability and eating locally were important aspects to organic food consumers as well. As a type of support or environmental concern, it was highlighted in several studies (Janssen, 2018; Melović et al., 2020; Scalvedi and Saba, 2018). However, it was not the main purchasing motivator. Work by Janssen (2018) uncovered that some consumers chose to buy organic as they preferred local and domestic food. For consumers, availability and ease of purchase for fresh organic foods are of more importance than time or money spent (De Maya et al. 2011). This finding could explain the demand for locally produced organic food, as the term "local farming" is usually associated with freshness, quality and sustainability. However, according to focus group results from Ditlevsen et al. (2020) work, organic food consumers, though not indifferent, were not willing to discuss localness in more depth and saw organic food as completely separate from local farming. This finding could indicate that organic food consumers do not care if food is locally produced, as long as it is organic. While local food consumers expressed a low level of trust in organic production and would rather choose less expensive conventional, but locally produced food.

Trust in brand, "organic" or "local" labels and advertisement has a significant impact on consumption. A positive attitude towards brand and label was strongly emphasised in Ngobo's (2011) study. Analysis revealed that it was ad advertising that had a positive impact on organic food purchasing. Although, the exact advertisement effect varies across brand and product categories. In fact, in store fliers and display advertisements had a negative impact on purchasing of organic food. These findings could be linked to price-sensitivity. The study revealed that price

has an inverted U-shaped effect. Even if the price of brands and labels are associated with better quality and taste by consumers, lower income families are more likely to refrain from buying due to the price being too high. This indicated that the price should not exceed a certain point. In addition, buyers are more likely to buy in store (cheaper) brands, this could be linked with price-sensitivity as well. Similar findings could be observed in a study done by Scalvedi and Saba (2018). While trying to distinguish between local and organic food consumers, the authors identified the common traits shared by both. Attention to brand and price were important to both types of consumers. Occasional customers were more concerned with the value-for-money driver (brand and price). This study once again highlighted the possibility of the price being an inverted U-shaped. A higher price could show higher value. although for environmentally concerned individuals' price had less effect than personal values (Monier-Dilhan and Bergès, 2016). Advertisement credibility does play a major role in green production purchasing intention, especially for environmentally concerned. According to Jaeger and Weber (2020), organic food producers should focus more on the credibility of advertising messages by focusing more on familiar arguments (environmental issues).

Social norms and personal values have a huge impact on organic food purchasing as well. The subjective norms highly depend on the culture and social setting the consumer originated from. Although, buyers of organic products are more socially conscious in general (Ngobo, 2011). Social consciousness has a negative effect on organic food purchasing through organic identity, especially for countries with group outlooks (such as Denmark)(Hansen et al., 2018). According to a study done by De Maya et al. (2011), social pressure is mostly seen in public settings (such as supermarkets), as the purchase of organic food could be observed by others. Danish and Swedish consumers are more likely to buy organic food due to subjective norms, as they seek to maintain their reputation and mastery of the social environment. They see themselves as a part of a larger group as opposed to an individual outlook. Similar findings were revealed by Ham et al. (2018) research done in Croatia and Zagata's (2012) work in the Check Republic. Subjective norms and behavioural control had a positive effect on the intention to buy organic food. Consumers in Croatia understand that organic food purchasing is considered to be socially desirable behaviour and a way to positively affect their social identity. The social norms in the Check Republic proved to strongly correlate with attitudes towards organic purchasing. However, in some research, family setting and expectations were more important than overall social pressure (Monier-Dilhan and Bergès, 2016; Zagata, 2012). On the other hand, Spanish consumers see themselves as individuals and are more likely to assess the purchase according to their personal values (De Maya et al., 2011). Social consciousness does play a major role in

choosing locally produced organic food, as organic food buyers tend to object to major retailers' business practices which might hurt small farmers (Ngobo, 2011).

However, according to the findings of Janssen (2018), there is still an attitude-behaviour gap in the market for organic food. People express positive attitudes toward organic food but decide not to buy. The main barriers to organic food purchasing were found to be high price and limited options or low accessibility of organic production and products. Lack of information or awareness and negative outlook on brands and organic advertisements was found to be huge barriers to organic food purchasing. Consumer scepticism is considered to have a negative effect on green buying intention. Such consumers perceive advertisement messages and environmental issues as less credible and sometimes annoying (Jaeger and Weber, 2020). They do not want to be stuck with such labels as "tree hugger" (Bryła, 2016). The reason for scepticism is the lack of trust and insufficient knowledge about organic farming and labelling. Customers start to confuse terms of healthy, traditional, organic and do not appreciate certificates (Bryła, 2016). As a result, there is a need for increased education on the importance of organic food and its benefits to human health. Promoting, advertising and correct labelling practices should be followed to avoid confusion.

Price consciousness has a significant effect on actual organic food purchases (Janssen, 2018). The price is especially a major barrier for young people, who are usually more price conscious due to lower income. They understand the importance of organic food and its health benefits but choose to buy cheaper conventional products (Melović et al., 2020). Overall, financial resources play an important role in the purchase of organic products (Ngobo, 2011). A study done by Janssen (2018) uncovered that households who were healthier and more sustainable cared less for the price of food and had a higher organic budget share. In general, the purchase of organic food is greater among higher income, college educated consumers holding high-level occupations (Ngobo, 2011). However, in the Czech Republic, price and availability proved to be only moderate barriers, as organic food is widely available in conventional retail-chain stores (Zagata, 2012). Existing organic food consumers tend to be less price sensitive due to higher income and more invested in personal (health) or altruistic (care for the environment) motivations (Ngobo, 2011). For such consumers, a price reduction of organic products had no impact on the decision to buy (Monier-Dilhan and Bergès, 2016). Still, price is a major barrier preventing interested individuals to become regular consumers of organic food.

Some studies found that the actual barriers and drivers varied between the product groups and countries (Buder et al., 2014). Health, quality and environmental concerns were still one of the most important motivators to buy organic food with the importance varying from country or

culture. Some studies uncovered that brand, labelling and advertising, together with social norms had an impact on purchasing behaviour. However, countries with more individualistic approaches tended to choose organic due to their personal opinions and values. Consumers were less interested in locally produced food and more in the aspect of safety and quality of organic products and the association of "local" to those aspects. Individuals with a negative outlook or lack of knowledge of organic products were disinterested in buying or consuming such products. Price proved to be the biggest barrier for new consumers to convert to healthier, "organic" lifestyles and was less important for existing, high income households. Some even prefer higher brand prices, as it shows quality.

1.3. The concept of utilitarian goods

1.3.1. The difference between hedonic and utilitarian products

Broadly speaking, goods can be categorised into different types depending on their main attributes and features. When making a choice, consumers decide between hedonic or utilitarian selection (Dhar and Wertenbroch, 2000). Utilitarian products are defined as goods that are used for specific functions and service more basic, functional needs. (Dhar and Wertenbroch, 2000). Usually, utilitarian products are described as effective, helpful, functional and necessary (Kahn, Dhar and Wertenbroch, 2005; Lu, Liu and Fang, 2016). Hedonic goods tend to relate more to emotions and multisensory experiences evoked by the product (Hirschman and Holbrook, 1982). In other words, hedonic decisions are often influenced by emotional desires, while utilitarian consumption is driven by cold cognitive deliberations (Kahn et al., 2005). For example, watching a documentary is utilitarian consumption (as consumers acquire knowledge) while watching comedy is hedonic (as a consumer will be having fun)(Lu et al., 2016). Certain product categories can be associated with either utilitarian or hedonic consumption. Designer clothes, luxury goods are perceived as hedonic, while paper towels, fridges are considered to be utilitarian products (Choi, Madhavaram and Park, 2020). It is important to note that both hedonic and utilitarian features can be found in a single product. For example, organic meat dishes can give pleasure by being tasty and helping to satisfy hunger and be healthier. Both attributes can contribute to either the functional or pleasure needs of consumers, but to a certain degree (Batra and Ahtola, 1991). Both goods, hedonic and utilitarian, are intended to give benefits, but of different types, and avoid causing direct harm (Okada, 2005).

Usage and consumption are key factors when determining if an item is perceived as hedonic or utilitarian (Kahn et al., 2005). Several authors have analysed different motivations to consume utilitarian goods. Utilitarian goods consumption, unlike hedonic, tend to be easily

justified and guilt is avoided as consumers place more emphasis on the fulfilment of their basic needs and possible positive consequences of their actions (Batra and Ahtola, 1991; Kim, 2016). However, the type of a product, utilitarian or hedonic, heavily depends on customers' perception. One product might be a necessity for customer A, but for customer B it is discretionary (Okada, 2005). Preference for utilitarian or hedonic products is not stable and different situations could be crucial for the decision to consume either option. For example, when choosing products for others, customers tend to select hedonic products over utilitarian goods. In such a situation, the feelings of guilt are also less effective (Lu et al., 2016).

1.3.2. The concept of utilitarian food products

By consuming utilitarian food, humans seek to accomplish practical and functional goals, for example, satisfying hunger. In a sense, utilitarian consumption is a priority before pleasure, as consumers use value-by-calculation process before feelings while indulging in utilitarian consumption (Basso etc., 2019; Cramer and Antonides, 2011; Kim, 2016). In the work of Babin, Darden and Griffin (1994), utilitarian value is defined as “work” or “chore”, as consumers tend to evaluate the value of utilitarian shopping through successful trips (they do not see the pleasure in such shopping). The definition of utilitarian foods could include such products as milk, bread, vegetables and fruits, while hedonic products include chocolate, ice cream and alcoholic beverages. It is important to note that price sensitivity for utilitarian food is higher than for hedonic products due to such differences in consumption reasons (Maehle, Iversen, Hem and Otnes, 2015). Utilitarian foods are often associated with instrumental benefits, for example, low price and high nutritional value, while hedonic foods are mainly consumed for good taste and pleasure (such as happiness when eating a delicious cake). Utilitarian consumption seldom calls out positive feelings. For this reason, consumers are willing to spend more for fun and relaxation than on functional food (Maehle, Iversen, Hem and Otnes, 2015). In addition, compared to hedonic, utilitarian food is less sensitive to discounts or pricing strategies as consumers tend to be colder and deliberating (as they do not experience guilt feelings) in making utilitarian purchase decisions (Choi et al., 2020). In short, utilitarian consumption is subjected to “should” preferences, while hedonic to “want” (Dhar and Wertenbroch, 2000). For consumers, it is important to manage between individual objectives and long-term society goals while selecting food. The conflict between time-saving, effortless tangible benefits seen in hedonic consumption and environmental-friendly, healthy utilitarian food shows the complexity of the choices consumers face today (Maehle et al., 2015).

