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A HOLISTIC APPROACH TO UNDERSTANDING SUSTAINABLE CONSUMER BEHAVIOR AND ATTITUDES TOWARD SUSTAINABLE CONSUMPTION

Case company EcoGarmonia

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ABSTRACT

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A holistic approach to understanding sustainable consumer behavior and attitudes toward sustainable consumption: case company EcoGarmonia

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This Bachelor's thesis sought to gain insights in sustainable consumption of EcoGarmonia's current and potential customers through analyzing actual sustainable consumer behavior in the nutrition sector as well as overall attitudes toward sustainable consumption. As the company seeks new opportunities in the market to further promote sustainable consumption on different levels, it is essential for EcoGarmonia to understand their current and potential customers' behavior and attitudes toward sustainable consumption.

Quantitative data collection method was used as the primary research method. Particularly, measurement of sustainable consumer behavior in the nutrition category as well as attitudes toward sustainable consumption were examined through questionnaires distributed among current and potential customers of EcoGarmonia. In this research both sustainable consumer behavior and attitudes toward sustainable consumption were viewed from the perspective of three sustainability dimensions: social, economic and environmental. Particularly, sustainable behavior was measured by using the SCB nutrition scale, which takes into consideration all phases of consumption (accusation, usage and disposal), sustainability dimensions as well as the level of impact of certain activities on sustainability. Furthermore, the 5-point Likert scale was used to form the basis of the questions that measured attitudes toward sustainable consumption. Attitudes were measured by taking into account all three components of attitudes (affective, cognitive and behavioral) as well as the sustainability dimensions.

The outcome of the thesis gives insights in sustainable consumption of current and potential customers of EcoGarmonia. Particularly, the data revealed that consumers have more positive attitudes toward environmental sustainability compared to socio-economic sustainability. Additionally, the overall behavior of the consumers can be rated as average as most of the sustainable activities were performed occasionally. However, the respondents exhibited clearly positive behavior in regard to environmentally sustainable behavior on the disposal stage of consumption.

Key words: sustainable consumption, attitude, consumer behavior

CONTENTS

1 INTRODUCTION

People's current consumption habits and behavior cause global environmental and social problems. The constant population growth toward 10 billion people (Martin, 2017) together with excessive consumption cannot be sustained by the planet anymore. Although there are various approaches that the governments and industries can take in order to reduce the negative impact on the environment (McDonald, Oates, Panayiota, Alevizou, Young & Hwang 2012, 445), it is essential to keep in mind that a sustainable future requires collective actions, meaning that governments, businesses, NGOs and individual consumers have to take action together. Soon, technological innovation will not be enough to address sustainability issues; the need of change in the minds of people and their lifestyle is dramatically increasing. As it is, currently one of the most difficult challenges is to actually focus on the issues associated with day-to-day individual consumption (McDonald et al. 2012, 445).

Numerous research efforts have been made on the topic of sustainable consumption in various industries as well as different types of consumption. Furthermore, "Responsible consumption and production" is one of the Sustainable Development Goals (SDGs) set by United Nations as a part of the new Sustainable Development Agenda (United nations, n.d.a). However, in order to understand how people can shift toward more sustainable consumption, it is essential to understand their attitudes and buying behavior. Therefore, the main purpose of this thesis is to understand trends in sustainable consumption through attitude and behavior analysis.

2 RESEARCH PLAN

The following chapter introduces the research plan of the thesis. The plan consists of the thesis topic, thesis objectives, purpose and research questions. Additionally, the main data collection and analysis methods are presented in this chapter.

2.1 Thesis topic

With this research, the author analyses sustainable consumer behavior in the nutrition category and attitudes toward sustainable consumption of the current and potential customers of EcoGarmonia – a Russian online store with sustainable products. From a business point of view the topic will bring added value to the company as it provides it a better understanding of its current and potential customers' buying behavior and attitudes toward sustainable consumption, which can be further utilized in the company's marketing activities. Particularly, analyzing consumer attitudes and behaviors will enable the company to consider new strategies which can be used to influence consumer behavior toward a more sustainable direction. Moreover, this study can be a starting point for other companies implementing or planning to implement sustainable practices to better understand the consumption patterns of their target market.

2.2 Thesis objectives and research questions

As mentioned above, the purpose of the thesis is to get insights into the sustainable consumption patterns of the current and potential customers of EcoGarmonia. In this research it is assumed that the potential customers of EcoGarmonia are individuals who are committed toward more sustainable consumption. Reaching out to the potential customers of EcoGarmonia will be done through influencers in sustainable living.

In order to achieve the purpose of the thesis the following objectives were set. The first objective is to measure EcoGarmonia's current and potential customers' attitudes and their actual behavior in terms of sustainable consumption. The analysis of EcoGarmonia's

current and potential customers will enable the company to understand their general sustainability consumption patterns. Secondly, the objective is to measure sustainable consumption in the food sector. As 50% of the company's income comes from food products, it is essential for the company to understand consumer behavior in this category (Zhigach 2015). Based on the above-mentioned objectives, the research questions of this study were set as follows:

RQ1: What are EcoGarmonia's current and potential customers' attitudes toward sustainable consumption?
RQ2: What are EcoGarmonia's current and potential customers' behavior in the nutrition sector?

2.3 Case company

EcoGarmonia is an online Russian retail store with health and sustainable products. The company was established by Yuliana Chichirova in 2013 in St. Petersburg, where the company also has a physical store. Overall, there are more than 3,5 thousand products available at EcoGarmonia. The majority of the company's income (up to 50%) comes from selling food products. The second biggest source of income for the company (20 %) is personal care and household products, while gifts, pet and health products account for the rest. One of the key competitive advantages of the company is that it distributes farm products from Leningrad Oblast to its customers, which account for one third of all products ordered from EcoGarmonia. (Zhigach 2015)

As it can be seen, by selling natural products, which do not contradict with environmental and socio-economic values, the company contributes and promotes sustainable consumption. EcoGarmonia is seeking to further promote sustainable consumption on different levels, therefore the purpose of this thesis was to aid the company in this mission – understanding the consumer behavior and their attitudes toward sustainable consumption.

2.4 Research methodology

The purpose and the research questions of this thesis require the collection of data and its further analysis. Therefore, primary and secondary research were conducted in order to answer the research questions of this thesis. Data for the theoretical framework of the thesis was collected from secondary sources such as scientific books and journals as well as scholarly articles and governmental reports on the topic of sustainable consumption. The secondary data collection method is essential for this research because there is a need to identify and introduce the theoretical framework of the research paper and examine relevant theories and concepts. In addition, the secondary data collection enabled the author to gain a clearer understanding of previous research conducted in the field. Furthermore, as EcoGarmonia has not conducted any prior research, there is a need to generate primary data related to the current and potential customers' attitudes and behaviors regarding sustainable consumption. A quantitative data collection was used for the primary research which is described further.

Quantitative research

According to O'Dwyer & Bernauer (2014, 5) quantitative research attempts to explore knowledge by dividing a complex phenomenon into simpler representations. This in turn enables the author to generalize the collected data in order to explain the phenomenon. Moreover, quantitative data is often represented numerically and referred as "measurement" data. For example, Korrapati (2016) states that quantitative researched is used to "quantify attitudes, opinions, behaviors, and other defined variables – and generalize results from a larger sample population". As the purpose of this thesis is to measure behaviors and attitudes, quantitative research suits the best.

Survey

The survey strategy was conducted to collect primary data in order to answer the research questions. According to Almeida, Faria & Queirós (2017, 381) surveys "are a research technique that allows the collection of data directly from a person involved in the researcher through a set of questions organized in a certain order." Additionally, the survey

strategy is one of the most frequently used quantitative research techniques, as it enables the researcher to collect information about the respondents' opinions, perceptions and behaviors (Almeida et al. 2017, 381). There are some well-defined advantages of surveys as a quantitative data collection method: (1) it is a traditional tool to measure attitudes and behaviors; (2) it is cost-efficient and requires a low development time; (3) it enables the researcher to reach a larger population; (4) the results are not affected by the subjective opinion of the researcher; and (5) it allows for easy comparison (Almeida et al. 2017, 381; Saunders, Lewis & Thornhill 2009, 144). However, it is essential to keep in mind that the reliability of the results depends on the survey structure and the answers provided by the respondents (Almeida et al. 2017, 381).

In this thesis, the method chosen within the survey strategy was a questionnaire. Questionnaires are one of the most widely used data collection techniques in the survey strategy (Saunders et al. 2000, 361; Lavrakas 2008). It is defined as a set of standardized questions (sometimes also called items) which is used to collect both qualitative and quantitative data (Lavrakas 2008; A Dictionary of Marketing 2011). However, as it has been mentioned above, the quantitative research method is used in this thesis. One of the most important advantages of the questionnaire for this research is that each respondent is asked to respond to the same set of questions, which provides an efficient way to collect responses from a large population (Saunders et al. 2000, 361).

2.5 Thesis structure

In the following chapter the author focuses on the theoretical background of the study, particularly the concepts related to sustainable consumption and consumer behavior are explained. First, definitions for the terms "sustainability", "sustainable development", "sustainable consumption", "consumer behavior" and "attitude" are presented. Following this, the author introduces theories explaining the connection between attitudes and behaviors. In chapter 4 the author presents the results of the primary research. Chapter 5 is the concluding chapter of this research paper, where the author summarizes the findings and gives recommendations for further research.

3 THEORETICAL BACKGROUND

In this chapter the author further introduces concepts and theories which form a relevant theoretical background for this thesis. The concepts of sustainable development, sustainable consumption and consumer behavior are explained and further developed in this chapter. Particularly, the author explains the theories related to sustainable consumer behavior (TPB and RAA), discusses components of sustainable consumer behavior, defines attitude and analyses attitude-behavior relationships in more detail. Additionally, the author analyses previously introduced attitude and behavior measurement scales relevant for this research, which were used as a foundation for the design of the questionnaire.

3.1 Sustainability and Sustainable Development

As it has been mentioned earlier, responsible consumption (or sustainable consumption) is one of the Sustainable Development Goals (SDGs). Therefore, there is a need to first define sustainable development in order to look at sustainable consumption as a part of this bigger concept.

The concept of sustainable development was expanded to the global scope in the beginning of 1972 at the United Nations Conference on Human Environment, where the concept was discussed for the first time on a global scale. The conference resulted in the United Nations General Assembly founding the World Commission on Environment and Development (WCED) in 1983. (Drexhage & Murphy 2010, 7) WCED in its "Our Common Future" report, also known as the Brudtland report, gave a definition of sustainable development, which was defined as follows: "Sustainable development is development that meets the needs of the present without compromising the ability of future generations to meet their own needs." (WCED 1987, 54). Although the definition has received public attention, it has been argued that it is too broad and can be interpreted differently (Newman 2006, 634). Since then the term of sustainable development has gone through numerous revisions and interpretations and has been attributed different definitions.

Consensus on a commonly accepted definition has not been reached yet. Nevertheless, Drexhage and Murphy (2010, 6) state that three principles tend to be emphasized in most definitions. Firstly, the commitment to equality and fairness. Secondly, a long-term vision, which focuses on the precautionary principle. Thirdly, the interrelations between the three main dimensions of sustainability: social, environmental and economic. (Drexhage & Murphy 2010, 6)

Indeed, currently the term of sustainable development is used to emphasize the three main dimensions of sustainability, also called the Triple Bottom Line (TBL) of sustainability. TBL is a concept introduced by John Elkington in 1994 and it represents the three main dimensions of sustainability: social, environmental and economic, which are also sometimes described as the 3Ps: people, planet, profit (Wilson 2015, 433).

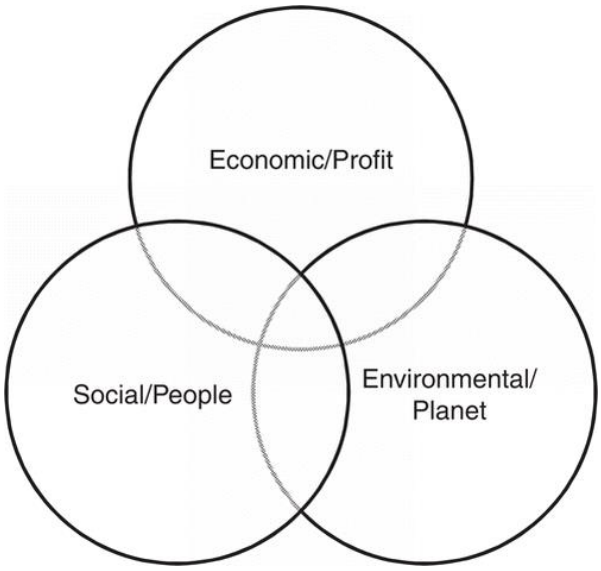

FIGURE 1. Triple Bottom Line of sustainability (Wilson 2015, 434)

The difference between sustainability and sustainable development can be drawn here. According to UNESCO (n.d.), sustainability is considered as a long-term goal while sustainable development refers to the many processes and pathways to achieve it. The key to sustainable development and thus sustainability is a balance between these three dimensions: the ability to be able to solve environmental and social issues while also enabling economic growth (Integrating the three dimensions of sustainable development: A framework and tools, 2015). However, when it comes to individuals' perception of the

term “sustainability”, the environmental aspect is still somewhat dominating (Wynveen 2014, 1284; Vincenzi, Possan, Andrade, Pituco, Santos, & Jasse 2018, 1381).