Utilitarian food as a scope of research was selected for several reasons. As price is analysed as a mediating variable, price sensitivity is an important factor. Due to utilitarian food

being more price sensitive, such a selection was made. In addition, we can see the shift from convenience (hedonic) towards more ethical, altruistic consumption (utilitarian), as consumers become more aware of the negative impact on the environment, health and social responsibility in general (Morgan, Croney and Widmar, 2016). People who choose to eat healthier and more sustainably tend to consume utilitarian products (Maehle, et al., 2015).

1.3.3. The connection between organic products, health and sustainability

"Organic food" could be defined as "food raised, grown or stored and/or processed without the use of synthetically produced chemicals or fertilisers, herbicides, pesticides, fungicides, growth hormones and regulators or genetic modifications" (Jones, Clarke-Hill, Shears and Hillier, 2001). Products labelled as "organic" are certified as being produced through a clear and strict process (FAO, 2001). According to the Food and Agriculture Organisation of the United Nations (FAO) (2021), organic agriculture is „a system that relies on ecosystem management rather than external agricultural inputs". The principles of the term "organic farming" or "organic agriculture" involve concerns for safe food production, environment, animal welfare and social justice (Browne, Harris, Hofny-Collins, Pasiecznik and Wallace, 2000). Council Regulation (EC) No 834/2007 on organic production and labelling of organic products and repealing Regulation (EEC) No 2092/91 states that organic production is "an overall system of farm management and food production" with several benefits to society and environment, such as protecting nature and animals' welfare, escalate rural development and meet market demand for organic goods. Such food production "combines best environmental practices, a high level of biodiversity, the preservation of natural resources" as well as high animal welfare standards with the usage of only natural substances and processes. Both consumers and farmers believe that organic goods are a way to create a more biologically diverse landscape and cut down groundwater pollution.

It is important to note that the terms sustainable, "green" and organic food are linked together, as their goals closely correspond (Browne et al., 2000). "Organic food" defines products grown without the usage of synthetic materials, while sustainable agriculture is defined as "environmentally-sound, resource-conserving, economically viable and socially supportive, commercially competitive, and environmentally sound" (Rigby and Cáceres, 2001). According to IFOAM Organics Europe, organic production does reduce emissions by reducing inputs, using closed nutrient cycles and is built on fertile soils. In addition, organic goods improve animal welfare, benefit the environment and consumers' health while maintaining overall quality (Jones et al., 2001). Organic, as well as sustainable farming use "soil and water protection and conservation techniques", such as crop rotation, organic manure and mulches, organic pests'

control and recycling. Mentioned techniques are a way to reduce soil degradation, improve soil structure and fertility, encourage soil microorganisms' development and improve the health of farmworkers (FAO, 1999). Additionally, lower levels of pesticides and higher levels of nutrients caused by organic farming practices have been proved by multiple studies to be better for consumers' health. Organic food was found to have significantly higher levels of vitamin C, iron, magnesium and others, as well as antioxidant phytochemicals (Crinnion, 2010). Organic food contains only one third of the pesticides that conventional food does, so lower exposure transfers to lower risk (Shafie and Rennie, 2012). According to a systematic review conducted by Vigar etc. (2019), significant positive outcomes of organic food intake were observed in longitudinal studies. Increased organic intake was associated with reduced incidence of infertility, birth defects, allergic sensitisation, otitis media, pre-eclampsia, metabolic syndrome, high BMI, and non-Hodgkin lymphoma.

Conducted systematic literature analysis has revealed that customers often associate organic food with health benefits and environmental sustainability. Customers who are more health conscious tend to be more aware of food hazards (Shafie and Rennie, 2012). The belief of health benefits of organic food is linked with higher nutritional quality and fewer toxic chemicals (Williams, 2002; Crinnion, 2010). Food safety in general is a motivational factor to consume. Consumers also associate organic food with natural process animal welfare and care for the environment seen in environmental protection behaviour (Shafie and Rennie, 2012). Such reasons were revealed to be the main driving force of consumers' purchase intention. Consumers who express strong environmental concerns are more willing to buy products that reflect those concerns. Health concerns also play an important role in consumption, especially of food (Maehle et al., 2015).

1.4. Price influence on utilitarian organic food purchasing intention

1.4.1. Price influence on intention to buy

Various authors define purchase intention in a similar manner - as an individual's conscious behaviour towards making a decision to purchase or planning to purchase a product or service (Kasemsap, 2017; Drossos, 2012; Dadwal, 2020; Amoroso, 2016). A consumer's purchase intention is influenced by the perception of price, product, promotion and place (marketing mix) (Widyastuti and Said, 2017). However, price is often considered to be the main barrier to customers' purchase intention (Mirabi, Akbariyeh and Tahmasebifard, 2015).

Price in various research is defined as money that is charged for a product or service. The price amounts to the value consumers exchange for using the benefits of an owned product or

received service (Satriawan and Setiawan, 2020; Widyastuti and Said, 2017). According to studies, consumers form their own price expectations based on pricing patterns they have observed over time (Kwon and Schumman, 2001). As such, the price can be categorised into two categories - perceived and actual price. Perceived price is defined as the overall price level or range the consumer perceives for the product category to be reasonable compared to reference price (Chang and Wildt, 1994; Zietsman, Mostert and Svensson, 2018). Customers tend to obtain reference price information and form decision rules from various sources, for example observing competitors (Kwon and Schumman, 2001). While the actual price is the sum of money a seller is asking to be paid for a certain product or service (Zietsman et al., 2018). As price is defined as the value spent and received, it is inseparable from perceived value. Such factors were found to be a significant influence on purchase decisions (Chang and Wildt, 1994; Satriawan and Setiawan, 2020). When making a purchase decision, consumers often compare perceived price with the actual price. As a result, a consumer's purchase intention depends on price expectation based on one or more competitors' reference prices. Such expectation could alter the intention to buy by either accelerating towards or deferring from purchasing (Chang and Wildt, 1994; Kwon and Schumman, 2001).

However, research conducted by Creyer (1997) revealed that customers are more likely to reward the ethical behaviour of companies by willing to pay higher prices for a firm's products. Such findings correlate with conducted systematic analysis. Even though the price is considered a major barrier to organic purchasing, consumers are willing to pay more for health and environmental sustainability benefits. For example, when selecting food, individual behaviour is not driven by the lowest price, but by price considerations. Health and environmental drivers were found to be a very important factors in shaping consumers' behaviour towards either buying or passing a product (Walumics, 2021).

1.4.2. Price influence on utilitarian products purchasing intention

It was found that price is a more important aspect of utilitarian products purchasing intention compared to hedonic. The acceptable price range is wider for a hedonic product than for a utilitarian one. Such findings suggest that customers are more price-sensitive while making utilitarian purchases (Maehle et al., 2015). It was found that utilitarian food is less sensitive to discounts, premiums or other pricing strategies (Choi et al., 2020; Palazon and Delgado-Ballester, 2013). The low price (discounts) of utilitarian products is linked with hedonic feelings (bargain-related responses) (Babin et al., 1994). Although, research proved hedonic consumption to be less price sensitive than utilitarian in general. Customers overview hedonic

consumption as a fun, exciting activity and would seldom care for the price while shopping. However, they would succumb to guilt feelings afterwards. Discounts and other pricing strategies can help to mitigate the feelings of guilt avoiding price sensitivity. This same strategy is not possible for utilitarian products. Utilitarian shopping is done as a "chore", so customers are less likely to spend impulsively and deliberate their decision to pay higher prices more carefully (Babin et al., 1994; Choi et al., 2020). Utilitarian value is understood as the efficiency of the shopping process, avoiding and minimising unnecessary costs, for example getting a product at the right price (Gerhard, De Souza, Peñaloza and Denegri, 2017; Teller, Reutterer and Schnedlitz, 2008). Such reasons make it difficult to charge a price premium for utilitarian food (Dhar and Wertenbroch 2000).

Low income segments often due to material and emotional limitations tend to adopt a high degree of rationality and consider their consumption according to product types (utilitarian) and low price (Gerhard, et al., 2017). Rational thinking heightens the need for justifying the choice of purchasing or rejecting a product, especially when presented with a choice (Okada, 2005). As environmental friendliness and health benefits were found to be more important for utilitarian consumption versus hedonic consumption, it is possible that consumers chose to pay more for such benefits, as seen in the systematic analysis of organic food purchasing motivation (Maehle et al., 2015).

1.4.3. Price influence on organic food purchasing intention

Even though the European Union is highly motivated to move to organic production and significantly increase (25%) organic farmland until 2030, the concept is still considered a small industry (2% of global food sales in 2021) (European Commission, 2021; FAO, 2021). However, according to the IFOAM Organic Food conference 2021 closing speech, organic production is a rapidly-growing sector, even if organic products cost more than conventional products. Multiple researchers have agreed that certified, high quality organic food usually has a higher price, compared to conventional (De Canio and Martinelli, 2021; Janssen, 2018). The market price of organic food in certain countries sometimes reaches two or even three times the price of conventional goods (Yin, Wu, Du and Chen, 2010). A study done by Islam and Colonescu (2019) revealed that organic goods prices, on average, were higher than conventional food in each overviewed store. By consumers, organic goods are considered to be more expensive than locally produced food (Feldmann and Hamm, 2015). Organic food does carry a price premium, even if it is hard for customers to evaluate the high price aspects under normal circumstances. In such situations, labelling and marketing become crucial (Manning and Kowalska, 2021).

According to a conducted systematic literature analysis, price is an important criterion for organic purchasing behaviour. A large share of consumers are willing to pay a premium price for organic goods. It is due to the premium price being associated with higher value. However, consumers' willingness to pay was highly affected by the demography of consumer segments. The high cost of organic food does hinder consumer demand and is considered a major perceived barrier to organic goods purchasing, especially for consumers with budget constraints. The price barrier is strongly exposed by price-sensitive customers in Europe. In multiple studies, income had a negative influence on households' organic food purchasing intention. Even if consumers understand the importance of organic food (sustainability, health benefits), they choose to buy conventional products for lower prices (consult **Annex 3**).

Although, it is stated that low income is only partially responsible for the intention to buy - psychological variables influence organic food purchasing even more. Higher earning consumers with a more positive attitude towards organic food were more likely to spend more. Van Doorn and Verhoef (2011) in their research on willingness to pay for organic products in the Dutch market have uncovered that consumers were more willing to pay for virtue (immediate costs (bad taste), but delayed benefits (healthy)) organic products, than for vice (immediate benefits (sweet taste), but delayed costs (health risks)). Meaning that consumers place utilitarian organic foods with delayed benefits (healthy) above hedonic immediate benefits (good taste). Results show that organic goods consumers tend to care more for the utilitarian, functional characteristics of the product. Indeed, the premium price of organic food requires the consumer to be more reasonable while choosing products. In other words, customers consider such purchasing habits as a sacrifice for their good health or wellbeing of an environment. As a study conducted by Ghali (2020) revealed, "a consumer is willing to pay premium prices when he/she is aware of the utilitarian attribute of organic food and has trust in its nutritional value, superior quality and healthfulness".

2. RESEARCH METHODS

2.1. Research conceptual model

The purpose of the empirical research is to collect and analyse the primary data and to reveal if there is a negative or positive influence of individuals' health consciousness and environmental consciousness on intention to purchase utilitarian organic vegetables and if such connection is moderated by perceived price. This research analyses the variables (perceived price, health consciousness, environmental consciousness) as conditional factors of customers' intention to purchase organic vegetables.

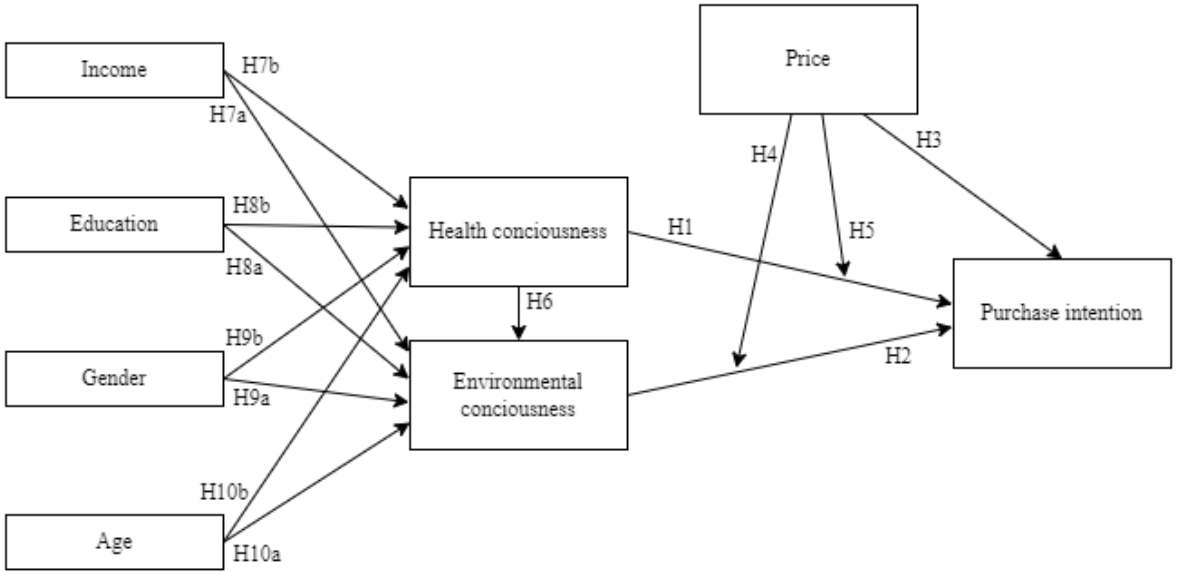
As the literature analysis uncovered one of the main barriers to intention to buy and actual purchasing of utilitarian organic food to be a high price, perceived price was selected due to the high rationality of careful utilitarian products price deliberation. Motivational drivers are as well important influential factors and should be taken into consideration. Motivational drivers, such as customers' seek of health benefits and belief in the safety and quality of organic food, as well as looking for more sustainable products due to environmental protection values and believing in the effectiveness of organic farming were heavily mentioned in various previous research. According to a systematic literature analysis, the health and quality of organic food benefits were found to be of extreme importance to customers (mentioned in 12 of 16 analysed studies). Environmental aid to the environment as a driver of purchase was mentioned frequently as well (revealed in 7 of 16 analysed studies) (consult **Annex 3**). In addition, health consciousness and environmental consciousness were mentioned to be affected by sociodemographic factors (income, age, gender and education). More educated, wealthier customers placed greater value on sustainable and healthy products. While health and environmental consciousness varied between age and gender. As result, depending on those variables, the intention to purchase utilitarian organic food could vary.

Previous research overviewed in systematic literature analysis focused on separate variables and their influence on organic food purchase. This study is focusing on unravelling if there are moderating effects of perceived price on the connection between health consciousness and environmental consciousness and purchasing intention. Additionally, the study analyses the connection between sociodemographic variables (income, age, gender and education) and health consciousness and environmental consciousness. The research provides insights for farmers and vendors who seek to adapt their marketing strategy of utilitarian local organic food and target

customers who intend to purchase such products. The research conceptual model is displayed in **Figure 1**.

Figure 1.

Conceptual model



Compiled by the author.

2.2. Scope of the research

Literature analysis revealed that both local and organic products are usually viewed by consumers as safer, fresher, of better quality and being more sustainable. Although, as such products are usually more expensive as well, it is important to analyse if customers are intending to buy utilitarian organic food for their daily essential consumption. The majority of studies overviewed in systematic literature analysis focused their attention on some types of utilitarian organic food in different European countries (consult **Annex 3**).

According to a variety of statistical sources, in Europe, the most locally grown organic products were cereals and vegetables (EUFIC, 2021; FiBL and IFOAM, 2021, Eurostat, 2021). According to Eurostat (2022), in 2019 55% of the European Union population reported to consume 1 to 4 portions of fruits and vegetables a day. Stonkus in his report on the Status of Organic Agriculture and Industry in Lithuania (2021) mentioned that the survey done in 2021 on behalf of supermarket chain Maxima revealed that the most common organic products chosen by customers are fruits and vegetables. Similar findings were uncovered in other research. According to the report done by the Health training and disease prevention centre (2021), the majority of citizens consume an average amount (in grams per day) of cereal products (grains) (223 g.), vegetables and nuts (185 g.), fruits (161 g.), meat (141 g.), milk and dairy (131 g.) in

their daily rations. Analysis done by Bartkevičiūtė etc. (2020) uncovered that the majority of respondents chose fruits and vegetables (57,1%), grain products (46.2%), meat (35.7%) and dairy (26.4%) for their daily consumption. According to statistics, vegetables, alongside grains, triumph over other types of food consumers choose for their daily consumption. As consumers consider vegetables to be an important part of their daily essential diet (utilitarian aspect), the scope of research was selected to be organic vegetables.

2.3. Hypothesis

The following hypotheses were created by consulting the literature analysis.

According to systematic analysis, the main motivational drivers of organic food purchasing were found to be health benefits and environmental concerns.

Some authors considered health benefits to be associated with “safety”, “pureness” and better quality overall (Ditlevsen et al., 2020). The research identified the concern for one's health to be a motivating factor in organic food purchasing. The findings of systematic literature analysis could be linked with customers' health consciousness, defined as self-awareness about one's health, and the willingness to engage in health and wellness promoting behaviours (Espinosa and Kadić-Maglajlić, 2018) and intention to buy organic food. More health conscious individuals could be more drawn to purchase organic food due to it being more nutritious and safer to eat (Vigar etc., 2019). As such, the following hypothesis could be drawn:

H1: Health consciousness positively influences organic vegetables purchasing intention.

Systematic analysis as well unravelled a motivational factor of concern for the environment. Advertisement and labelling targeting environmental beliefs were found to be a significant motivator toward organic purchasing and consumption (Ngobo, 2011). Due to a belief in current environmental endangerment and the trust in the benefits of organic farming, customers are more likely to choose organic. Such behaviour could be defined as environmental consciousness, an individual's propensity to engage in pro‑environmental behaviours (Sharma and Bansal, 2013). It is possible that organic food consumers are much concerned for the environment and intend to buy food which is farmed in a way to save the fertile ground and the wellbeing of the environment in general. As such, the following hypothesis could be drawn:

H2: Environmental consciousness positively influences organic vegetables purchasing intention.

However, an attitude-behaviour gap is strong in the organic food market. The findings of Janssen (2018) revealed that people express positive attitudes toward organic food but decide not to buy. This could be linked with the high price of organic food found in systematic literature analysis to be the main barrier to intention to buy (consult **Annex 3**).

H3: Perceived price negatively influences purchasing intention of organic vegetables.

Lower income families might understand the importance of organic food (health and environmental benefits) but choose not to buy due to unfavourable financial situation (Melović et al., 2020). If customers' perceived price is lower or higher than the actual price or their referral price (of conventional goods), they decide not to buy regardless of their health and environmental consciousness. In this case, the perceived price could be a moderator. Therefore, the following hypothesis could be drawn:

H4: Perceived price negatively moderates the relationship between health consciousness and purchasing intention of organic vegetables.

H5: Perceived price negatively moderates the relationship between environmental consciousness and purchasing intention of organic vegetables.

Literature analysis revealed that health conscious individuals are more aware of food hazards, such as toxic chemicals used in conventional farming, and the nutritional quality of food (Crinnion, 2010; Shafie and Rennie, 2012; Williams, 2002). Organic food is considered by such individuals to be of high quality and safe, due to sustainable farming practices. Such findings could indicate a possible influence of health consciousness on environmental consciousness. Individuals who care for their health, care for the environment as well due to their own wellbeing. Therefore, the following hypothesis could be drawn:

H6: Health consciousness positively influences environmental consciousness.

In addition, the systematic analysis found that a household's socioeconomic and sociodemographic background influences the behaviour and attitude of consumers. Sociodemographic factors could in more depth explain the profile of health conscious and environmentally conscious organic food consumer.

Organic food purchasing motivation was found to be higher for more earning, college educated customers, who were found to be more invested in their personal health and environment (Monier-Dilhan and Bergès, 2016; Ngobo, 2011). In Croatia and Bosnia, such respondents were more concerned with returning to nature and preserving the environment and animal welfare (Cerjak et al., 2010). Higher education showed higher awareness of organic food benefits for both health and the environment. Higher earnings allow such individuals to lead a healthier and more sustainable lifestyle (Wojciechowska-Solis and Soroka, 2017). Such cases hint that higher earning, more educated consumers are more likely to be health and environmentally conscious. Therefore, the following hypothesis could be drawn:

H7a: The more a person earns, the more environmentally conscious he is

H7b: The more a person earns, the more health conscious he is

H8a: The higher the education of the individual, the stronger environmental consciousness is.