The TBL of sustainability is a foundational and central concept in this research as both attitudes and behaviors of the respondents are measured in accordance with all three sustainability dimensions: economic, environmental and social. It is essential that all dimensions are taken into account because sustainability as a whole is a holistic concept. Although the dimensions of sustainability are different and targeting different areas of human life, they are interdependent. In other words, failing to respect one of the dimensions of sustainability will have a negative impact on the other dimensions. Therefore, in order to measure sustainable consumer behavior and attitudes toward sustainable consumption comprehensively, all aspects of sustainability are taken into account in this thesis.

In the year 2015 the United Nations General Assembly adopted the 2030 Agenda for sustainable development. The main components of the agenda are 17 sustainable development goals (SDGs), which highlight the holistic approach toward achieving sustainable development (United Nations, n.d.b). The SDGs include a variety of global environmental, social and economic targets that must be achieved in order to establish sustainability. Among these goals is Responsible Consumption and Production (goal number 12). Therefore, the term of responsible consumption, also referred to as sustainable consumption, is introduced in the next chapter.

3.2 Sustainable Consumption

As the objectives of this thesis are to measure attitudes toward sustainable consumption and actual sustainable consumer behavior, it is essential to clearly define the term sustainable consumption, investigate its origins and analyze its components. Despite the fact that sustainable consumption (SC) was coined as a term in 1992 (Nagypál, Görög, Harazin & Baranyi 2015, 208), there is no common and universally accepted definition; different organizations define sustainable consumption differently, by emphasizing only certain aspects of SC. In addition, many researches have been made on the topic of SC as

well as the typical characteristics of sustainable consumer behavior (Nagypál et al. 2015, 208). In this chapter, the author reviews and discusses some of the definitions of SC.

Sustainable consumption goes hand in hand with sustainable production and thus some of the definitions combine the terms of sustainable consumption and sustainable production as a single term. The Oslo Symposium in 1994 provided a working definition of sustainable consumption and production: "The use of services and related products, which respond to basic needs and bring a better quality of life while minimizing the use of natural resources and toxic materials as well as the emissions of waste and pollutants over the life cycle of the service or product so as not to jeopardize the needs of future generations." *(*ABC of SCP*:* Clarifying Concepts on Sustainable Consumption and Production 2010, 12).

Since the role of sustainability is developing rapidly, the concept of sustainable consumption is also developing, and the initial definition has been expanded by various organizations, institutions and researchers. Likewise, Schoot Uiterkamp (2007, 35) states that consumption can be called sustainable "if consumption aimed at meeting the needs of future generations is not prevented by consumption of current generations". The National Consumer Council (NCC) (2003) proposes that sustainable consumption is a "balancing act", which is about consuming in "such a way as to protect the environment, use natural resources wisely and promote quality of life now, while not spoiling the lives of future consumers." (according to Atkison, Dietz, Neumayer & Agarwala 2014, 281).

In scientific literature, researchers have provided clearer definitions by emphasizing key characteristics of sustainable consumption. For example, Wang, Liu and Qi (2014, 154) state that the term of sustainable consumption is an "umbrella term" for key issues such as "meeting needs, enhancing the quality of life, improving resource efficiency, increasing the use of renewable energy sources, minimizing waste, taking a life cycle perspective and taking into account the equity dimension". While Geiger, Fischer & Schrader (2018, 20) provided a comprehensive definition of sustainable consumption. In their research, they state that sustainable consumption is defined as "individual acts of satisfying needs in different areas of life by acquiring, using and disposing goods and services that do not compromise the ecological and socio-economic conditions of all people (currently living

or in the future) to satisfy their own needs." Geiger et al. 2018, 20). The definition of sustainable consumption proposed by Geiger et al. (2018, 20) is used as the main definition for this thesis as it looks at SC holistically by emphasizing the importance of sustainable consumption in all consumption phases (chapter 3.4), sustainability dimensions (chapter 3.1, figure 1) and consumption areas (chapter 3.3, figure 2).

3.3 Sustainable Consumption Components

When analyzing sustainable consumer behavior, it is essential to break it down into consumption areas, to see the components of sustainable consumer behavior. UNEP – United Nations Environmental Programme (2002) suggests that sustainable consumption can be categorized into several groups according to the life "functions" of individuals, which include nutrition, mobility, housing, clothing, health and education (figure 2) (Hertwich & Katzmayr 2004, 9). It is a useful manner to analyze sustainable consumption as it covers all functions of human life.

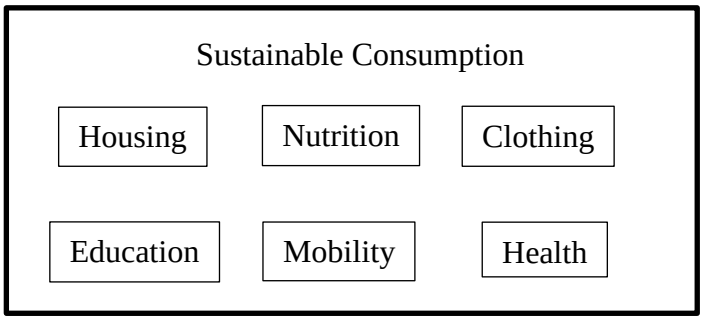

FIGURE 2. Sustainable consumption components

- **Nutrition** category includes food consumption, food waste reduction, sustainable diets, eating seasonal and locally produced food.
- **Housing** category includes sustainable water and energy consumption as well as sustainable buildings. Domestic appliances can be also seen as a part of the housing category (Hertwich & Katzmayr 2004, 15).
- **Clothing**. From the individual consumer's perspective repairing, redesigning, upcycling, renting, loaning, giving preferences to sustainable brands among other can be seen as ways of sustainable consumption in the clothing industry.

- **Mobility.** Sustainable tourism, leisure practices with low resource intensity, car sharing and environmentally friendly transport usage are some of the examples of sustainable consumption in the mobility sector (Kostadinova 2016, 225; Hertwich & Katzmayr 2004, 10–11)
- **Education**. Teaching sustainable living, increasing awareness about sustainability and related issues are some examples in the education category. (Kostadinova 2016, 225)
- **Health**. The health category includes healthy and environmentally friendly living. (Kostadinoa 2016, 225)

When measuring sustainable consumption as a holistic concept, it is essential to consider all components of sustainable consumption. However, as it has been mentioned earlier, due to the scope of this thesis, the author will only focus on the nutrition category and analyze it in accordance to the above-mentioned sustainability dimensions (chapter 3.1, figure 1) and phases of consumption (chapter 3.4).

United Nations and the Economic and Social Council emphasize the importance of understanding consumer behavior as it is one of the integral parts and an essential requirement for achieving sustainable consumption (Progress towards the Sustainable Development Goals 2017, 13). Additionally, as one of the objectives of this thesis is to measure consumer behavior, there is indeed a need to provide a definition for the term of consumer behavior. Therefore, in the following chapter consumer behavior is defined as well as its process is explained.

3.4 Consumer behavior

Consumer behavior is an unstable, complex and dynamic process, which is constantly changing due to the changes in the consumers' physical and psychological needs. Therefore, the researchers emphasize the need for businesses and governments to understand consumer behavior. According to Solomon (2013, 31) consumer behavior is "the processes involved when individuals or groups select, purchase, use, or dispose of products, services, ideas, or experiences to satisfy needs and desires". Similar to Solomon (2013,

31), Hoyer, Pieters & MacInnis (2018, 5) define consumer behavior as a combination of "consumer's decisions with respect to the acquisition, consumption, and disposition of goods, services, time, and ideas by human decision-making units (over time)".

As it can be seen, Solomon (2013, 31) and Hoyer et al. (2018, 5) in their definitions emphasize different stages in the consumer behavior process such as **acquisition**, **usage** and **disposal**. Acquisition is the way of obtaining goods or services such as buying, renting, sharing and leasing. The next phase in the consumer behavior is usage – the process by which the consumer uses the product. Disposal is the final stage of the consumer behavior and the process by which the consumer discards the product by means of recycling, giving away and selling. (Hoyer et al. 2018, 6) Particularly, the relevance of the stages of consumption to the sustainable consumption concept will be explained more in details in chapter 3.9.1.

In this thesis the author considers all stages of consumer behavior while analyzing sustainable behavior in the nutrition category. The reason behind that is that consumer behavior is analyzed holistically and thus all stages of consumer behavior are equally important.

3.5 Attitude and its components

As one of the objectives of this thesis is to measure attitudes, it is essential to define attitude and analyze its components. Attitude has been defined by various social scientists and psychologists. For example, one of the earliest definitions of attitude was proposed in 1921 by Jung (2017, 382), which states that attitude can be defined as "the readiness of the psyche to act or react in a certain way". Some of the researchers gave a definition to attitude by emphasizing emotional aspects (positive/negative). For example, Eagly and Chaiken (1993, 1) state that attitude can be expressed by evaluating a certain object with favor or disfavor, while Katz (1960, 168) similarly noted that attitude is the "predisposition of the individual to evaluate object/part of the object in a favorable or unfavorable manner".

The above-mentioned definitions do not describe attitudes as a holistic concept as they only emphasize certain components of attitudes (which are discussed in the next paragraph) such as willingness to act or feelings. Therefore, a definition provided by Hogg & Vauhan (2005, 150) is used as the central one in this research as it views attitude as a holistic concept. Hogg & Vauhan (2005, 150) define attitude as "a relatively enduring organization of beliefs, feelings, and behavioral tendencies toward socially significant objects, groups, events or symbols".

Attitude is formed based on three main components: affective (A), behavior (B) and cognitive (C), also called the ABC model (Solomon 2013, 274). These components can be seen as the determinations which influence the formation of attitude (Solomon 2013, 273). A visual representation of the model can be seen in figure 3. Each component of an attitude is directed toward an attitude object, which can be a physical item, concept, person, place, idea etc. Therefore, the attitude object in this study is the concept of sustainable consumption.

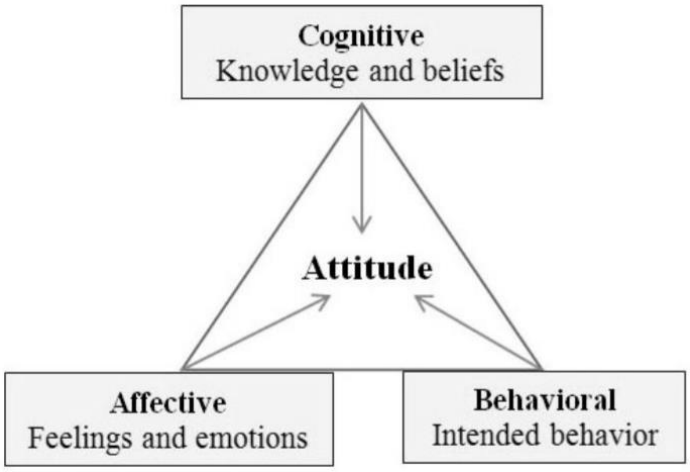

FIGURE 3. Attitude components (Lee, Shin & Greiner 2015, 91)

The **affective** component describes human feelings, both positive and negative, and the reaction related to an attitude object (Solomon 2013, 274). In other words, the affective component represents an emotional response (liking or disliking) of an individual toward an attitude object. As a result, affect can vary from pleasurable (liking or feeing good) to

unpleasable (disliking or feeling bad) (Breckler 1984, 1191). The **behavioral** component means the individual intention toward taking an action (Solomon 2013, 274). According to Vishal (2014, 6) the behavioral component involves an individual's response (favorable/unfavorable) to perform a behavior toward a certain attitude object. The **cognitive** component refers to the individual knowledge, perceptions or beliefs held about the attitude object (Solomon 2013, 274). Likewise, in the behavioral component, cognition can vary from favorable to unfavorable (Breckler 1984, 1191). Therefore, it can be concluded that attitude formation includes the combination of beliefs, feelings and willingness to act toward a particular attitude object.

A number of studies have analyzed the relationships between the components of attitudes. Although some researchers argue that the attitudes components influence attitude independently (Breckler 1984; Ostrom 1969), some relationships have been found between them. For example, it was found that beliefs (cognition) influence the emotions (affective component) (Lazarus1984) and that attitudes (cognitive or affective) predict behavior (Fishbein & Ajzen 1974). However, some of the studies proved that affect has a stronger impact on behavior compared to cognition (Farley & Stasson 2003, 56).

In this thesis, the attitudes are measured by taking into account all of the above-mentioned attitude components in order to see the big picture of the respondents' attitudes toward sustainable consumption. In other words, the respondents' feelings (affective component), knowledge and beliefs (cognitive component) and willingness to act (behavioral component) toward sustainable consumption are measured.

As attitude and its components were clearly defined in this chapter and in the previous chapter consumer behavior and its stages were explained, the next chapter will address a theory of consumer behavior (Theory of Planned Behavior), which explains the connection between attitude and behavior.

3.6 Theory of Planned Behavior

One of the major theories of consumer behavior is the Theory of Planned Behavior (TPB), which was introduced by Icek Ajzen (Kostadinova 2016, 226). The theory clearly explains an individual's behavior process and factors that influence behavior. Apart from being widely applicable to the consumer behavior research, TPB is to a great extent used in relation to sustainable consumption as well. Additionally, the theory is one of the central ones which shows the connection between attitudes and actual behavior. A systematic interpretation of the Theory of Planned Behavior is presented in figure 4.