H8b: The higher the education of the individual, the stronger health consciousness is.

The authors also observed that gender and age had an impact on the motivation to buy organic food. In a study done by Cerjak et al. (2010), women were found to be more interested in the health and environmental benefits of organic food. It is possible that women are more environmental and health conscious and are more likely to buy organic food due to such motivations. Hypotheses to be tested:

H9a: Women are more environmentally conscious compared to men.

H9b: Women are more health conscious compared to men.

Age factor in overviewed articles was mentioned the least and findings differ. Older respondents were found to be more interested in organic food consumption due to health benefits (Cerjak et al., 2010). However, a study done in Poland revealed that consumers, mainly in the 20-25 age bracket, chose to buy organic food due to health benefits as well (Bryła, 2016). Age might have an impact on environmental and health consciousness and organic food purchasing intention. Hypotheses to be tested:

H10a: The younger the person, the more environmentally conscious they are.

H10b: The older the person, the more health conscious they are.

2.4. Methods and procedures for sampling and data collection

In order to answer the research question and test the hypotheses, this study used a quantitative research method due to it being a fast, objective and accurate way to gather a large number of respondents. The main method of data collection was an internet-administered online survey conducted using a self-completing questionnaire in Lithuanian language (consult **Annex 4** for the example of the questionnaire in Lithuanian language). A questionnaire was distributed through online portals and social media accounts. According to the literature review, multiple past empirical quantitative research used a variation of a different survey format (Goetzke and Spiller (2014), Melovič et al. (2020) and Jager (2019) used an online questionnaire) as a method to collect data (Goetzke and Spiller, 2014; Melovič et al., 2020; Ditlevsen et al., 2020; Bryła, 2016; De Maya et al., 2011; Hansen et al., 2018). The majority of authors used face-to-face interviews. However, for this study, an online survey as a data collection method was chosen as it is a quick and economical way to reach a high number of respondents and the method is proven to be effective and safe, especially during a global pandemic.

Non-probability sampling was used as a sampling method due to the need for respondents who possess certain traits. The ideal respondents of the research are residents of

Lithuania, from 18 years of age and able to evaluate their preferences. When calculating sample size, the following factors were evaluated: (1) residence of the respondent; (2) age; (3) interest in organic food purchasing. A study carried out by "Kantar TNS" (2021), revealed that 46% of the Lithuanian population buy organic products. According to Lithuanian Statistics Portal, approximately 2 795 680 people lived in Lithuania in total. based on mentioned statistics, the calculated total of residents 1 286 012 were interested in buying organic food in 2021 in Lithuania. According to the Paniotto formula, the sample of research should be around 399 respondents to get a 95% probability of a test result with an error of 5%. Step by step calculation of the sample is provided in **Figure 3**.

Figure 2.

Paniotto formula.

$$n = \frac{1}{\Delta^2 + \frac{1}{N}} = \frac{1}{0.05^2 + \frac{1}{1286012}} = \frac{1}{0.002503395} = 399.8756231 \sim 400$$

Compiled by the author.

The respondent number in past research reviewed in literature analysis which focused on purchasing behaviour of organic food consumers and used exclusively an online or in person survey as a data collection method without research agency or other external professional provider service varied from 172 to 500 respondents (**Table 1**). Other empirical quantitative research, included in literature analysis, which used other methods of data collection (panel scanner, mixed methods) or professional or external providers were not included in calculations.

According to calculation and reference of past studies, a sample between 200-500 respondents is acceptable for relevant test results. On average the following studies had 331 respondents.

Table 1.

Comparison of various research executed from 2010 to 2020 sample sizes.

Research	Data collection methods	Respondents	Country
Ham et al. (2018)	In person survey	411	Croatia
Cerjak et al. (2010)	In person survey	200	Multiple countries
Melovič et al. (2020)	Online survey	300	Montenegro
Goetzke et al. (2014)	Online survey	500	Germany
Yin et al. (2010)	In person survey	432	China
Van Doorn and Verhoef (2011)	In person survey	172	Netherlands
Maehle et al. (2015)	Online survey	306	U.S.

Compiled by the author based on the sources listed in the table.

2.5. Instrument

In order to test the hypothesis, the researchers used four previously tested and reliable multi-item existing or slightly modified measurement constructs adapted from other authors.

Health consciousness was measured using 5 items (α=0.93) adapted from Squires, Juric and Cornwell (2001). The construct was selected to test the health and diet beliefs of respondents. The exact version of the construct was used to test.

Environmental consciousness was measured using 5 items (α=0.95) derived from Hensen et al. (2018). The construct was selected to test the beliefs about the environmental benefits of organic food. The exact version of the construct was used.

The measurement of *purchase intention* was based on 3 items (α=0.94) proposed by Michaelidou and Hassan (2008). The scale was adapted to measure the intention to purchase organic vegetables within the next two weeks.

Perceived price was measured by 2 items (α=0.8) derived from Yoo, Donthu and Lee (2000). The scale was adapted to measure how respondents perceive the price of organic vegetables.

Each item was measured on a seven-point Likert scale. Health consciousness was measured from 1 to 7 (1=strongly disagree; 7=strongly agree). Environmental consciousness was measured from 1 to 7 (1=not at all important; 7=very important). Purchasing intention was measured from 1 to 7 (1=strongly disagree; 7=strongly agree). Perceived price was measured from 1 to 7 (1=strongly disagree; 7=strongly agree).

After collecting data, the reliability of the constructs was checked. Cronbach's alpha was used as an index of reliability. The analysis of reliability was conducted in SPSS. All of the scales had high reliability (>.80). As the acceptable values of alpha are ranging from 0.70 to 0.95 (Tavakol and Dennick, 2011), constructs are considered reliable and suitable for further analysis. Measurement items, variables sources and Cronbach's Alpha index are displayed in **Table 2**.

As income, gender, age and education proved to be important in determining health consciousness and environmental consciousness (Aschemann-Witzel and Zielke, 2017; Ngobo, 2011), such sociodemographic options were included: income, age, education, gender.

The online survey was administered electronically from April 4th to April 28th. It was possible to collect answers from 279 respondents. After reviewing and rejecting poorly answered forms, 270 answers were selected for further analysis.

Table 2.

Constructs and their source of adaptation.

Variable	Measurement items	Cronbach's Alpha	Source
Health consciousness (HC)	I choose food carefully to ensure good health. I think of myself as a health conscious consumer. I prefer unprocessed foods. I believe I am what I eat. I buy food that helps maintain my weight and appearance. Compared to others my age, I am in better health.	.93	Squires et al., 2001
Environmental consciousness (EC)	When/if you purchase/would purchase organic foods how important is it to you that this helps to… Reduce the amount of chemicals that run-off into lakes and watercourses Reduce the amount of artificial fertilisers in agriculture Reduce the use of herbicides and pesticides in agriculture Reduce the pollution of the soil By purchasing organic foods, I help/would help to improve the general state of the environment	.95	Hansen et al., 2018
Purchase intention (PI)	I intend to purchase organic vegetables within the next two weeks I want to purchase organic vegetables within the next two weeks How likely is it that you will purchase organic vegetables within the next two weeks?	.94	Michaelidou and Hassan, 2008
Perceived price (PP)	Organic vegetables are expensive The price of organic vegetables is high	.80	Yoo et al., 2000

Compiled by the author based on the sources listed in the table.

4.2. Methods and statistics for data analysis

Sample data were analysed using IBM SPSS and Microsoft Excel. Data analysis was executed in 3 steps.

The first step: data preparation for analysis. First, the data was exported to Excel and reviewed. Poorly answered questionnaires were excluded (respondents who evaluated all constructs with the same number). After the review, 270 responses were selected for further analysis. Variables were renamed and prepared for transfer to SPSS.

The second step: data evaluation. Descriptive statistics of the sample and constructs were conducted, normality testing using Explore was executed and multicollinearity was tested by running collinearity diagnostics. After analysing the distribution of the data, tools for hypothesis testing were selected.

The third step: data analysis. Multiple regression analysis, PROCESS v.4.1 by Andrew F. Hayes, linear regression analysis, Spearman's rank correlation analysis and Mann-Whitney U were used to test the hypotheses. Analysis results were presented.

4. DATA ANALYSIS

4.1. Descriptive statistics

Basic descriptive statistics provided a first glimpse at the main data and constructs of the model. A larger number (55,6%) of respondents were women, compared to men (44,4%). The age ranged between 18 and 61+ years. The majority of respondents were from 18 to 25, while the least of respondents' age was 61+. Such disbalance could be linked with older people's lack of understanding and usage of social media. The sample was highly educated (56,3% of respondents held a university degree). However, the less educated part of the population will be underrepresented (only 3,3% of respondents had a less than high school degree). The income was varying from 11,1% to 25,2%. Higher income households were slightly underrepresented. Respondents mostly earned between 601 and 1000 eur (27%). The sociodemographic characteristics of the sample are displayed in **Table 3**.

Table 3.

Demographic characteristics of the sample.

Demographic variable	Measurement items	Number of respondents	Percentage of respondents (%)
Age	18-25	112	41.5 %
	26-30	57	21.1 %
	31-40	37	13.7 %
	41-50	35	13.0 %
	51-60	19	7.0 %
	61+	10	3.7 %
Income	600€ or less	68	25.2 %
	601-1000€	73	27,0 %
	1001-1500€	62	23,0 %
	1501-2000€	37	13,7 %
	2001+€	30	11,1 %
Education	Less than a high school degree	9	3,3 %
	High school degree	63	23,3 %
	Professional education	46	17,0 %
	Higher degree	152	56,3 %
Gender	Male	120	44.4 %
	Female	150	55.6 %

Compiled by the author based on the data analysis results.

On average, respondents tend to be environmentally conscious (M=5.32) and health conscious (M=4.82). The mean for environmental consciousness is higher than for health

consciousness. The purchasing intention of the sample is moderate (M=4.2). Consumers perceive organic food price as high (M=5.70). **Table 4** shows the mean of the data.

Table 4.

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
HC	270	1,50	7,00	4,8235	1,42994
EC	270	1,00	7,00	5,3215	1,46058
PP	270	2,00	7,00	5,7093	1,20165
PI	270	1,00	7,00	4,2741	1,81137
Valid N (listwise)	270				

Compiled by the author based on the data analysis results in SPSS.

4.2. Normality testing

To select suitable analysis methods, the normality of construct scores was assessed. Shapiro-Wilk test indicates that the scores of health consciousness were not normally distributed, $W(270)=945$, $p<0.001$. The scores of environmental consciousness were not normally distributed $W(270)=879$, $p<0.001$. The scores of perceived price were not normally distributed $W(270)=878$, $p<0.001$. The scores of purchasing intention were not normally distributed $W(270)=950$, $p<0.001$. The results of normality testing can be found in **Table 5**.

Table 5.

Tests of Normality

	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
HC	,100	270	<,001	,945	270	<,001
EC	,183	270	<,001	,879	270	<,001
PP	,162	270	<,001	,878	270	<,001
PI	,100	270	<,001	,950	270	<,001

a. Lilliefors Significance Correction

Compiled by the author based on the data analysis results in SPSS.

4.3. Hypothesis testing

To test the influence of variables on purchasing intention, it is important to recognize that not all behavioural events will be normally distributed, bearing this in mind, multiple regression

analysis were used for hypothesis testing. To test the moderating effects of price, PROCESS v.4.1 by Andrew F. Hayes was adapted.

As the data set is considered non-normal data, nonparametric tests were applied to test the relationship and differences between variables. Spearman correlation test were selected to determine the correlation between health consciousness, environmental consciousness and purchasing intention, perceived price and sociodemographic variables. Mann-Whitney test was used to analyse the differences between men and women.

4.3.1. Multiple regression analysis

Multiple regression analysis was conducted to test if the independent variables (health consciousness, environmental consciousness, perceived price) influence the dependent variable purchasing intention.

Before conducting multiple regression analysis, the multicollinearity of the variables was tested using the variance inflation factor (VIF). As none of the VIF values for the predictor variables are greater than 5, therefore multicollinearity is not a concern (HC, Tolerance=0.699, VIF=1.43, EC, Tolerance=0,679, VIF=1.47, PP, Tolerance=892, VIF=1,12). The results of multicollinearity analysis can be found in **Table 6**.

Table 6.

Coefficients[a]

		Collinearity Statistics	
Model		Tolerance	VIF
1	HC	,699	1,430
	EC	,679	1,473
	PP	,892	1,121

a. Dependent Variable: PI

Compiled by the author based on the data analysis results in SPSS.

Multiple regression model is statistically significant (R2=0,390, F(3)=56,753, P<0.001). The result of the ANOVA is presented in **Table 7**. Analysed predictors only partially explain the variance (the R-squared value is at 39%). It indicates that organic vegetable purchasing intention could be influenced by other variables not included in the model. A model summary is presented in **Table 8**.

Table 7.

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	344,457	3	114,819	56,753	<,001[b]
	Residual	538,151	266	2,023		
	Total	882,607	269			

a. Dependent Variable: PI

b. Predictors: (Constant), PP, EC, HC

Compiled by the author based on the data analysis results in SPSS.

Table 8.

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	,625[a]	,390	,383	1,42237

a. Predictors: (Constant), PP, EC, HC

Compiled by the author based on the data analysis results in SPSS.

The results of regressions indicate that health consciousness (t=6,514 , p<0.001) and environmental consciousness (t=6,499, p<0.001) positively influences organic food purchasing intention. Therefore, H1 and H2 are accepted. Regression results are displayed in **Table 9**.

Table 9.

Coefficients[a]

		Unstandardized Coefficients		Standardized Coefficients		
Model		B	Std. Error	Beta	t	Sig.
1	(Constant)	920	,477		1,927	,055
	HC	,473	,073	,373	6,514	<,001
	EC	,468	,072	,378	6,499	<,001
	PP	-,248	,076	-,165	-3,249	,001

a. Dependent Variable: PI

Compiled by the author based on the data analysis results in SPSS.

Perceived price negatively influence organic vegetables purchasing intention (t=-3,249, p=0.001<0.05). H3 is accepted. Every one unit increase in health consciousness would result in an increase of 0.473 in purchasing intention of organic vegetables (B=0.473, p<0.001). Every

one unit increase in environmental consciousness would result in an increase of 0.468 in purchasing intention of organic vegetables (B=0.468, p<0.001). Every one unit increase in perceived price would result in a decrease of 0.248 in purchasing intention of organic vegetables (B=0.248, p=0.001<0.05).

In this case, health consciousness scored the highest in terms of strength of influence, although it is very similar to environmental consciousness. Perceived price has the lowest strength of influence.

4.3.4. PROCESS v.4.1

The PROCESS by Andrew F. Hayes was used to test the moderating effects of perceived price in a relationship between health consciousness and purchasing intention and between environmental consciousness and purchasing intention.

First, moderating effects of perceived price (IV) on environmental consciousness (IV) and organic food purchasing intention (DV) connection were analysed. Model is statistically significant (R2=0,295, F(3)=37,143, p<0.001). The model summary is displayed in **Table 10**.

Table 10.

Model Summary

Model	R	R Square	MSE	F	df1	df2	p
	,5434	,2952	2,3385	37,1432	3,0000	266,000	,0000

Compiled by the author based on the data analysis results in SPSS.

Analysis revealed that both health consciousness and perceived price influence purchasing intention. Perceived price negatively affects purchasing intention (t=-1,984, p=0.048<0.05). While health consciousness positively affects purchasing intention (t=10.2487, p<0.001).

Although, the results of the analysis revealed that for the different levels of the moderator, the interaction between variables was not significantly different from zero (not significant) (b=-0.0391 t=-0.8212, p=0.4123). H4 is rejected. The perceived price in this case is not a moderator. Test results are displayed in **Table 11**.

Table 11.

Model

Model	coeff	se	t	p
(Constant)	4,2916	,0955	44,9497	,0000
HC	,6998	,0683	10,2487	,0000
PP	-,1693	,0853	-1,9840	,0483
Int_1	-,0391	,0476	-,8212	,4123

Compiled by the author based on the data analysis results in SPSS.

Second, moderating effects of perceived price (IV) were tested on a relationship between health consciousness (IV) and organic food purchasing intention (DV). Model is statistically significant (R2=0,294, F(3)=36,926, p<0.001). A model summary can be observed in **Table 12**. Perceived price negatively affects purchasing intention (t=-2,375, p=0.018<0.05). While environmental consciousness positively affects purchasing intention (t=10.3962, p<0.001). Although, the results once again indicate that for the different levels of the moderator, the interaction between variables was not statistically different from zero (not significant) (b=-0.0286 t=-0.6196, p=0.5361). H5 is rejected. The perceived price in this case is not a moderator. Test results are displayed in **Table 13**.

Table 12.

Model Summary

Model	R	R Square	MSE	F	df1	df2	p
	,5422	,2940	2,3425	36,9265	3,0000	266,000	,0000

Compiled by the author based on the data analysis results in SPSS.

Table 13.

Model

Model	coeff	se	t	p
(Constant)	4,2895	,0964	44,4885	,0000
EC	,7000	,0673	10,3962	,0000
PP	-,2106	,0886	-2,3754	,0182
Int_1	-,0286	,0461	-,6169	,5361

Compiled by the author based on the data analysis results in SPSS.

The influence of strength is too low for moderating effect to take place. Even if consumers perceive price as expensive, the motivational factors (environmental consciousness and health consciousness) are more influential.

4.3.4. Linear regression analysis

Linear regression analysis was used to test the relationship between health (IV) and environmental consciousness (DV). Analysis shows that health consciousness has a positive influence on environmental consciousness. Multiple regression model is statistically significant (R2=0,29, F(3)=109,952, P<0.001). The result of ANOVA is presented in **Table 14**. Analysed predictors only partially explain the variance (R-squared value is at 29,1%). The model summary is displayed in **Table 15**. The results of regressions indicate that health consciousness (t=10,486, p<0.001) positively influences environmental consciousness. Therefore, H6 is accepted. Regression results are displayed in **Table 16**. Every one unit increase in health consciousness would result in an increase of 0.551 in environmental consciousness of organic vegetables (B=0.551, p<0.001).

Table 14.

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	166,943	1	166,943	109,952	<,001[b]
	Residual	406,912	268	1,518		
	Total	573,855	269			

a. Dependent Variable: EC

b. Predictors: (Constant), HC

Compiled by the author based on the data analysis results in SPSS.

Table 15.

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	,539[a]	,291	,288	1,23221

a. Predictors: (Constant), HC

Compiled by the author based on the data analysis results in SPSS.

Table 16.

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	2,664	,264		10,080	<,001
	HC	,551	,053	,539	10,486	<,001

a. Dependent Variable: EC

Compiled by the author based on the data analysis results in SPSS.

4.3.1. Correlation analysis

Spearman correlation test was used to test the relationship between health consciousness, environmental consciousness and sociodemographic variables (income, age and education). The test was selected due to its suitability for analysing ordinal variables and non-normally distributed data.

As different research uses different interpretations of correlation coefficients, a clear definition is necessary (Agoklu and Haldun, 2018). For clarity, the interpretation of the r values is the same as presented in Dancy's and Reidy's book "Statistics without maths for psychology". If r equals from 0.1 to 0.3 (-0.1 to -0.3), correlation is considered to be weak. If r equals from 0.4 to 0.6 (-0.4 to -0.6), the correlation is considered to be moderate. If r equals from 0.7 to 0.9 (-0.7 to -0.9), the correlation is considered to be strong. If the r value is below 0.1, correlation is considered negligible.

A weak positive correlation can be observed between health consciousness and education (Spearman rho R=0.286, p<0.001), age (Spearman rho R=0.241, p<0.001) income (Spearman rho R=0.308, p<0.001). The older and more educated individuals are and the more they earn, the more health conscious they are. H7b, H8b and H10b are accepted.

A weak positive correlation was found between environmental consciousness, education (Spearman rho R=0.203, p<0.001) and income (Spearman rho R=0.120, p=0.024). There is a possibility that the more consumers earn and are more educated, the more environmentally conscious they are. H7a and H8a are accepted. Contrary, the correlation between age and environmental consciousness was not statistically significant (Spearman rho R=0.087, p=0.077>0.05), therefore H10a is rejected.

Although not included in the model, sociodemographic variables, purchasing intention and perceived price correlation were additionally tested to further analyse the organic vegetables consumer profile.