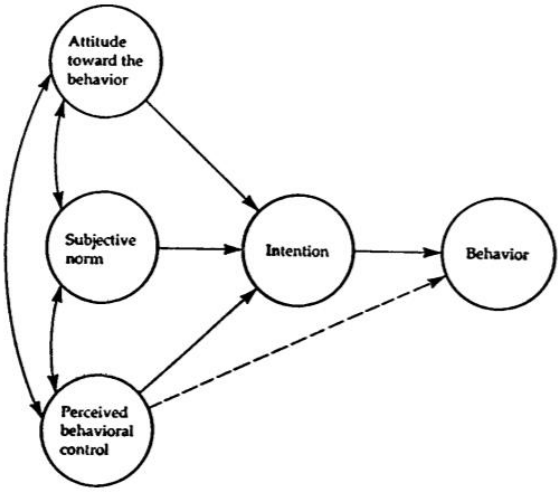

FIGURE 4. Theory of Planned Behavior (Ajzen 1991, 182)

The theory states that the main determination factor of an individual's behavior is their **intention**. According to Ajzen (1991, 181), intention determines how much effort an individual is ready to invest in order to behave in a certain way. In order to formulate an intention, individuals take into account three independent types of factors, which are **attitude toward the behavior** (beliefs about the likely consequences of the behavior), **subjective norm** (perceived social pressure, expectations of relevant groups to perform or not perform a certain behavior) and **perceived behavioral control** (a human perception of the ability to perform a certain behavior) (Ajzen 1991, 183). In other words, the Theory of Planned Behavior gives an explanation to human behavior and shows what factors determine it.

As it has been mentioned earlier, the TPB has been applied to various research related to sustainable consumption. For example, Chan (1998) has applied the theory to analyze the

intention and behavior of waste recycling in Hong Kong. The results showed that attitude was the main factor in the determination of actual human behavior, followed by behavioral control and social norms. Also, Han, Hsu, and Sheu (2009) applied the TPB to explain a green hotel's customers' intentions in choosing the hotel. The result of the study proved that attitude, subjective norm and perceived behavioral control had a positive impact on the intention formation (Han et al. 2009, 325). Additionally, the Theory of Planned Behavior received recognition in relation to different studies in general environmental attitudes (Kaiser, Wölfing & Fuhrer, 1999), green products acquisition/consumption (Yazdanpanah & Forouzani 2015; Maichum, Parichatnon & Peng 2016), water conservation (Liang, Kee & Henderson 2018; Trumbo & O'Keefe 2001) and recycling (Boldero 1995; Taylor & Todd 1995, 1997) among other sustainable aspects of behavior.

As it can be clearly seen, the TPB has been widely used in research related to sustainability and other relevant topics. Additionally, the theory clearly determines the relationships between attitude and behavior by showing a clear connection between both. The TPB is not used as a foundational theory in this research, as the subjective norm and perceived behavioral control are not studied. However, it clearly defines the connection between attitudes and behaviors which are both studied in this research.

3.7 Reasoned Action Approach

The Theory of Planned Behavior was complemented by extensive empirical evidence and as a result, the Reasoned Action Approach (RAA) was created. RAA more clearly shows the cognitive foundation of human behavior. A flowchart representing the Reasoned Action Approach is presented in figure 5.

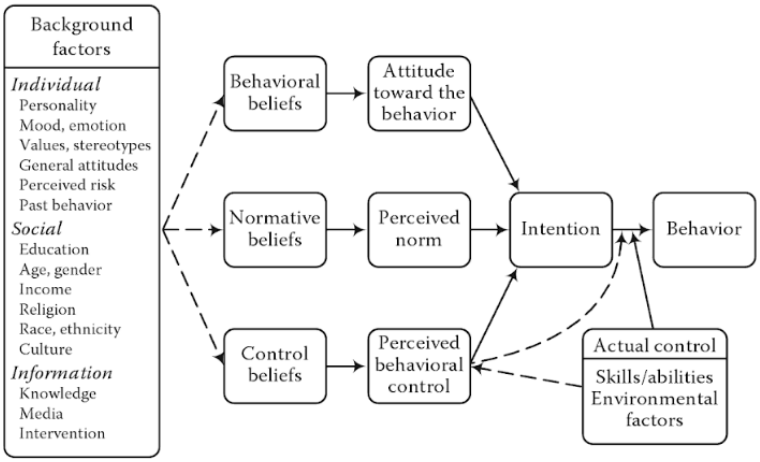

FIGURE 5. Reasoned Action Approach (Fishbein & Ajzen 2010,22)

According to RAA the human decision-making process starts with background factors, which are divided into three main categories: **individual**, **social** and **information**. The background factors indirectly influence behavior, by affecting **behavioral**, **normative** and **control** believes independently. **Behavioral beliefs** are the beliefs about the likelihood of the outcome of a certain behavior as well as the evaluation of the outcome. **Normative beliefs** stand for the beliefs that a human has about the extent to which relevant groups agree or disagree and the motivation to comply with their opinion. **Control believes** (sometimes called locus of control) are the beliefs regarding an individual's ability to perform a certain behavior. (Ajzen & Albattacin 2007, 4-7.) The individual beliefs in turn influence **attitudes**, **subjective norm** and **perceived behavioral control**. Particularly, behavioral beliefs lead to a positive or negative attitude toward the behavior, normative beliefs produce the subjective norm, while control beliefs result in perceived behavioral control. (Ajzen 2012) The remainder of the process is identical to the TPB.

Similar to the TPB, the RAA shows the connection between attitudes and actual behavior. However, the main difference is that according to RAA the individual decision-making process starts with background factors. Although background factors are not studied in this thesis as they are outside of its scope, it is essential to keep in mind that they influence the attitudes of consumers to some extent.

3.8 Attitude-behavior connection and attitude-behavior gap

The previously explained TPB and RAA approaches prove that individual attitude and behavior are connected, as attitude is one of the factors influencing actual behavior. Additionally, many previous studies have focused on attitude-behavior relations both in a general sense as well as from a sustainability angle. For example, Wolters (2014) in the study analyzed how environmental attitudes and concerns translate into water conservation behavior. The results of the study showed the consistency between attitude and behavior. However, in the conclusion the author states that in order to fully understand environmental behavior it is essential to analyze other factors which influence behavior, such as habits and beliefs. (Wolters 2014, 462) Additionally, the previously mentioned research of Chan (1998, 317) (see chapter 3.6) also proved that attitude was the main factor that determined the actual behavior concerning recycling. Balderjahn (1988) states that consumers' positive attitudes toward ecologically conscious living resulted in actual behavior (according to Mostafa 2007, 222).

However, some research has proven that attitudes do not always result in actual behavior, that is why the term **attitude-behavior gap** was introduced. The attitude-behavior gap is an inconsistency between attitudes toward sustainable consumption and actual sustainable behavior. The consistency/inconsistency of the attitude-behavior relation is a highly controversial topic and research regarding the reasons behind the attitude-behavior gap is insufficient (Terlau & Hirsch 2016, 160). Although, there has been some research conducted to identify the reasons behind the lack of correlation between attitude and behavior. For example, Tarrant and Cordell (1997) proposed that most researchers do not take into consideration the impact of external factors (sometimes also called contextual or situational factors) while measuring attitudes. External factors stand for the factors which influence the individual's behavior externally. For example, Kostadinova (2016, 228) by analyzing previous research states that contextual factors can include price, availability, product quality, labeling, environment of the retail store and the economic situation among other.

To conclude, there is no previous research explicitly stating that attitudes are directly linked to behavior. Behavior is influenced by other individual and situational factors as

well. However, this thesis only focuses on attitude as one of the many factors influencing behavior and does not consider other factors which might have an influence. Nevertheless, due the nature of this study it is essential to understand the connection between attitude and behavior.

3.9 Measuring sustainable consumer behavior and attitudes.

As the two main objectives of this research are to measure behavior and attitudes of EcoGarmonia's current and potential customers, it is essential to analyze previously utilized scales for sustainable and ecological behaviors and attitudes measurement. Although a great number of research has been conducted to identify the most accurate measurement scales, in this chapter the most relevant scales for this research are presented.

3.9.1 Measuring behavior

One of the most popular scales used to measure ecological behavior is the General Ecological Behavior (GEB) measure introduced by Kaiser (1998). The scale measures environmental performance by taking into account 40 types of varied ecological behavior in 7 categories (Kaiser 1998, 404). However, the GEB scale measures only ecological behavior, and while it is a significant part of sustainable consumption, it is not the only one.

There is a limited amount of scales that can be used to comprehensively measure sustainable consumer behavior from the social, environmental and economic points of view. The reason behind this might be that sustainable consumption is a relatively new term and does not have a commonly accepted definition. However, the scale to measure ethically-minded consumer behavior regarding consumption choices pertaining to environmental and social issues was developed by Sudbury-Riley & Kohlbacher (2016). Additionally, Fischer, Böhme & Geiger (2017) developed and tested a scale for young consumers' sustainable consumption behavior (YCSCB), which in addition to the environmental dimension of sustainability also takes into consideration the socio-economic dimension. Particularly, the scale was introduced to measure young consumers' sustainable consumption

in relation to food and clothing (Fischer et al. 2017). The scale was constructed based on the SCB-cube scale, which is discussed further.

SCB-cube scale

Comparing the available scales concerning sustainable consumer behavior, it was determined that the cube model of sustainable consumption, or the SCB-cube model, introduced by Geiger et al. (2018) is the most relevant for this research. The model has two practical applications: firstly, it helps to systemize existing information on sustainable consumption and secondly, it allows to choose relevant consumer behaviors based on their environmental and socio-economic impact (Geiger et al. 2018, 29). Specifically, the model is based on the following four dimensions and to some degree summarizes all information regarding sustainable consumption discussed previously.

- **Sustainability dimensions**. As it has been mentioned earlier, the sustainability dimensions include social, environmental and economic aspects (see chapter 3.1) (Geiger et al. 2018). Therefore, in order to measure sustainable consumption, it is essential to take into account all sustainability dimensions.
- **Consumption phases.** When measuring sustainable consumption, it is also essential to take into consideration the phases of consumer behavior which include acquiring, using and disposing of goods and services (Geiger et al. 2018). For example, from the perspective of the clothing consumption area, sustainable behavior means rational consumption on all levels: acquisition (purchase of sustainable clothes, buying used clothes), usage (repairing, redesigning), disposal (selling, giving away, recycling, upcycling).
- **Consumption areas**. It is essential to understand various consumption areas in order to fully comprehend sustainable consumer behavior as a whole (see chapter 3.3). The model takes into account four main areas of consumption which include food, housing, mobility and clothing. This proves that in order to measure truly sustainable consumption in general, all consumption areas should be taken into account. (Geiger et al. 2018.)
- **Impact.** Defined as the need to focus on the consumption behaviors that have the highest negative impact on sustainable development. In other words, the impact

dimension is prioritization of certain sustainable behaviors in a certain field. For example, looking from the perspective of the mobility area, it can be argued that travelling by bus is a lower impact behavior compared to travelling by personal car. (Geiger et al. 2018.)

When combined, the first three dimensions (sustainability dimensions, consumption phases and consumption areas) create a cube, complemented by a fourth cross-cutting dimension (impact) (Fischer et al. 2017). The visual representation of the model can be seen in figure 6.

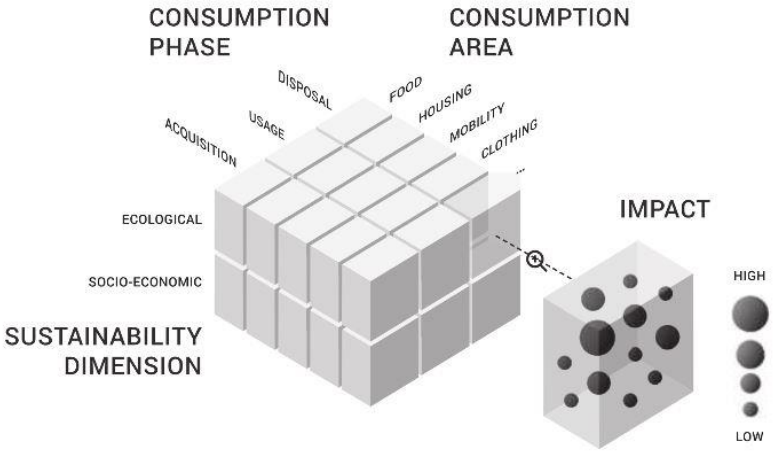

FIGURE 6. SCB-cube model (Geiger et al. 2018)

The model aims to make the research on sustainable consumption across various industries more comprehensive and comparable. (Geiger et al. 2018) Additionally, it provides a clear image of what sustainable consumption stands for. The authors recommend using the SCB-cube as a guideline for the selection of behaviors and their systematization. Additionally, the SCB-cube is a tool to validate items for the behavioral scale in order to measure sustainable consumption (Geiger et al. 2018).

Furthermore, Geiger et al. (2018) have developed an exemplary implementation of a scale based on the SCB-cube model, which measures sustainable consumption in the nutrition category. As one of the purposes of this thesis is to measure sustainable consumption in the food sector, the SCB nutrition scale was a suitable framework, which covered both sustainability dimensions as well as consumption phases. Therefore, the SCB nutrition

scale was used as the foundation for this thesis when measuring sustainable consumer behavior in the food category.