Results indicate that education (Spearman rho R=0.329, p<0.001) and income (Spearman rho R=0.279, p<0.001) are positively correlated with purchasing intention, although the correlation is considered weak. As a result, the more individuals earn and the more educated they are, the more they intend to purchase organic vegetables. Contrary, the correlation between age and purchasing intention was not statistically significant (Spearman rho R=0.043, p=0.242>0.05).

A weak positive correlation can be observed between age and perceived price (Spearman rho R=0.214, p<0.001). The older the person is, the more expensive he perceived organic vegetables price to be. Education (Spearman rho R=-0,009, p=0.442>0.05) and income (Spearman rho R=0,67, p=136>0.05) did not have a significant correlation with perceived price. Test results can be observed in **Table 17**.

Table 17.

Correlations

			Education	Income	Age
Spearman's rho	HC	Correlation Coefficient	,286**	,308**	,241**
		Sig. (1-tailed)	<,001	<,001	<,001
		N	270	270	270
	EC	Correlation Coefficient	,203**	,120*	,087
		Sig. (1-tailed)	<,001	,024	,077
		N	270	270	270
	PI	Correlation Coefficient	,329**	,279**	,043
		Sig. (1-tailed)	<,001	<,001	,242
		N	270	270	270
	PP	Correlation Coefficient	-,009**	,067**	,214
		Sig. (1-tailed)	,442	,136	<,001
		N	270	270	270

**. Correlation is significant at the 0.01 level (1-tailed).
*. Correlation is significant at the 0.05 level (1-tailed).

Compiled by the author based on the data analysis results in SPSS.

4.3.5. Mann-Whitney U tests

To test the differences between gender, Mann-Whitney U test was conducted. Test results revealed that women (M=153.71) tend to be more environmentally conscious than men

(M=112.73) (Mann-Whitney U=6268.0 Z=-4.298 p<0.01) and are more likely to intend to purchase organic vegetables (M=147.75) than men (M=120.19) (Mann-Whitney U=7162.5 Z=-2.889 p=0.04<0.05). Therefore, H9a are accepted. Although, the health consciousness (Mann-Whitney U=8514.0 Z=-0.762 p=0.446) and perceived price (Mann-Whitney U=8832.0 Z=-0.267 p=0,789) of an individual do not differ by gender. H9b is rejected. Mann-Whitney Test results are displayed in **Table 18** and **Table 19**.

Table 18.

Test Statistics

	HC	EC	PI	PP
Mann-Whitney U	8514,500	6268,000	7162,500	8832,000
Wilcoxon W	15774,500	13528,000	14422,500	16092,000
Z	-,762	-4,298	-2,889	-,267
Asymp. Sig. (2-tailed)	,446	<,001	,004	,789

a. Grouping Variable: Gender

Compiled by the author based on the data analysis results in SPSS.

Table 19.

Ranks

	Gender	N	Mean Rank	Sum of Ranks
HC	Female	150	138,74	20810,50
	Male	120	131,45	15774,50
	Total	270		
EC	Female	150	153,71	23057,00
	Male	120	112,73	13528,00
	Total	270		
PI	Female	150	147,75	22162,50
	Male	120	120,19	14422,50
	Total	270		
PP	Female	150	136,62	20493,00
	Male	120	134,10	16092,00
	Total	270		

Compiled by the author based on the data analysis results in SPSS.

4.4. Results

The purpose of this study was to analyse the moderating effects of perceived price on the relationship between health and environmental consciousness and purchasing intention. In

addition, the sociodemographic profile of environmentally and health conscious organic vegetables consumer was revealed.

Motivational factors health consciousness and environmental consciousness were found to be positively influencing the purchasing intention of organic vegetables. Previous research mentioned either one, health consciousness or environmental consciousness, to have a stronger influence on purchasing intention or purchasing behaviour (Melović et al., 2020, Monier-Dilhan and Bergès, 2016). However, in this case, both health consciousness and environmental consciousness have a similar strength of influence, so it can be concluded that both motivational factors are significantly affecting purchasing intention. Literature dues mention those factors as influential, so such findings were to be expected (Bryła, 2016; Janssen, 2018; Scalvedi, and Saba, 2018). It is possible that consumers quite strongly associate organic food with health benefits and believe in organic food's environmental sustainability effects.

Such results could be explained by the positive correlation between health consciousness and environmental consciousness. The more a person is concerned for his health, the more he cares about the environment and the more he intends to purchase organic vegetables. In previous research overviewed in literature analysis, only the nutritional quality aspect was mentioned and linked with natural farming practices (Crinnion, 2010; Shafie and Rennie, 2012; Williams, 2002). Consumers who are health conscious are more likely to care for the welfare of soil and the environment due to their own wellbeing (consuming nontoxic food). Additional regression analysis indicates that health consciousness positively influences concern for the environment.

Perceived price, on the other hand, had a negative influence on purchasing intention of organic vegetables, although moderator analysis revealed that the effect is not stronger than health consciousness and environmental consciousness. Perceived price does not moderate the relationship between health consciousness, environmental consciousness and purchasing intention, even if, on average, consumers perceive organic vegetables' price as expensive. Consumers may perceive price as premium, but the positive benefits of organic vegetables are more important. Such findings coincide with past research (Ghali, 2020, Van Doorn and Verhoef, 2011) which mentioned that consumers are willing to pay premium prices if they are aware of utilitarian attributes and express a positive attitude toward organic food. In this case, a high price is a sacrifice health and environmentally conscious consumers are willing to pay.

Correlation analysis revealed that highly earning educated individuals are more likely to be environmentally conscious, health conscious and intend to purchase organic vegetables. Women were found to be more environmentally conscious than men and are more likely to intend to purchase organic vegetables. Such consumer profile align with other studies (Cerjak et

al., 2010, Monier-Dilhan and Bergès, 2016; Ngobo, 2011). Contrary, it is worth mentioning that there was no significant correlation found between both income and education, meaning that consumers perceive price as expensive or not regardless of those sociodemographic variables.

However, environmental consciousness and purchasing intention of individuals were not correlated with age. This indicates that organic food purchasing intention and care for the environment are similar in all age categories. Although, a clear positive correlation between groups is observed in a relationship between health consciousness, perceived price and age. Older people are more likely to be health conscious and perceive organic vegetables price as high. Similar findings were observed in a study done by Cerjak et al. (2010). However, perceived price aspects were not mentioned. Findings that purchasing intention and age do not correlate only show that younger individuals are as well interested in purchasing organic food, possibly due to environmental consciousness or other factors not overviewed in the study.

Multiple and linear regression, PROCESS, correlation analysis and Mann-Whitney U test results summary are displayed in **Table 20**.

4.5. Limitations

The main limitations of this study are the small sample size and lack of factors included in the conceptual model. The sample size of 270 was not enough to correctly assess moderating effects of perceived price and potentially does not represent the whole population.

Multiple regression analysis uncovered that there might be other variables affecting organic food purchasing intention not mentioned in this model. Systematic literature analysis did uncover other possible influencers, such as social norms, trust in an organic label or local food, but those factors were found to be connected with either health or environmental consciousness (De Maya et al., 2011; Monier-Dilhan and Bergès, 2016; Zagata, 2012). Different findings could be expected if the moderator would be price consciousness or income of individuals. Past research highly emphasises price consciousness of low earning individuals deterring effects instead of perceived price (Janssen, 2018; Melović et al., 2020). Low income individuals are more likely to see organic food price as high and chose not to purchase due to financial situation (Ngobo, 2011).

In addition, the scope of research was narrow, only the purchasing intention of organic vegetables was assessed. It is possible that findings might differ for other organic food categories.

Table 20.

Analysis results summary

Hypothesis	Description	Result	Estimate	p value
H1	Health consciousness positively influences organic vegetables purchasing intention.	Accept	B=0,473	<0,001
H2	Environmental consciousness positively influences organic vegetables purchasing intention.	Accept	B=0, 468	<0,001
H3	Perceived price negatively influences purchasing intention of organic vegetables.	Accept	B=-0, 248	0,001
H4	Perceived price negatively moderates the relationship between health consciousness and purchasing intention of organic vegetables.	Reject	B=-0, 039	0,412
H5	Perceived price negatively moderates the relationship between environmental consciousness and purchasing intention of organic vegetables.	Reject	B=-0,028	0,536
H6	Health consciousness positively influences environmental consciousness.	Accept	B=0, 551	<0,001
H7a	The more a person earns, the more environmentally conscious he is.	Accept	R=0,120	0, 024
H7b	The more a person earns, the more health conscious he is.	Accept	R=0,308	<0,001
H8a	The higher the education of the individual, the stronger environmental consciousness is.	Accept	R=0,203	<0,001
H8b	The higher the education of the individual, the stronger health consciousness is.	Accept	R=0,286	<0,001
H9a	Women are more environmentally conscious compared to men.	Accept	Z=-4,298	<0,001
H9b	Women are more health conscious compared to men.	Reject	Z=0,762	0,446
H10a	The younger the person, the more environmentally conscious they are.	Reject	R=0,087	0,077
H10b	The older the person, the more health conscious they are.	Accept	R=0,241	<0,001

Compiled by the author based on the data analysis results in SPSS.

CONCLUSIONS AND RECOMMENDATIONS

1. The systematic literature analysis revealed the main motivational drivers of organic food to be health concerns, seeking for better quality and environmental sustainability. While the main barriers were price and lack of knowledge.
2. Regression analysis revealed that both environmental consciousness and health consciousness positively influence organic vegetables purchasing intention. This links with the findings that health consciousness positively influences environmental consciousness.
3. Regression analysis revealed that perceived price negatively influences intention to buy organic vegetables but did not have moderating effects on the relationships between health conscious, environmentally conscious and organic vegetables purchasing intention.
4. The ideal organic vegetable consumer was found to be a health and environmentally conscious highly educated woman with a high earning salary. More earning, more educated consumers are more health conscious and environmentally conscious and are more intending to purchase organic vegetables. Women were found to be more interested in environmental sustainability and purchasing intention of organic vegetables than men. Although, health consciousness does not differ according to gender.
5. The least interested in organic vegetables purchase were less educated, less earning individuals not concerned with environment and health issues and who perceive price as high.
6. Consumers perceive the price of organic vegetables as expensive or not irrespective of income, education and gender. Older consumers perceive organic vegetables' price as more expensive and are more health conscious. Although, environmental consciousness and purchasing intention do not correlate with age.
7. Retailers should not compete in terms of price but look for a more motivational approach. Literature analysis revealed a positive influence of advertising on organic food purchasing. Organic food retailers could try communicating the health and environmental benefits of organic food throe advertising and labelling.
8. As health conscious consumers tend to be environmentally conscious as well, emphasising the sustainable, nontoxic, farming practices and nutritional quality of

organic vegetables could educate and motivate individuals to choose organic. Such a strategy could be a key to capturing health conscious consumers' attention.

9. Marketers should focus more on clear labelling and advertising of organic vegetables and educating possible consumers to influence their positive motivation towards organic, as those variables were more important to customers than price. Highlighting the reason (for example expansive farming costs) for the higher price could shift attitudes, especially for high income individuals. In their adverts, marketers should focus on health issues, emphasize better quality and environmental benefits of organic food.
10. Advertisements should be targeted towards higher income households, as they are the main buyers of organic products. Cuts on expansive organic food farming costs could be made to make it more available for lower income households. Although further research is necessary to understand the lack of purchase intention of less educated and less earning consumers.

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INFLUENCE OF HEALTH AND ENVIRONMENTAL CONSCIOUSNESS ON ORGANIC FOOD PURCHASING INTENTION WHEN THE MODERATING FACTOR IS PRICE

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Bachelor Thesis

Management and Business Administration programme

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SUMMARY

54 pages, 2 figures, 20 tables, 101 references.

The aim of the research was to determine the influence health and environmental consciousness have on customers‘ utilitarian organic food purchasing intention by considering a possible moderating effect of price. The research consists of the literature analysis, research and results, conclusions and recommendations.

Qualitative research in a form of a systematic literature analysis was conducted to analyse the main motivational drivers (health and environmental consciousness) and main barriers (price) impact on organic food purchasing. Additionally, a literature review was carried out to analyse the utilitarian organic food definition, price and linkage with health and environmental benefits. After conducting a literature review, a quantitative research survey in a form of a questionnaire was conducted. The purpose of the empirical research was to collect and analyse the primary data and to reveal if there is an influence of health and environmental consciousness on utilitarian organic food purchasing intention and if such connections are moderated by price. In addition, a health and environmentally conscious utilitarian organic food consumer profile was constructed.

The analysis uncovered a positive influence on health and environmental consciousness and a negative influence of price on organic vegetables purchasing intention. No moderating effects of perceived price were detected. Health consciousness was found to positively influence environmental consciousness. The ideal organic vegetable consumer was found to be a health and environmentally conscious highly educated woman with a high earning salary.

SUSIRŪPINIMO SVEIKATA IR APLINKA ĮTAKA KETINIMUI PIRKTI EKOLOGIŠKĄ MAISTĄ, KAI MODERUOJANTIS VEIKSNYS YRA KAINA

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SANTRAUKA

54 puslapiai, 2 paveikslai, 20 lentelių, 101 literatūros šaltinis.

Tyrimo tikslas – nustatyti sveikatos ir aplinkosaugos sąmoningumo įtaką pirkėjų ketinimui pirkti utilitarinius ekologiško maisto produktus, įvertinus galimą stabdantį kainos poveikį. Tyrimą sudaro literatūros analizė, tyrimai ir rezultatai, išvados ir rekomendacijos.

Atliktas kokybinis tyrimas sisteminės literatūros analizės forma, siekiant išanalizuoti pagrindinius motyvacinius veiksnius (sveikatos ir aplinkos sąmoningumą) ir pagrindines kliūtis (kainos) įtaką perkant ekologiškus maisto produktus. Be to, buvo atlikta literatūros apžvalga, siekiant išanalizuoti utilitarinio ekologiško maisto apibrėžimą, kainą ir ryšį su nauda sveikatai ir aplinkai. Atlikus literatūros apžvalgą, atlikta kiekybinė tyrimo apklausa anketos forma. Empirinio tyrimo tikslas – surinkti ir išanalizuoti pirminius duomenis bei atskleisti, ar sveikatingumo ir aplinkosaugos sąmoningumas turi įtakos utilitariniam ekologiško maisto pirkimo ketinimui ir ar tokius ryšius riboja kaina. Be to, buvo atskleistas sveikatą ir aplinką tausojančio utilitarinio ekologiško maisto vartotojo profilis.

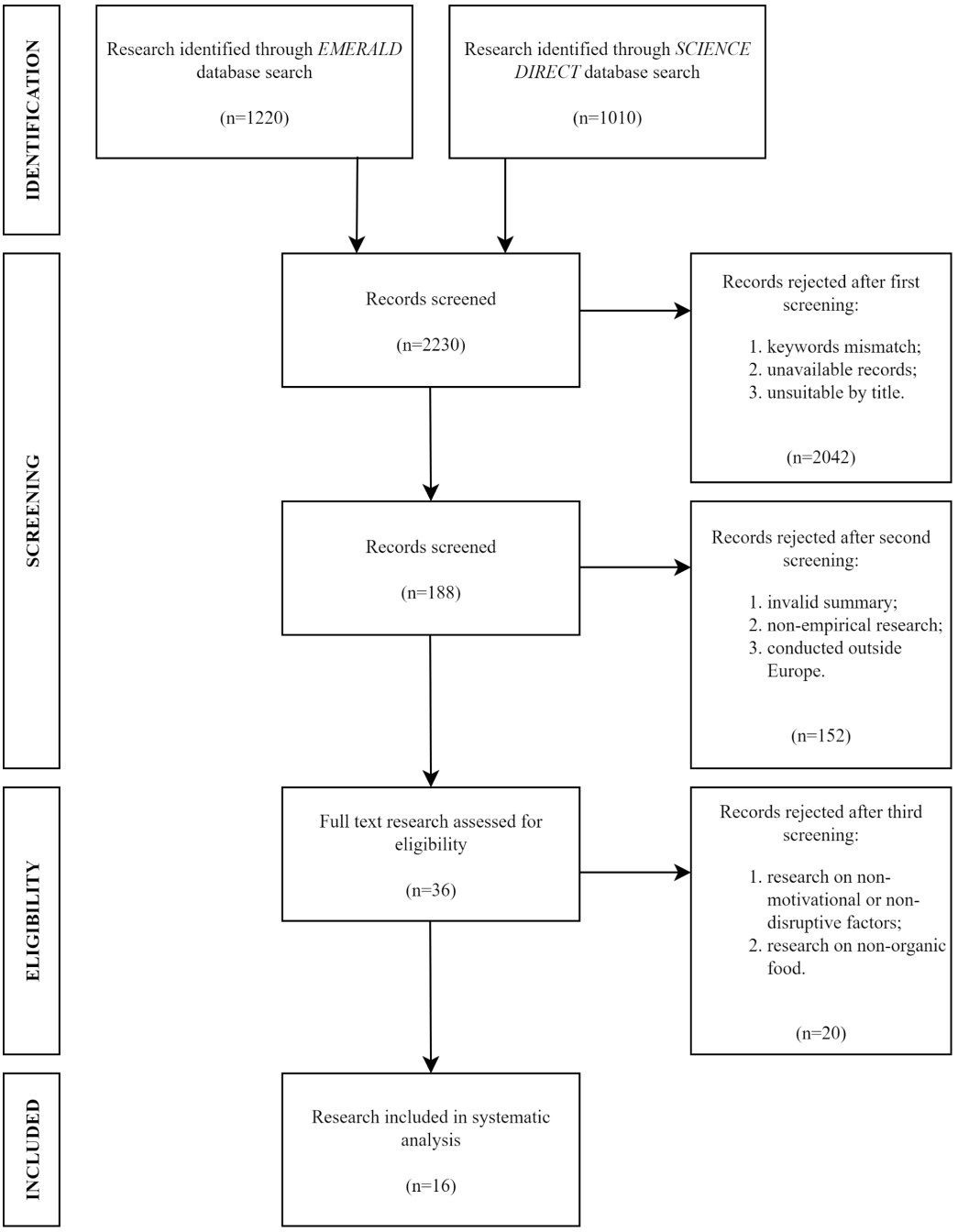
Analizė atskleidė teigiamą sveikatos ir aplinkosauginio sąmoningumo bei neigiamą kainos įtaką ekologiškų daržovių ketinimams pirkti. Nebuvo aptiktas joks ribojantis kainos poveikis. Nustatyta, kad sąmoningumas apie sveikatą teigiamai veikia aplinkos suvokimą. Nustatyta, kad ideali ekologiškų daržovių vartotoja yra sveikatą ir aplinką tausojanti aukšto išsilavinimo moteris, gaunanti didelį atlyginimą.

ANNEXES

Annex 1.

Figure 1.

Selection process for publications for systematic literature analysis.



Compiled by the author based on the sources listed in the figure.

Annex 2.

Table 1.

The summary of study quality assessment

Authors	Detailed product type	Clear sample geographic information	Clear sample demographic information	Clear research methods	Clear results of drivers and barriers
Bryła, P. (2016)	+	+	+	+	+
Buder, F., Feldmann, C., Hamm, U. (2014)	+	+	+	+	+
Cerjak, M., Mesič, Ž., Kopič, M., Kovačič, D., Markovina, J. (2010)	-	+	+	+	+
De Maya, S. R., López-López, I. L., Munuera, J. L. (2011)	+	+	+	+	+
Dilhan, S. M., Bergès, F. (2016)	+	+	+	+	+
Ditlevsen, K., Denver, S. Christensen, T., Lassen, J. (2019)	+	+	+	+	+
Goetzke, B. I., Spiller, A. (2014)	+	+	+	+	+
Ham, M., Pap, A., Stanic, M. (2018)	-	+	+	+	+
Hansen, T. , Sørensenb, M. I., Eriksen, M. L. R. (2018)	-	+	+	+	+
Jaeger, A. K., Weber, A. (2020)	+	+	+	+	+
Janssen, M. (2018)	+	+	+	+	+
Melovič, B., Dabič, M., Rogič, S., Đurišič, V., Prorok, V. (2020)	-	+	+	+	+
Ngobo, P. V. (2011)	+	+	+	+	+
Scalvedi, M. L., Saba, A. (2018)	+	+	-	+	+
Solis, J. W., Soroka, A. (2017)	+	+	+	+	+
Zagata, L. (2012)	+	+	-	+	+

Compiled by the author based on the sources listed in the table.

Annex 3.

Table 2.

Main characteristics and results of analysed scientific publications.