3.9.2 Measuring attitudes

As a comprehensive scale measuring attitudes toward sustainable consumption has not been developed yet, the author of the thesis reviewed already existing scales toward relevant attitude objects (e.g. sustainable development, sustainable business) and developed a scale which would take into account both different sustainability dimensions and components of attitudes.

There are various ways to measure consumers' attitudes toward sustainability and relevant subjects. However, similar to behavior measurement, most of the scales focus on environmental sustainability. NEP (New Ecological Paradigm) is one of the most widely-used scales to measure environmental attitudes. The scale was created to measure environmental concerns of individuals by using a fifteen-statement survey. (Anderson 2012, 260). The Environmental Attitude Inventory (EAI) is also one of the scales used to measure attitude toward the environment. It combines 12 scales which measure environmental attitude from diverse perspectives. Examples of some of the scales are enjoyment of nature, environmental movement activism and personal conservation behavior among other. (Milfont & Duckitt 2010, 89–90.) In addition to NEP and EAI, previous research on ethical and ecological consumption were reviewed for the questionnaire design of the thesis. Examples of the reviewed research include questionnaires created by Franzen & Vogl (2013), Biasutti & Frate (2017), Mcilroy & Stanton (2017), OECD (2014), Delistavrou & Tilikidou (2014), Lavelle, Rau & Fahy (2015) and Schmücker, Günther, Kuhn, Weiss & Horster (2018). However, some of the items were taken directly from the above-mentioned studies. Table 1 lists these items with references to their original sources.

TABLE 1. Items for attitude measurement

Q1: "In your view, what are the most serious issues facing the world today?" (OECD 2014)
Q6: "The benefits of modern consumer products are more important than the pollution that results from their production and use." (Mcilroy & Stanton 2017)
Q7: "Environmental protection and people's quality of life are directly linked." (Schmücker, Günther, Kuhn, Weiss & Horster 2018, 115).
Q8: "I would be willing to accept cuts in my standards of living, if it helped to protect the environment." (Lavelle, Rau & Fahy 2015)
Q 14: "I am more concerned with my own financial problems than with the elimination of poverty in the under-developed countries of the so-called Third World." (Delistavrou & Tilikidou 2014)
Q 15: "I will not buy a product if I know that the company that sells it is socially irresponsible." (Sudbury-Riley & Kohlbacher 2016, 2703)

4 DATA ANALYSIS

The survey for this research was divided into several parts, which included attitude toward sustainable consumption (part A), actual consumer behavior in the food sector (part B) and demographic section (part C). In addition, the last question (Q36) was open-ended, where respondents had a chance to add any information relevant to the research. The full version of the questionnaire in the original language (Russian) is available in Appendix 1 and its translation into English in Appendix 2.

The data collection was conducted between 17th of September and 21st of September. The survey link was available in EcoGarmonia's social media profiles (VKontakte, Instagram and Facebook) as well as sent through the company's newsletters to the customers e-mails. Additionally, potential customers were reached through various sustainability and healthy lifestyle influencers. A total of 148 respondents answered the questionnaire, of which 136 completed it fully. The 12 respondents' answers who did not fully complete the questionnaire were not taken into account in the analysis.

According to Singh (2007, 122), one of the most important steps after the data collection stage is to conduct a data analysis. In this thesis, quantitative analysis techniques such as graphs, charts and statistics were used in order to extract essential information from the questionnaires. Saunders et al. (2000) state that these techniques enable the researcher to "explore, present, describe and examine relationships and trends" with the collected data. The quantitative data analysis was conducted by using Microsoft Excel due to its cost effectiveness and convenience.

4.1 Demographic characteristics

The demographic data analyzed in the current research included age, gender and income. The results of the demographic data analysis are depicted in table 2. Although the channels where the questionnaire was distributed in had generally even gender ratios, the majority of the respondents were female (98%), while males accounted for only 2%.

TABLE 2. Demographic data analysis

Variable	Answer option	%
Gender	Female	98%
	Male	2%
Age	16-20	5%
	21-25	27%
	26-30	35%
	31-35	26%
	36-40	5%
	41-45	0%
	46-50	1%
	51-55	1%
Income distribution	Less than 14999	16%
	15 000-24 999	16%
	25 000-34 999	17%
	35 000-44 999	12%
	45 000-54 999	7%
	55 000 - 64 999	10%
	65 000 - 74 999	5%
	75 000 - 84 999	8%
	85 000 - 94 999	2%
	95 000 - 104 999	1%
	More than 105 000	5%

The data collected revealed that the respondents who took part in the survey are relatively young. Descriptive statistics indicate that the ages range from 16 to 55 with a mean age of 28 years and a standard deviation of 5. Initially, the respondents were asked to identify their specific age, while at the data analysis stage the data was grouped into intervals of 4 to present the data. A considerable number of respondents (35%) fell into the category of 26-30 years, followed by 21-25 years (27%) and 31-35 years (26%). The remaining 12% were spread evenly between the other categories. A possible explanation for the underrepresentation of older age groups might be that the survey was conducted online.

The results show that approximately half of the respondents (49%) have an income level of below 35 000 RUB. The average gross income level in the Russian Federation for the year 2017 was 39 167 RUB (Russian Federal State Statistics Service 2018) which indicates that half of the respondents represent the lower half of the income scale.

4.2 Analyzing attitudes

Measuring attitudes toward sustainable consumption was an essential part of this thesis. The respondents' attitudes were measured in relation to three attitude components discussed in chapter 3.5 (affective, cognitive and behavioral) as well as sustainability dimensions (social, economic and environmental) discussed in chapter 3.1. In other words, the respondents' feelings, believes and readiness to act according to environmental and socio-economic values were measured.

The survey included fifteen items and their purpose was to gather data on consumer attitudes toward sustainable consumption. A 5-point Likert scale was used in order to measure attitudes. The Likert scale is considered as one of the most commonly used attitude measuring scales (A Dictionary of Psychology 2015). The scale is constructed so that the respondents express their agreement with a statement on a scale ranging from "strongly agree" to "strongly disagree" with the option "neither agree nor disagree" in the middle (A Dictionary of Epidemiology 2014). There were several negatively worded statements (Q4, Q6, Q14) included in the attitude-measurement section. These items were diverse-coded at the data analysis stage for easier interpretation of results, meaning that further along in the thesis the tables representing them are presented as positive-worded. Appendix 3 depicts the items which were used in the survey to measure attitudes towards sustainable consumption.

In addition to the items measured using the Likert scale there was an additional question (Q1) that attempted to measure the respondents' personal opinions toward some of the biggest global problems. The options included economic, political, environmental, social, health and safety issues. The respondents were asked to compare options based on their personal views by ranking them in order of their personal preference. The results of this question will be presented first, followed by the remaining 15 items.

Frequency analysis of the results for question 1 shows that 43% of the respondents consider environmental problems as the number one priority, while the least popular option among the respondents was political issues: 51% of the respondents ranked it as the least important option. Additionally, in order to identify the items which respondents ranked

as most important, the total weighted average ranking for each option was calculated at the data analysis stage. The results of the weighted average rankings are depicted in figure 7. As it can be seen, environmental issues were considered most crucial, followed by economic and social issues. A noteworthy mention, perhaps, is that the issues perceived most crucial by the respondents represent the dimensions of TBL of sustainability which are discussed in chapter 3.1. This suggests that the respondents consider sustainability problems as the priority at least on a subconscious level.

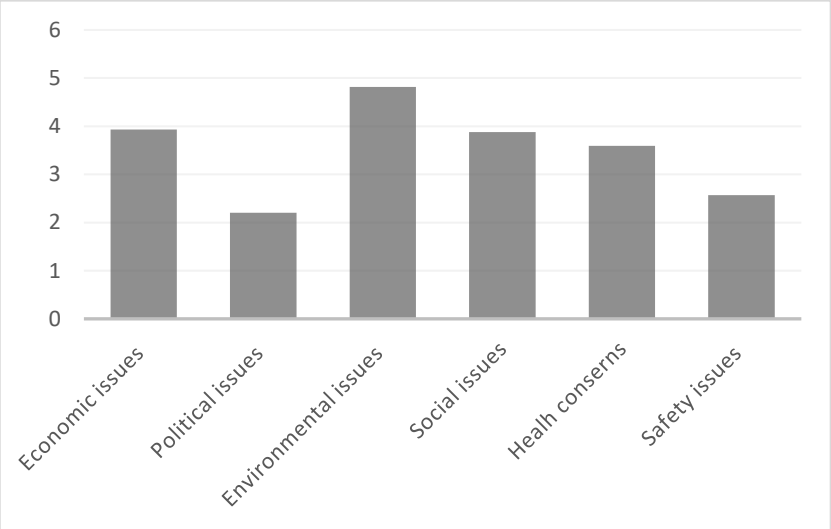

FIGURE 7. Q1: In your view, what are the most serious issues facing the world today

Continuing with the aforementioned fifteen items measuring attitudes, those representing the affective component of attitude will be presented first followed by the cognitive and the behavioral.

4.2.1 Affective component

In figures 8-10 the respondents' agreement with the items representing the feelings toward environmental sustainability are introduced.

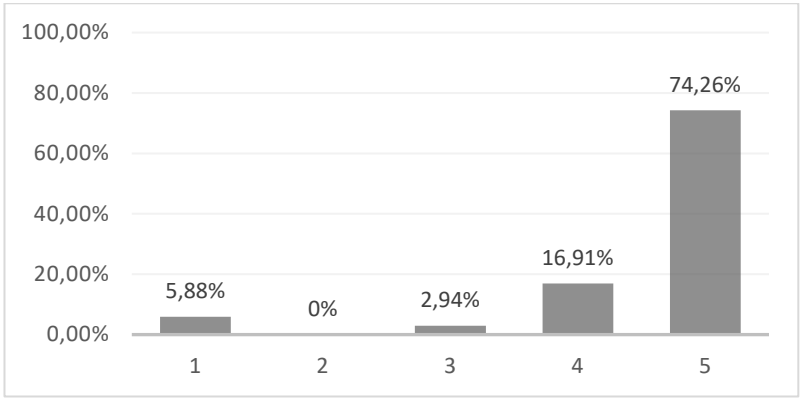

FIGURE 8. Results of Q2: I like the idea behind concept of sustainable consumption as it helps to reduce the environmental impact.

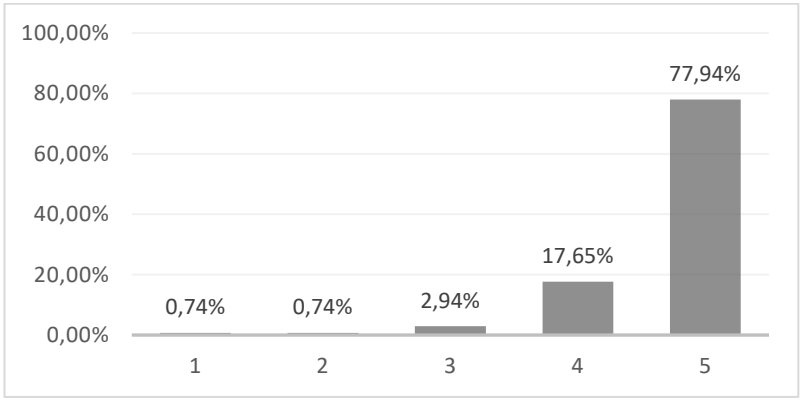

FIGURE 9. Reverse-coded results of Q4: I'm worried about the impact of my activity on the environment

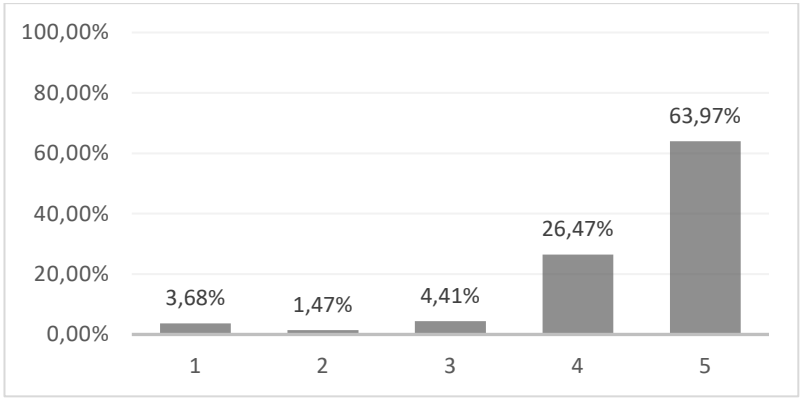

FIGURE 10. Results of Q5: I admire people who contribute to the solution of the environmental problems

Overall, the results indicate that there is a high number of respondents agreeing or agreeing strongly with the items measuring the affective component of sustainability. As depicted in figure 8, 91% of the respondents supported the idea behind the concept of sustainable consumption by agreeing or agreeing strongly with the statement. The results represented in figure 9, indicate that the majority of the respondents (96%) care about their actions' impacts on the environment. Additionally, figure 10 shows that 90% of the respondents indicated their agreement with question 5, which measured whether the respondents admire people who contribute to the solution of environmental problems.