Authors	The aim of the research	Analysed products	Respond-ents	Data collection methods	Analysis methods	Drivers/ barriers to organic goods purchase
Bryła, P. (2016)	To identify the motives and barriers of Polish consumers to organic food consumption.	Organic fruit and vegetables, dairy products, meat and others.	1000 (Poland)	Survey (profession-al provider). **Instrumen t**questionna i-re	Executed by a specialised marketing research agency.	**Drivers:** health, quality, environmental concerns, taste, trust in label. **Barriers**: high price, lack of awareness, low availability, visibility.
Buder, F., Feldmann, C., Hamm, U. (2014)	To analyse the barriers preventing consumers from choosing to buy organic food.	Utilitarian and hedonic organic food (44 product groups).	817 (Germany)	Survey (profession-al provider). **Instrumen t:**personal interviews.	Product specific analysis.	**Barriers**: high price, insufficient availability and information, quality, prejudices.
Cerjak, M., Mesič, Ž., Kopič, M., Kovačič, D., Markovin a, J. (2010)	To determine attitudes, buying motives and satisfaction of consumers to buy organic food products in the markets of Croatia, Bosnia-Herzegovina, Slovenia.	Organic food.	200 (Croatia, Bosnia-Her-zegovina, Slovenia).	Survey (Authors). **Instrumen t** face-to-face Interviews (questionna i-re)	SPPS. Comparati-ve analyses (Chi square test, t-test, analysis of variance).	**Drivers:** health concerns, care for the environment, return to nature, animal welfare, safety (quality).
De Maya, S. R., López-López, I. L., Munuera, J. L. (2011)	To examine how European consumers use attitudes, subjective norms and perceived behavioural control to form their purchase intention for organic products.	Organic fresh tomatoes, tomato sauce.	8014 (Denmark, Finland, Greece, Italy, Spain, Sweden, UK)	Survey (profession-al provider). **Instrumen t** face-to-face interviews (questionna i-re)	Cluster analysis, cultural distance index, Structural modelling analysis.	**Drivers**: subjective norms, cultural values, social identity, social acceptability.
Dilhan, S. M., Bergès, F. (2016)	To reveal consumers' effective motivations by analysing the combinations of labels present in their shopping baskets.	Organic eggs, coffee, ham, margarine	22,539 (France)	Pre-recorde d Kantar Worldpanel scanner data from mass retail stores in France.	Market-ba sket estimation probability model.	**Drivers**: environmental, health, quality, household's socioeconomic background. Personal benefits affected less.

Compiled by the author based on the sources listed in the table.

Continuation of Table 4

Ditlevsen, K., Denver, S. Christensen, T., Lassen, J. (2019)	To investigate the differences between organic and local consumers' choices to buy, values, opinions, sociodemographic.	Utilitarian organic food (5 product groups).	**Focus groups**: 52 (8 groups). **Survey**: 1515. (Denmark)	Data was collected as part of OrgHealth and LOCO projects. Survey. **Instrument :** online questionnai-re, focus groups.	Fisher's exact test, two-sided test.	**Drivers**: safer (free from pesticides), health benefits, trust, environmental friendliness.
Goetzke, B. I., Spiller, A. (2014)	To compare functional and organic food consumers' understanding of health, practices of well-being improving lifestyles.	Baked, fresh and whole grain organic food.	500 (Germany)	Survey (online access panel provider). **Instrument :** online questionnai-re	Exploratory,confir-matory factor and OLS regressio n analysis.	**Drivers:** active lifestyle, health care, spiritual balance and harmony.
Ham, M., Pap, A., Stanic, M. (2018)	To explain the intention to buy organic food by examining the direction and strength of the influence of inherent factors of TPB and uniqueness-seeking lifestyle	Utilitarian organic food	411 (Croatia).	Survey (Authors). **Instrument** face-to-face interviews (questionnai-re).	Explorato-ry and confirmat-ory factor analysis. Structural equation modellin g	**Drivers:** uniqueness seeking lifestyle (social identity), subjective norms, perceived behavioural control, behavioural beliefs, attitudes.
Hansen, T. , Sørensenb , M. I., Eriksen, M. L. R. (2018)	To specify the expected relationship between consumer motivations, values and organic food identity and behaviour.	Organic food.	1176 (Denmark)	Survey (profession-al provider). **Instrument** : questionnai-re	Structural equation modellin g	**Drivers**: health consciousness, openness to change, self-transcendenc e**Barriers**: social consciousness.
Jaeger, A. K., Weber, A. (2020)	To compare self-benefits, other benefits, abstract and concrete message framing effects in generating organic food purchases.	Organic apples	297 (Germany)	Survey (profession-al provider). **Instrument :**online questionnai-re	Two-way, one-way ANOVA testing. Parallel multiple mediator model.	**Drivers:** environmental issues, more than health issues (self-benefits).
Janssen, M. (2018)	To compare determined drivers of actual organic food purchases and drivers of attitudes towards organic food.	Pre-pack-aged and unpackag-ed organic food from German supermar-ket).	9470 (Germany)	Panel scanner data from the German supermarket chain.	Explorato - ry factor analysis, structural equation models.	**Drivers**: naturalness, healthiness, environmental protection, preference for local food, desire for high quality food,convenience.

Compiled by the author based on the sources listed in the table.

Continuation of Table 4

Melovič, B., Dabič, M., Rogič, S., Đurišič, V., Prorok, V. (2020)	To identify the factors influencing perceptions and attitudes young people in Montenegro have towards organic food.	Utilitarian organic food	300 (Monteneg-ro)	Survey (Authors). **Instrument :**online questionnai-re	Multivari ate factor analysis. Method of the main squares.	**Drivers:** health, quality, supporting local producers, altruistic motivations (less effect). **Barriers**: high price, limited options.
Ngobo, P. V. (2011)	To analyse the drivers of consumer choice of organic products by analysing product type, brand choice, purchase quantity in supermarkets'	Two brands of organic food.	4,500 (France)	Panel scanner data from France supermarket	Three-sta ge purchase incidence / brand choice/ purchase quantity model.	**Drivers**: brand price (show quality, trust), feature advertising promotions, social consciousness. **Barrier**: very high price, negative view of product display, fliers advertisement, concentrated categories.
Scalvedi, M. L., Saba, A. (2018)	To identify overlapping aspects of sustainability and local and organic consumer profiles	Pro-envi-ronmental product, local organic food product.	3004 (Italy).	Survey (based on past (2011) data). Three-step quota-based sampling. **Instrument** questionnai-re	Discrimi-nant analysis.	**Drivers:** brand and price influence, sustainability principles, pro-environmenta l views, healthy diets (quality of food), self-transcendenc e values).
Solis, J. W., Soroka, A. (2017)	To clarify the motives and intentions of Polish consumers to buy certain types of organic food.	Utilitarian organic food (9 product groups).	3436 (Poland)	Diagnostic survey (Authors). **Instrument** questionnai-re.	Discrimi-nant analysis.	**Drivers**: health concerns (diets), sensory qualities (childhood associations). **Barriers**: availability, lack of confidence, high price.
Zagata, L. (2012)	To analyse the decisions of organic consumers in post-socialist countries to buy organic food.	Organic dairy products, vegetables , meat, bread.	1054 (Czech Republic)	Survey (professiona l provider). **Instrument** face-to-face interviews (trained interviewer)	Descripti -ve statistics, correlati-on. Structural equation modellin g	**Drivers**: attitudes, subjective, social norms (families), health benefits, safety, taste. **Barriers**: expensive price, availability, not enough information.

Compiled by the author based on the sources listed in the table.

Annex 4.

Example of a questionnaire in the Lithuanian language

1. Skalėje nuo 1 iki 7, kur 1 - "visiškai nesutinku", o 7 - "visiškai sutinku" įvertinkite, kiek kiekvienas iš teiginių tinka jums apibūdinti:
    a. Kruopščiai renkuosi maistą, kad užtikrinčiau gerą sveikatą
    b. Manau, kad esu sveikata besirūpinantis vartotojas
    c. Renkuosi neperdirbtą maistą
    d. Tikiu, kad esu tai, ką valgau
    e. Perku maistą, kuris padeda palaikyti svorį ir išvaizdą
    f. Palyginti su kitais mano amžiaus žmonėmis, esu geresnės sveikatos
2. Skalėje nuo 1 iki 7, kur 1 - "visiškai nesvarbu", o 7 - "visiškai svarbu" įvertinkite, kai/jei perkate/pirktumėte ekologiškus maisto produktus, kaip jums svarbu, kad tai padėtų…
    a. Sumažinti cheminių medžiagų, kurios įteka į ežerus ir vandens telkinius, kiekį
    b. Sumažinti dirbtinių trąšų kiekį, naudojamą žemės ūkyje
    c. Sumažinti herbicidų ir pesticidų naudojimą žemės ūkyje
    d. Sumažinti dirvožemio užterštumą
3. Skalėje nuo 1 iki 7, kur 1 - "visiškai nesutinku", o 7 - "visiškai sutinku" įvertinkite, kiek sutinkate su šiuo sakiniu: Pirkdamas ekologiškus maisto produktus padedu/ padėčiau gerinti bendrą aplinkos būklę
4. Skalėje nuo 1 iki 7, kur 1 - "visiškai nesutinku", o 7 - "visiškai sutinku" įvertinkite savo požiūrį į ekologiškų daržovių kainą:
    a. Ekologiškos daržovės yra brangios
    b. Ekologiškų daržovių kaina didelė
5. Skalėje nuo 1 iki 7, kur 1 - "visiškai nesutinku", o 7 - "visiškai sutinku" įvertinkite savo planus pirkti ekologiškus produktus:
    a. Per artimiausias dvi savaites ketinu įsigyti ekologiškų daržovių
    b. Per ateinančias dvi savaites noriu nusipirkti ekologiškų daržovių
    c. Per ateinančias dvi savaites įsigysite ekologiškų daržovių
6. Jūsų lytis:
    a. Moteris
    b. Vyras
7. Jūsų amžius:
    a. 18-25
    b. 26-30
    c. 31-40
    d. 41-50
    e. 51-60
    f. 61+
8. Jūsų išsilavinimas:
    a. Pagrindinis
    b. Vidurinis
    c. Profesinis
    d. Aukštasis
9. Jūsų pajamos (“į rankas”):
    a. Mažiau nei 600 €
    b. 601-1000 €
    c. 1001-1500 €
    d. 1501-2000 €
    e. 2001 € +

Compiled by the author based on the work of Squires et al. (2001), Hansen et al. (2018), Michaelidou and Hassan (2008) and Yoo et al. (2000)