Overall, it can be clearly seen that the results from measuring the affective component of attitudes toward environmental sustainability showed a high level of agreement with the statements. As it has been mentioned previously, according to Solomon (2013, 274) the affective component refers to individuals' feelings toward an attitude object, while Breckler (1984, 1191) proposed that feelings can vary from pleasurable to unpleasurable. This indicates that the respondents have highly pleasurable feelings toward environmental sustainability.

Measuring the respondent's feelings toward socio-economic sustainability was an important part of this study. Figures 11 and 12 present the degree to which the respondents agree with the items representing affective attitude components toward socio-economic sustainability.

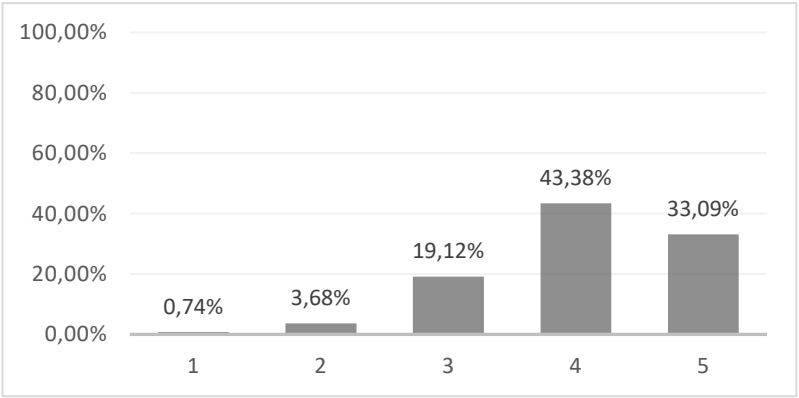

FIGURE 11. Results of Q13: I like the idea that by buying products from ethical companies I can contribute to the solution of some social problems.

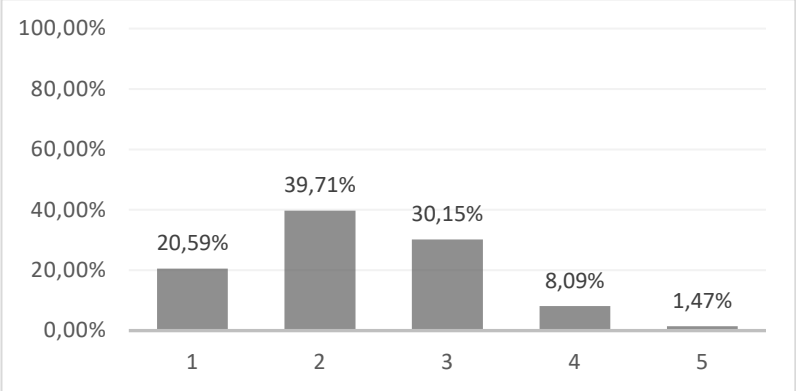

FIGURE 12. Reverse-coded results of Q14: I am more concerned with my own financial problems than with the elimination of poverty in the under-developed countries of the so-called Third World

Comparing the affective attitude components of the socio-economic dimension of sustainability with the environmental, it is clear that the respondents' attitudes toward the socio-economic dimension are less positive. The results revealed that 76% of the respondents agreed or strongly agreed with question 13 represented in figure 11, which measured whether respondents associate positive feelings with buying from ethical companies. In turn, the results of question 14 (reverse-coded item) represented in figure 12 showed conflicting results: in total 60% of respondents disagreed or strongly disagreed with the statement, while 30% took a neutral stance. Overall, the validity of the results presented in figures 11 and 12 is questionable, as they were complete opposites of each other and therefore it is hard to determine whether or not the respondents' feelings toward socio-economic sustainability are pleasurable or unpleasurable.

4.2.2 Cognitive component

The results of the environmental-cognitive attitudes are presented in figures 13-15. Similar to the affective component items measuring attitudes toward environmental sustainability, respondents generally agreed with the cognitive items measuring environmental sustainability. This can particularly be seen from figure 13: 91% of the respondents believe that they can personally contribute to the solution of environmental problems. The results from questions 3 and 6 presented in figures 13 and 14 also showed high rates of

agreement, with 71% and 87%, respectively, agreeing or strongly agreeing with the items. As the cognitive component stands for beliefs and knowledge (Solomon 2013, 274), the results to the questions 3, 6 and 7 suggest that the respondents are aware of the effects of their consumption on environmental sustainability. As a result, cognition in this category seems to be favorable.

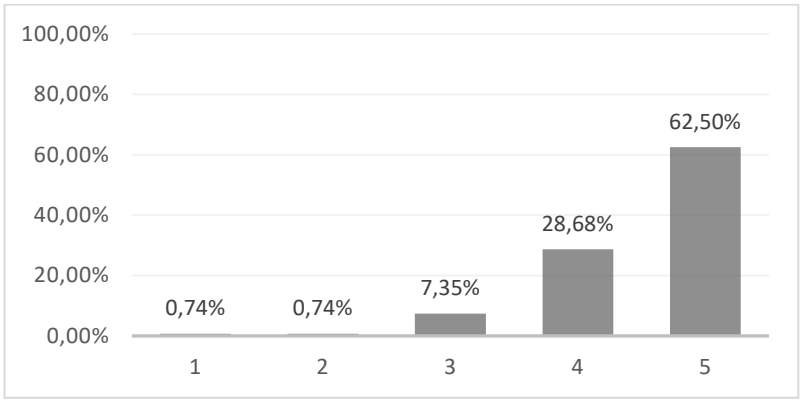

FIGURE 13. Results of Q3: I can personally contribute to the solution of the environmental problems.

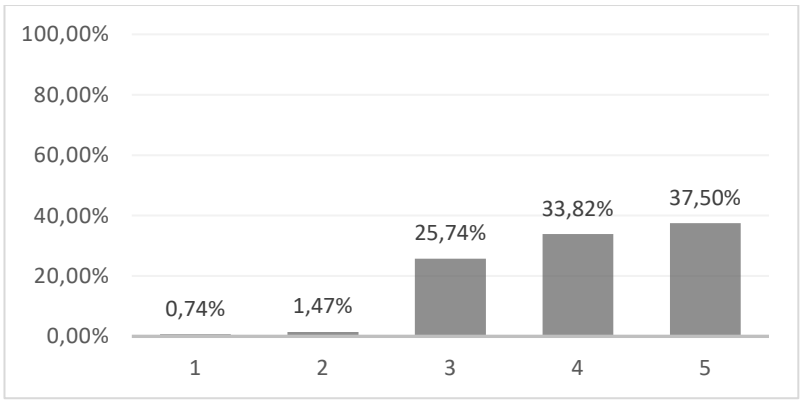

FIGURE 14. Reverse-coded results of Q6: The benefits of modern consumer products are more important than the pollution that results from their production and use.

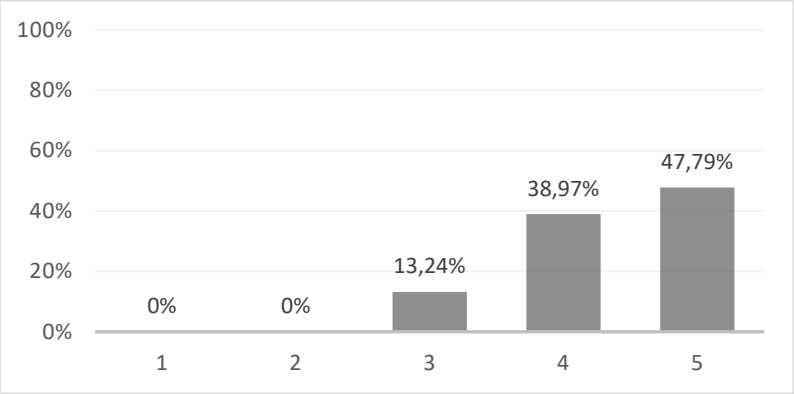

FIGURE 15. Results of Q 7: Environmental protection and people's quality of life are directly linked

When comparing the groups of items representing the affective-environmental and cognitive-environmental attitudes, it can be seen that the answers to the items in both groups are predominantly positive. Although this study did not seek to explore relationships between the attitude components, these results correlate with the previously mentioned study of Lazarus (1984) which state that cognition influences affect. Therefore, it can be concluded that favorable beliefs about environmental sustainability results in favorable feelings toward environmental sustainability.

Figures 16-18 present the results of the items measuring the cognitive component of attitude in the socio-economic dimension of sustainability. These items did not receive the same level of agreement as the items concerning the environmental dimension. Moreover, the respondents were generally uncertain or completely disagreed with the statements. For example, the answers to the question regarding developed countries providing support for developing countries presented in figure 16 showed that 56% of the respondents disagreed, while 34 % of the respondents were uncertain about the statement. Similarly, the respondents were uncertain or did not believe in the effectiveness of their actions when it comes to contributing to the solutions of social (figure 17) and economic problems (figure 18). The results showed that 44% and 42% of the respondents were uncertain about their personal importance in solving social and economic problems, respectively.

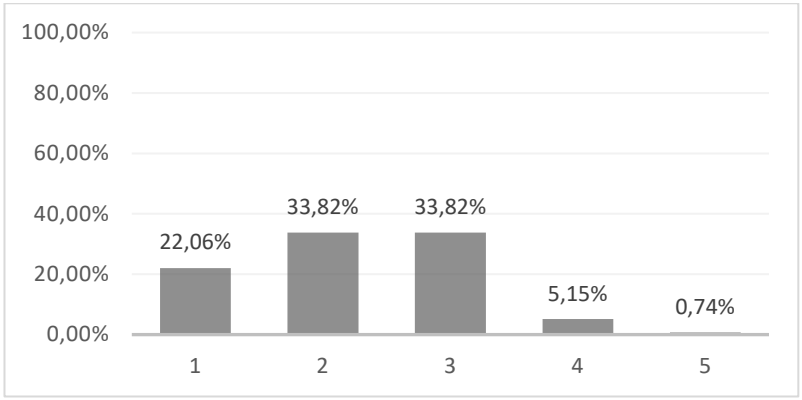

FIGURE 16. Results of Q10: People from developed countries have to pay more attention to the social problems in the developing countries.

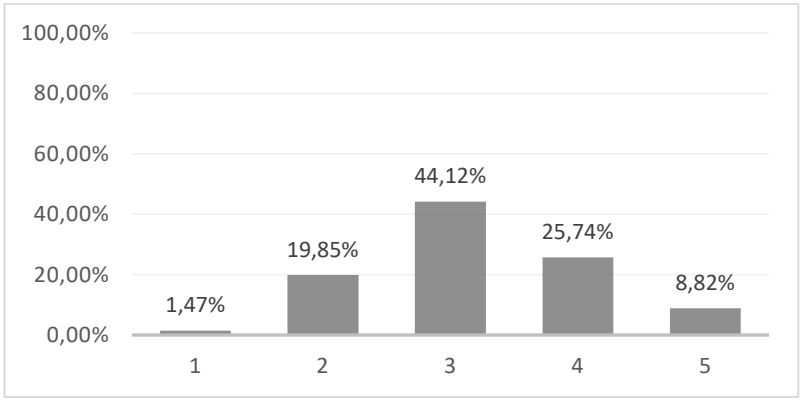

FIGURE 17. Results of Q11: I can personally contribute to the solution of the social problems

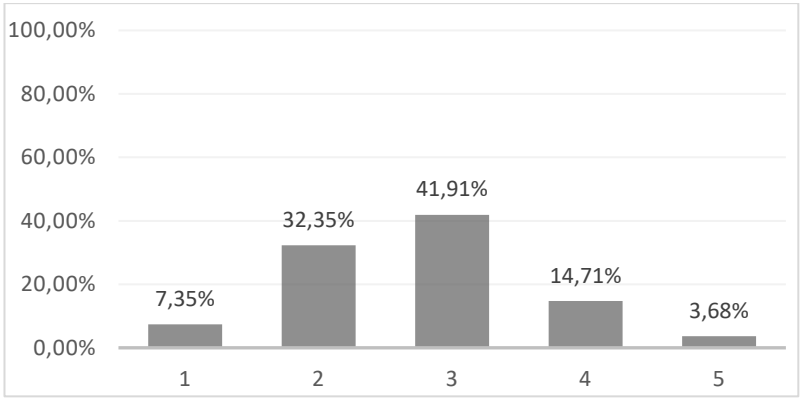

FIGURE 18. Results of Q12: I can personally contribute to the solution of the economic problems.

Overall, in the results representing the cognitive attitude component, a clear difference between attitudes toward environmental and socio-economic sustainability can be seen. While the results for the cognitive-environmental items are favorable, the results of the cognitive-socio-economic items are mostly uncertain or unfavorable. According to Solomon (2013, 274) the cognitive component of attitude refers to the beliefs or knowledge an individual has about the attitude object. Therefore, it is likely that the respondents' uncertainty and disagreement regarding the cognitive socio-economic items is a result of lack of knowledge about the impact of consumption on socio-economic problems, compared to environmental.

4.2.3 Behavioral component

In this research, the behavioral component measures whether the respondents are willing to adopt sustainable consumption principles. Particularly, the research aimed to identify to what extent socio-economic and environmental sustainability influence the behavior of the respondents.

Figures 19 and 20 illustrate the influence of environmental sustainability on individuals' actions. It can be clearly seen that the difference between the results of these two items is significant. The data revealed that 98,5 % of the respondents are willing to recycle by agreeing or strongly agreeing with question 9 (figure 20). However, the results from question 8 presented in figure 19 are less evident. Nearly half of the respondents (46%) had a neutral opinion about the item regarding the willingness to give up their current quality of life in order to solve environmental issues. The significant difference in the responses could be explained by the wording of the statements: one is asking the respondents to perform a certain activity (e.g. recycling) while the other asks them to give up something (e.g. quality of life).

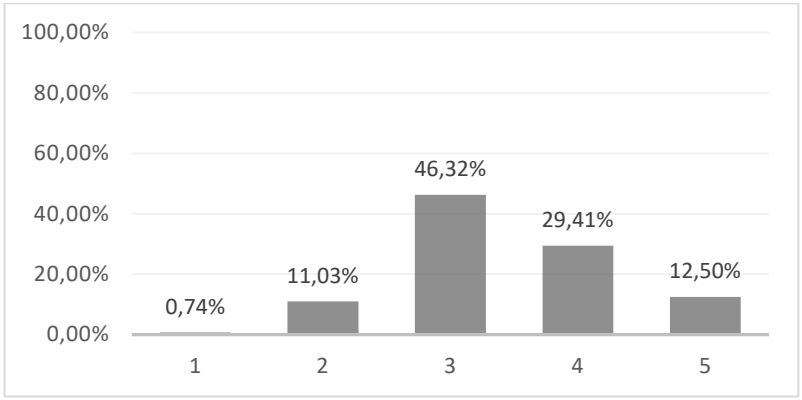

FIGURE 19. Results of Q8: I would be willing to accept cuts in my standards of living, if it helped to protect the environment

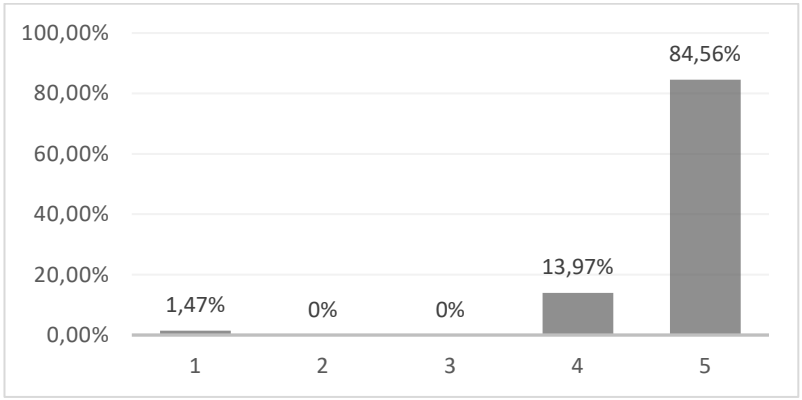

FIGURE 20. Results of Q9: I would be willing to recycle

Analysis of the socio-economic-behavioral items revealed that the respondent's level of uncertainty toward them is relatively high. Figure 21 reveals the respondents' answers to the item regarding willingness to buy from socially responsible companies. Although the level of uncertainty is relatively high (39%), nearly a half of the respondents (49%) agreed or strongly agreed with the statement, which still indicates a concern for socio-economic issues. Figure 22 depicts the uncertainty of the respondents when it comes to potentially giving up their current quality of life in order to reduce socio-economic problems. Particularly, it can be seen that more than half of the respondents (52%) neither agreed or disagreed with the statement while the rest of the respondents' answers distributed relatively evenly between both sides. As Solomon (2013, 274) states, the behavioral attitude component depicts the individual's intention to act. Therefore, it can be concluded that the

respondents of this research are uncertain about their willingness to act toward socio-economic sustainability.

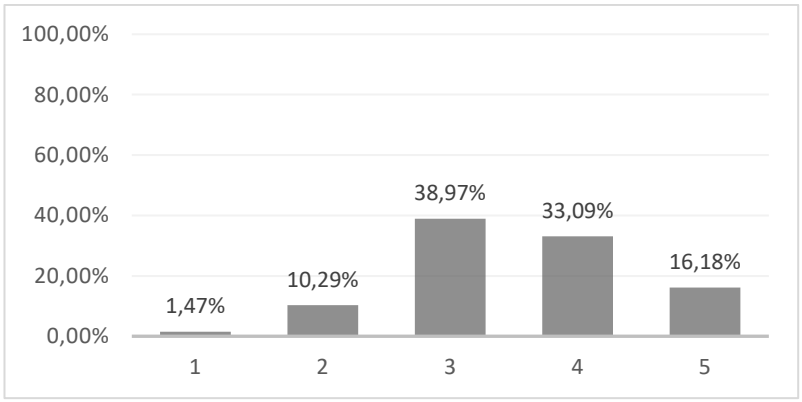

FIGURE 21. Results of Q15: I will not buy a product if I know that the company that sells it is socially irresponsible

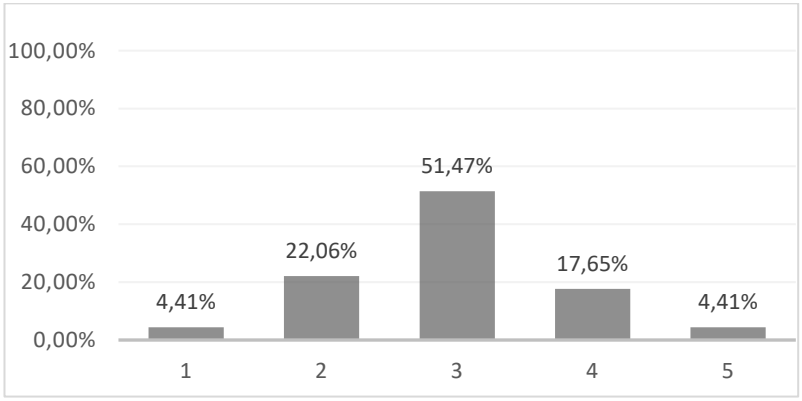

FIGURE 22. Results of Q16: I would be willingly to accept cuts in my standards of living if it helped to solve socio-economic issues

It can be concluded that the respondents' behavior is most of the time the result of their knowledge and feelings. To a certain degree, these results correlate with the previously mentioned Theory of Planned Behavior (chapter 3.6) as well as studies conducted by Fishbein and Ajzen (1974), which state that among many other factors, knowledge and feelings predict behavior. Particularly, it can be seen that the respondents' uncertain answers regarding the items representing cognitive and affective components of attitude (uncertain knowledge and feelings) resulted in uncertainty in the answers to the items

representing behavioral component (uncertain behavior) toward sustainable consumption. Additionally, highly favorable knowledge/beliefs and feelings of the respondents about environmental sustainability resulted in relatively supportive behavior.

4.2.4 Comparing dimensions of sustainability

While comparing the attitudes of the respondents toward the TBL of sustainability, it appears certain that the respondents' attitudes toward environmental sustainability were generally consistently favorable, while attitudes toward the socio-economic dimension were less evident and consistent. For better understanding of the phenomenon, the mean of the percentages of responses was calculated for each sustainability dimension. Figure 23 compares this mean toward both the environmental and socio-economic sustainability.

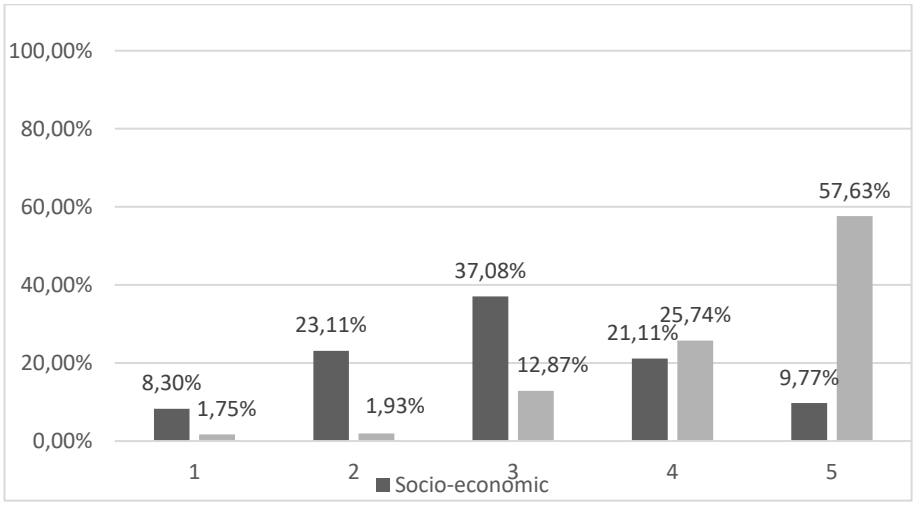

FIGURE 23. Comparison of attitudes toward sustainability dimensions

As it can be seen, on average nearly 58% of the respondents strongly agreed with the environmental items in the survey, while only 14% strongly agreed with items supporting socio-economic sustainability. The uncertainty of the respondents' perceptions when it comes to the socio-economic impact of consumption is especially highlighted with 35% of respondents neither agreeing or disagreeing with the statements. In other words, it can be concluded that consumers have more favorable attitudes toward environmental sus-

tainability compared to socio-economic. These results correlate with the previously mentioned studies of Wynveen (2014) and Vincenzi et al. (2018), which state that environmental sustainability is perceived as more important than socio-economic sustainability.

A clear difference in attitudes was especially highlighted in three similar questions that concerned the three sustainability dimensions. The questions attempted to measure the respondents' Perceived Consumer Effectiveness (PCE) in solving social, economic and environmental issues. PCE is a belief of a certain individual that his/her actions can make a difference in the solution of a problem (Ellen, Weiner and CobbWalgren, 1991, 102). In other words, the respondents were asked to identify to what extent they believe they could contribute to solving environmental (Q3), social (Q11) and economic (Q12) problems. The results are presented in figure 24.

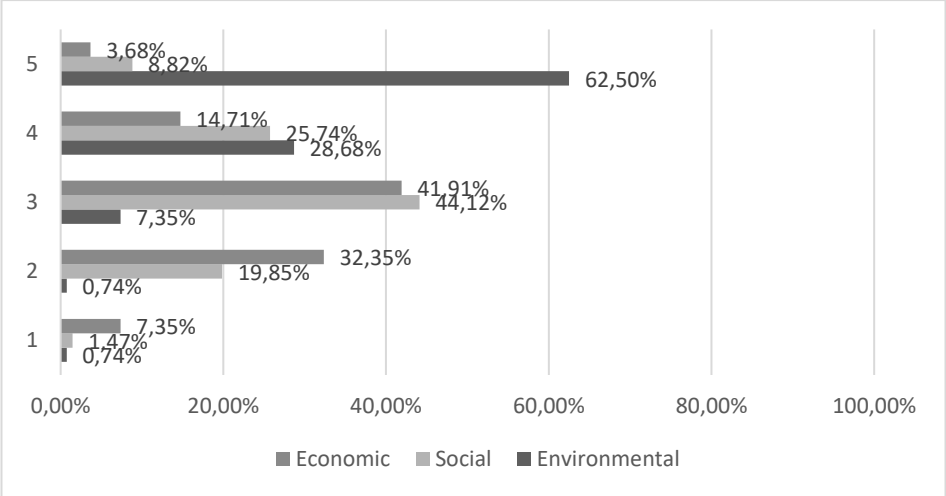

FIGURE 24. PCE toward the solution of sustainability issues.

As it can be seen from figure 24, 63% of the respondents strongly agreed that their actions are effective in solving environmental issues. In contrast, only 4% and 9% of the respondents strongly agreed with the items concerning their actions' effectiveness when it comes to solving economic and social issues, respectively. The uncertainty among the respondents was especially highlighted with 42 % and 44 % of the respondents neither agreeing or disagreeing with the economic and social items, respectively.

The results showed that the respondents believe in the importance of their actions when it comes to achieving environmental sustainability, while uncertainty of the effectiveness of their actions in achieving social and economic sustainability is relatively high. In other words, it can be argued that consumers do not perceive their actions as effective in solving socio-economic problems as solving environmental problems.

Overall, while comparing the respondent's attitudes toward sustainable consumption in general (figure 23) and PCE toward sustainability dimensions (figure 24), it can be assumed that among many other reasons, one of the possible explanations to the respondents having less certain attitudes toward socio-economic sustainability might be the lack of perceived effectiveness of their actions in solving socio-economic issues. This result correlate with the previous studies conducted by (Altinigne, N. & Bilgin Wührer 2013). Although, the study measured only attitudes toward environmental aspect of sustainability, its results showed that PCE has a significant effect on the attitudes.

4.3 Analyzing consumer behavior in the nutrition category

The SCB cube model was chosen as the basis for the behavioral questions in the current research. Particularly the items of the SCB-nutrition scale developed by Geiger et al. (2018) were used to measure sustainable behavior in the nutrition sector. In their research the authors clearly describe why certain behaviors were chosen to be included in the SCB-nutrition scale. They particularly analyzed every behavior in regards to the dimensions of the SCB-cube model (sustainability dimensions, consumption phases, consumption areas and impact). However, for this research some minor changes to the original scale were made. The table in Appendix 4 depicts the items which were used in the survey to measure sustainable consumer behavior in the nutrition category. Overall, the scale consists of 16 items, which represent consumption in its different phases of consumer behavior and takes into account the three dimensions of sustainability. Almost all items were measured on the 5-point Likert scale, where 1 was interpreted as "never" and 5 as "always". However, for the items measuring meat and dairy consumption (Q20 and Q21), a 5-point scale with the options "never", "once a month", "once a week", "2-3 times per week", "every day" was used.

In the following chapter, the items measuring consumer behavior are analyzed. First, the items which belong to the environmental category are examined, followed by socio-economic items.

4.3.1 Environmental sustainability

In the following, the results of the items representing consumer behavior regarding environmental sustainability are presented. First, the items representing consumer behavior on the acquisition stage of consumption are investigated followed by usage and disposal.

Acquisition

When it comes to the acquisition consumption phase, four questions were asked in relation to environmental sustainability. Particularly the frequency of meat and dairy consumption as well as the frequency of buying organic and imported foods were measured.

The frequency of meat and dairy consumption is represented on the table 3. The consumption of meat products distributed relatively evenly with minor variance. However, a significant number of respondents (32%) stated that they consume meat around 2-3 times per week. Additionally, it is somewhat worthy of mentioning that the number of respondents who do not eat meat (19%) is approximately the same as the number of respondents who consume meat daily (21%). In addition to meat consumption, 58% of the respondents consume dairy on a regular basis (every day or 2-3 times per week). Overall, it can be seen that although a significant number of respondents consume meat and dairy on a regular basis, a relatively high number of respondents are vegetarian (do not consume meat at all).

TABLE 3. Results of question 17 and 18

Statements		Never	Once a month	Once a week	2-3 per week	Daily
Q17: I eat meat	N	26	15	23	43	29
	%	19,12%	11,03%	16,91%	31,62%	21,32%
Q18: I eat/drink dairy products	N	7	24	26	38	41
	%	5,15%	17,65%	19,12%	27,94%	30,15%

On the topic of meat and dairy consumption, it is one of the consumer activities that has a highly negative impact on the environment within the food category (Tukker & Jansen, 2006, 159). Therefore, when talking about the "Impact" dimension of the SCB-cube model, meat and dairy consumption can be considered as the behaviors that have the most negative impacts on environmental sustainability. It can be concluded that although there was a significant number of respondents that consume meat and dairy on a regular basis, still relatively many of the respondents are vegetarian, and are thus significantly reducing the negative environmental impact of their consumption.

To the question about the acquisition of organic products (table 4), more than half of the respondents (54%) stated that they buy organic products occasionally, with the remaining answers distributing almost evenly on either side of the "occasionally" option.

TABLE 4. Result of question 19

		Never	Rarely	Occasionally	Regularly	Always
Q19: I buy certified organic food.	N	5	25	73	31	2
	%	3,68%	18,38%	53,68%	22,79%	1,47%

The fact that most of the respondents buy organic food only occasionally is an interesting result, on the one hand because the Russian organic market has been increasing by 5-10% annually (Zhykova 2015) and on the other hand because most of the respondents are customers of EcoGarmonia, which sells organic products. There could be several explanations as to why the respondents do not buy organic food products on a more regular basis. According to Nachaenko (2011) organic products in Russia cost 2-3 times more than non-organic products. Furthermore, according to the article, organic food products can only be bought from specialty stores or ordered online; their availability in regular supermarkets is scarce. The results show that external factors such as availability can be barriers for sustainable consumption, as proposed by Kostadinova (2016, 228) (see chapter 3.8).

The question about the consumption of imported food (table 5) revealed that 45 % of the respondents buy imported food products occasionally, while 35% buy them regularly. This type of behavior can be considered unsustainable because consuming imported food products is considered unsustainable due to the high amounts of emissions their transportation produces (Geiger et al. 2018, 27).

TABLE 5. Result of question 20

		Never	Rarely	Occasionally	Regularly	Always
Q 20: I buy imported food	N	0	16	61	47	12
	%	0%	11,76%	44,85%	34,56%	8,82%

While there might be a great variety of reasons why a significant amount of the respondents buys imported food products, one factor which was pointed out by several respondents in an open-ended question is the lack of locally produced food in some of rural areas of Russia. As it can be seen, external factors (in this case availability) can significantly influence sustainable consumption, as proposed by Kostadinova (2016, 228).

Usage

When it comes to the usage consumption phase, two questions were asked in relation to environmental sustainability. The first question concerned food preparation techniques, while the second one measured the frequency of buying ready-made meal products.

In the question concerning food preparation (table 6), a considerable number of respondents (33%) indicated that they take into account the energy saving factor regularly or always, while 31% do so occasionally. However, overall 29% of the respondents never or rarely take into consideration the energy saving factor when preparing food. According to Hager and Morawicki (2013) cooking methods (e.g. using suitable pot lids) have a significant environmental impact (according to Geiger et al. 2018, 27). However, as the results distributed relatively evenly it is difficult to make definitive conclusions of what the results indicate.

TABLE 6. Result of question 31

		Never	Rarely	Occasionally	Regularly	Always
Q31: I cook in an energy saving way	N	16	23	42	45	10
	%	11,76%	16,91%	30,88%	33,09%	7,35%

To the question about the frequency of buying frozen meals (table 7), more than 45% of the respondents indicated that they buy them occasionally, while 39% buy them rarely. A relatively low percentage (16%) of the respondents indicated that they do so always or often.

TABLE 7. Result of question 21

		Never	Rarely	Occasionally	Regularly	Always
Q21: I buy frozen foods and meals	N	4	49	61	20	2
	%	2,94%	36,03%	44,85%	14,71%	1,47%

According to Schmidt Rivera, Espinoza Orias & Azapagic (2014, 294), the types of ready-made meal products that have the highest environmental impact are frozen ready-made meals which require heating in an electric oven. Therefore, a low number of respondents buying frozen ready-made meals on a regular basis indicates relatively positive environmental behavior.

Disposal

The following questions were used to map consumer behavior in the disposal stage of consumption in relation to environmental sustainability. There were four questions in total asked about environmentally sustainable consumption with regards to the disposal stage of consumption. Particularly the questions on refraining from buying food in excessive packaging, frequency of buying food in one-way packaging, recycling and preventing food waste by freezing unused food were included in the questionnaire. The results of the four items are presented in table 8.

TABLE 8. Results of questions 22, 23, 24, 25

		Never	Rarely	Occasionally	Regularly	Always
Q22: I recycle	N	5	5	18	34	74
	%	3,68%	3,68%	13,24%	25,00%	54,41%
Q23: I refrain from foods with excessive packaging	N	1	4	54	49	28
	%	0,74%	2,94%	39,71%	36,03%	20,59%
Q24: I freeze left-overs for the next meal	N	13	28	38	39	18
	%	9,56%	20,59%	27,94%	28,68%	13,24%
Q25: I buy food in one-way packaging	N	9	76	45	6	0
	%	6,62%	55,88%	33,09%	4,41%	0%

In response to the statement “I refrain from foods with excessive packaging.”, 40 % of the respondents indicated that they do so occasionally, while “regularly” and “always” gathered a cumulative percentage of 57%. Additionally, in response to the next question regarding the frequency of buying food products in one-way packages, over half of the respondents (56%) identified that they buy them rarely, while 33% stated that they buy them occasionally. Recycling appeared to be the most positive behavior of the respondents when it comes to sustainable consumption in the nutrition sector: 54% of the respondents indicated that they always recycle, while 25% and 13% indicated that they do so often or occasionally, respectively. In turn, never or rarely gathered a cumulative response amount of 7%.

Additionally, in the open-ended question the topic of recycling was raised most frequently by the respondents. In particular, a significant amount of the respondents noted that some of the waste is not accepted in their cities, and in some cities there are no recycling points at all:

1) I am from Saratov, Russia. We have next to no opportunities for recycling (some locations used to have containers for plastic bottles and paper, but they were relocated). One voluntary organization collects waste from time to time, but it’s

difficult to take all the waste there if you don't live close to the pick-up location and you don't have a car (Respondent 111). [1]

2) I wholly support recycling, but there are many obstacles. For example, there are only a few recycling points for glass, and I have accumulated a lot of it from buying baby food. I'm not equipped to store empty glass jars for months on end. If there was a recycling point nearby, there would be no problems at all. For example, I am able to recycle paper near my house, so that's what I do. Unfortunately, this is only possible when it comes to recycling paper (Respondent 122). [2]
3) We only sort paper, plastic and aluminum. I also bring light bulbs and batteries to the recycling points. There are no places to bring other kinds of waste for recycling (Respondent 40). [3]
4) I live in a small town in Siberia, so unfortunately organizing proper waste collection is difficult (Respondent 45). [4]
5) There are no containers for sorting waste within a walking distance (Respondent 60). [5]
6) There are almost no containers for sorting waste in the city (Respondent 65). [6]

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[1] "Я из Саратова, Россия. У нас почти нет возможностей для раздельного сбора мусора. В некоторых местах есть ящики для пластиковых бутылок, раньше были ящики для макулатуры, но они исчезли. Одна организация проводит акции время о времени, но на них сложно попасть, если ты живёшь не в центре и у тебя нет машины" (Respondent 111).

[2] "Я полностью за раздельный сбор отходов. Но есть много препятствий. Например, стекло сдавать некуда, а у меня его много накапливается от детского питания. Собирать месяцами, а потом искать,куда его деть я не готова. Если бы было место приема рядом, вообще без проблем. Например, макулатуру можно сдать рядом с домом, я собираю всю бумажную упаковку, картон и сдаю. Но к сожалению, такая ситуация только с макулатурой" (Respondent 122).

[3] "Мусор сортирую только макулатуру и пластик (только 5), алюминий. Сдаю лампы и батарейки. Остальное не принимают у нас (Respondent 40)".

[4] "Живу в маленьком городе в Сибири, так что к сожалению есть сложности с организацией раздельного сбора отходов" (Respondent 45).

[5] "Во дворе и в шаговой доступности отсутствуют контейнеры для раздельного сбора мусора" (Respondent 60).

[6] "В городе почти нет контейнеров для раздельного мусора" (Respondent 65).

Overall, the results for the above-mentioned items measuring environmentally sustainable consumption in the disposal stage indicated a highly favorable behavior on the part of the respondents. The results of the quantitative questions and the open-ended question revealed that topics such as recycling and zero waste lifestyle are priorities for the respondents when it comes to sustainable consumer behavior in the nutrition category. Even though the item "I freeze leftovers for the next meal" also belongs to the disposal-environmental category, compared to the three above-mentioned activities, the answers were less positive as they distributed relatively evenly among the opinions. The analysis revealed that 28% of the respondents act in this manner occasionally, 29 % often, 21% rarely, 10% never and 13% always. Although the results did not receive the same level of attention as the three questions mentioned previously, the results were still relatively positive.

4.3.2 Socio-economic sustainability

In the following, the results of the items representing consumer behavior regarding socio-economic sustainability are presented. First, the items representing consumer behavior in the acquisition stage of consumption are investigated followed by usage and disposal.

Acquisition

Concerning consumer acquisition behavior in the socio-economic dimension, three questions were asked. To the question about the frequency of buying locally produced food (table 9), a significant amount of the respondents (63%) indicated that they do so regularly, while only 7% do so rarely or never. In contrast to imported food, choosing locally produced food can be seen as a part of the solution to carbon mitigation because unlike imported food, local food is not transported over long distances. Comparing the results from this and the previous question about the acquisition of imported food, although the respondents still buy imported food relatively frequently, buying locally produced food is still more common. In the question "I grow or produce food by myself", the option "occasionally" accumulated the most answers (43%), while 38% of the respondents produce food themselves never or rarely.

TABLE 9. Results of questions 27 and 28

		Never	Rarely	Occasionally	Regularly	Always
Q27: I buy local food products	N	4	5	38	85	4
	%	2,94%	3,68%	27,94%	62,50%	2,94%
Q28: I produce/grow food myself	N	25	26	59	21	5
	%	18,38%	19,12%	43,38%	15,44%	3,68%

Analysis of the answers on purchasing fair trade products (table 10) showed negative results, with a low amount of the respondents doing so regularly or always (7%). The results revealed that over 50% of the respondents do so never or rarely and 39% occasionally.

TABLE 10. Results of question 26

		Never	Rarely	Occasionally	Regularly	Always
Q26: I buy fair trade food products	N	38	36	53	8	1
	%	27,94%	26,47%	38,97%	5,88%	0,74%

As it has been mentioned previously in the theoretical part, a variety of both internal (e.g. attitudes toward fair trade products, knowledge) and external factors (e.g. availability) can influence a consumer's buying behavior (Kostadinova 2016, 228). However, one reason which was pointed out by several respondents is the lack of Fair Trade products in the Russian market. Some answers from the open-ended question related to the availability of fair trade products are presented below.

1) There are no products with a "Fair Trade" logo in my city (Respondent 40). [7]
2) I have never seen goods with the fair trade logo in Moscow (Respondent 60). [8]
3) I have not been able to find fair trade products (Respondent 65). [9]
4) Talking about Fair Trade, in Russia this logo is very rare (Respondent 70). [10]

[7] "Продуктов питания с пометкой "честная продажа" в моем городе нет" (Respondent 40).

[8]" В Москве ни разу не видела товары с логотипом Справедливая торговля" (Respondent 60).

[9] Ни разу не находила продукцию fair trade" (Respondent 65).

[10] На счёт fair trade, в российских реалиях этот логотип редко вообще попадается на глаза" (Respondent 70).

5) I would really like to buy fair trade products, but unfortunately in Russia there are no such products, which is very disappointing (Respondent 72). [11]

Usage

Two items attempted to measure sustainable food consumption in relation to socio-economic sustainability in the usage phase. The first question measured how often the respondents cook meals by using fresh ingredients, while the second one measured the frequency of healthy eating. The results of both questions are presented in the table 11.

The results to the question "I cook my own meals with fresh ingredients" were among the most positive. All given answers were occasionally (18%), regularly (57%) or always (25%); none of the respondents chose never or rarely for this question. In addition, regarding question about healthy eating, 39 % and 49% of the respondents indicated that they eat healthy food occasionally and regularly, respectively, while "never" received no answers and "rarely" was chosen by 3,68% of the respondents. As EcoGarmonia identifies itself as a store that sells healthy products, the results were not surprising, because most of the respondents were the company's current customers.

TABLE 11. Results of questions 30 and 32

		Never	Rarely	Occasionally	Regularly	Always
Q30: I eat healthy	N	0	5	53	66	12
	%	0%	3,68%	38,97%	48,53%	8,82%
Q32: I cook my own meals with fresh ingredient	N	0	0	25	77	34
	%	0%	0%	18,38%	56,62%	25,00%

Overall, the two items measuring food consumption in relation to socio-economic sustainability on the usage stage showed highly positive results, indicating that the respondents take into account the socio-economic factors in the usage stage of their consumption.

[11] Я хотела бы покупать продукты Fair Trade, но, к сожалению, в России этого нет, это очень расстраивает" (Respondent 72).

Disposal

Only one item was presented in the socio-economic-disposal category, due to the category's low impact on sustainable consumption in the nutrition category. The item attempted to measure how frequently the respondents buy food with long expiration dates. The results of the question are presented in table 12. The answers to the item were distributed somewhat evenly: 29 % of the respondents indicated that they do so occasionally, 24% often, 20% always, 13% regularly and 15% never.

TABLE 12. Results of question 29

Q 29: I choose food with the longest expiration dates	N	27	32	39	18	20
	%	19,85%	23,53%	28,68%	13,24%	14,71%

4.3.3 Conclusion of the behavioral part

It can be clearly seen that the majority of the respondents are aware of the social, economic and environmental impacts of their consumption as well as adopt sustainable behavior in the nutrition industry to some extent. However, "occasionally" was the most frequent answer to most of the items.

Overall, comparisons across the different stages of consumption and sustainability dimensions have not been conducted, as the items were not distributed evenly among the scale's categories (e.g. only one item in the socio-economic-disposal category). However, it is important to notice that the three items which belong to the disposal-environmental category revealed the most positive behaviors compared to the other items. Therefore, it can be concluded that the activities associated with the disposal stage and environmental sustainability are a concern for most of the respondents. The open-ended question confirmed this result, as the topic of recycling was raised by many of the respondents there.

The results revealed that in addition to recycling, some of the most frequently performed activities included buying locally produced food, healthy eating, cooking by using fresh ingredients, refraining from food in excessive packaging and avoiding food in one-way

package. On the other hand, activities such as growing or producing food and buying fair trade products were the behaviors that were not performed frequently.

5 CONCLUSION

Sustainable consumption is an essential component of achieving sustainable development. This study focused on measuring attitudes toward sustainable consumption and actual behavior in the nutrition sector of the current and potential consumers of EcoGarmonia. The purpose of the study was to analyze the buying behavior and attitudes of EcoGarmonia's customers in order to provide a reasonable understanding of the trends in sustainable consumption. A holistic approach toward the attitude and behavior analysis was taken meaning that both were measured by taking into consideration the three sustainability dimensions (social, economic and environmental). Overall, the research findings provided interesting insights into the consumer behavior of people who already adopt sustainable practices to some extent.

Research findings

This research was the first step in understanding the attitudes and behaviors of the current and potential customers of EcoGarmonia toward sustainable consumption. Generally, it can be seen that EcoGarmonia's customers and potential customers have positive attitudes toward sustainability. Particularly, this research revealed that the respondents have positive feelings toward environmental sustainability and they are aware of and willing to be engaged in environmentally sustainable activities. It can especially be seen that the respondents' feelings (affective component) were predominantly positive when it comes to environmental sustainability. In contrast, the results revealed that the respondents' feelings, knowledge and behavior are less evident when it comes to socio-economic sustainability. The respondents were mostly uncertain about the items measuring attitudes toward socio-economic sustainability.

Another objective of this thesis was to measure sustainable consumer behavior of the current and potential customers of EcoGarmonia in the nutrition sector. Concerning the behavior in general, the respondents showed predominantly positive behavior. However, it can be clearly seen that most of the sustainable activities were performed "occasionally". Although this research did not seek to compare the different phases of consumption or behavior in different sustainability dimensions, environmentally sustainable behavior

in the disposal stage of consumption showed highly positive results. Especially, the topic of recycling received the most attention from the respondents.

To sum up, the growing interest toward sustainable consumption from the consumer side is evident. However, lack of perceived consumer effectiveness might be one of the reasons why consumer attitudes and behavior are not yet completely positive. Additionally, it is essential to keep in mind that achieving sustainable consumption is a collective effort: consumers will do things they have control over and will refrain from doing things they do not. Support from governments, businesses and NGOs is required.

Future Research and Recommendations

The purpose of this study was not to compare, but rather to reveal the big picture of consumer behavior and attitudes. A more detailed analysis of the quantitative data collected could be conducted in order to compare variables and find the relationships between them. Additionally, as the research identified that the respondents have predominantly positive attitudes toward sustainable consumption as a concept, future research could include analyzing consumer behavior and attitudes in relation to more specific objects such as sustainable food/cosmetics or fair trade products. In the longer run, EcoGarmonia could look into fair trade product opportunities because although it seems like consumer demand for them is increasing, supply is falling behind.

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APPENDICES

Appendix 1. Original questionnaire.

1(3)

ЧАСТЬ А: Отношение покупателей к устойчивому потреблению

Q1: Какие проблемы являются наиболее актуальными лично для Вас?

Пожалуйста, разместите проблемы в порядке приоритетности. 1 – самая значимая, 6 – наименее значимая

1. Экономические проблемы
2. Политические проблемы
3. Экологические проблемы
4. Социальные проблемы
5. Проблемы здравоохранения
6. Проблемы безопасности

Часть А1: Отношение к экологическим проблемам

Выразите степень своего согласия по пятибалльной шкале (1-полностью не согласен, 2-не согласен,3 – где-то посередине, 4 – согласен, 5 – полностью согласен).

Q2: Мне нравится концепция рационального потребления, поскольку она помогает снизить воздействие на окружающую среду.

Q3: Я лично могу внести вклад в решение экологических проблем.

Q4: Меня не беспокоит влияние моей деятельности на окружающую среду.

Q5: Я восхищаюсь людьми, которые вносят свой вклад в решение экологических проблем.

Q6: Преимущества современных товаров важнее, чем загрязнение окружающей среды, возникающее в результате производства и использования этих товаров.

Q7: Защита окружающей среды и качество жизни людей напрямую связаны.

Q8: Я бы согласился на снижение уровня своей жизни, если бы это помогло защитить окружающую среду.

Q9: Я хотел бы заниматься раздельным сбором отходов.

Часть А2: Отношение к социально-экономическим проблемам

2(3)

Выразите степень своего согласия по пятибалльной шкале (1-полностью не согласен, 2-не согласен,3 – где-то посередине, 4 – согласен, 5 – полностью согласен).

Q10: Люди из развитых стран должны уделять больше внимания социальным проблемам в развивающихся странах.

Q11: Я лично могу внести вклад в решение социальных проблем.

Q12: Я лично могу внести вклад в решение экономических проблем.

Q13: Мне нравится покупать товары компаний, придерживающихся этических принципов. Таким образом, я могу внести свой вклад в решение социальных проблем. (Например, покупка товаров с логотипом “Fair Trade”).

Q14: Я больше беспокоюсь о своих финансовых проблемах, чем о ликвидации нищеты в развивающихся странах «третьего мира».

Q15: Я не куплю товар компании, если она не разделяет принципы социальной ответственности (использует детский труд/принужденный труд).

Q16: Я бы согласился на снижение уровня жизни, если бы это помогло решить социально-экономические проблемы.

Часть B: Вопросы о поведении (продукты питания)

Как часто Вы совершаете следующие действия (1 – никогда, 2 – раз в месяц, 3 – раз в неделю, 4 – 2-3 раза в неделю, 5 – ежедневно).

Q17: Я ем мясо.

Q18: Я ем/пью молочную продукцию

Как часто Вы совершаете следующие действия (1 – никогда, 2 – редко, 3 – время от времени, 4 – часто, 5 – всегда).

Q19: Я покупаю продукты питания с логотипом “Organic”.

Q20: Я покупаю импортированные продукты питания (бананы, манго).

Q21: Я покупаю замороженные продукты питания.

Q22: Я занимаюсь раздельным сбором отходов.

Q23: Я покупаю продукты питания в минимальной упаковке.

Q24: Я замораживаю остатки еды/продуктов, чтобы использовать их позже.

Q25: Я покупаю еду в одноразовой упаковке (фастфуд, доставка еды).

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Q26: Я покупаю продукты питания с логотипом “Fair Trade” (Справедливая торговля).

Q27: Я покупаю продукты, произведенные в моем регионе.

Q28: Я выращиваю овощи/фрукты или изготавливаю продукты питания самостоятельно.

Q29: В магазине я смотрю на срок годности и выбираю продукты с наибольшим.

Q30: Я правильно питаюсь.

Q31: Я готовлю с учетом экономии электроэнергии.

Q32: Я готовлю самостоятельно, используя свежие ингредиенты

Часть С: Демографические характеристики

Q 32: Пожалуйста, укажите Ваш возраст (кол-во полных лет).

Q 33: Пожалуйста, укажите Ваш пол.

1. Женский
2. Мужской

Q 34: Под какую категорию попадает Ваш доход? (рублей в месяц)

1. Меньше 14999
2. 15 000-24 999
3. 25 000-34 999
4. 35 000-44 999
5. 45 000-54 999
6. 55 000 - 64 999
7. 65 000 - 74 999
8. 75 000 - 84 999
9. 85 000 - 94 999
10. 95 000 - 104 999
11. Больше 105 000

Q35: Тут Вы можете поделиться любой дополнительной информацией, которая может оказаться полезной для нашего исследования. Также, если Вы не против, чтобы автор дипломной работы связался с вами для получения дополнительной информации, то можете оставить свою контактную информацию.

Appendix 2. Survey translation

Section A: General Attitude Questions

Q1: In your view, what are the most serious issues facing the world today?

Please rank the following issues in order of their importance. 1 stands for the most important and 6 for the least important.

1. Economic issues
1. Political issues
2. Environmental issues
3. Social issues
4. Health issues
5. Safety issues

Section A1: Environmental Attitude Questions

Please indicate a level of agreement or disagreement with the following statements.
1 – strongly disagree, 2 – disagree, 3 – neither agree nor disagree, 4 – agree, 5 – strongly agree

Q2: I like the idea behind concept of sustainable consumption as it helps to reduce the environmental impact.

Q3: I can personally contribute to the solution of the environmental problems.

Q4: I'm not worried about my personal impact of my activity on the environment.

Q5: I admire people who contribute to the solution of the environmental problems.

Q6: The benefits of modern consumer products are more important than the pollution that results from their production and use.

Q7: Environmental protection and people's quality of life are directly linked.

Q8: I would be willing to accept cuts in my standards of living, if it helped to protect the environment.

Q9: I would be willing to recycle.

Section A2: Social-Economic Attitude Questions

2(3)

Please indicate a level of agreement or disagreement with the following statements. 1 – strongly disagree, 2 – disagree, 3 – neither agree nor disagree, 4 – agree, 5 – strongly agree

Q 10: People from developed countries have to pay more attention to the social problems in the developing countries.

Q 11: I can personally contribute to the solution of the social problems.

Q 12: I can personally contribute to the solution of the economic problems.

Q13: I like the idea that by buying products from ethical companies I can contribute to the solution of some social problems. (for example, by buying Fair Trade products)

Q 14: I am more concerned with my own financial problems than with the elimination of poverty in the under-developed countries of the so-called Third World.

Q 15: I will not buy a product if I know that the company that sells it is socially irresponsible. (using child labor, forced labor, poor working conditions)

Q 16: I would be willingly to accept cuts in my standards of living if it helped to solve socio-economic issues.

Section B: Food consumption Behavioral Questions

Please, indicate how often you perform the following behaviors (1 – never, 2 – once per month, 3 – once per week, 4 – 2-3 times per week, 5 – daily).

Q 17: I eat meet for the main meals

Q 18: I eat dairy products

Please, indicate how often you perform the following behaviors (1 – never, 2 – rarely, 3 – occasionally, 4 – regularly, 5 – always)

Q 19: I buy certified organic food.

Q 20: I buy imported food (bananas, mango).

Q 21: I buy frozen foods and meals.

Q 22: I recycle.

Q 23: I refrain from foods with excessive packaging.

Q 24: I freeze left-overs for the next meal.

Q 25: I buy food in one-way packaging (fast food, delivery).

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Q 26: I buy fair trade food products.

Q 27: I buy local food products.

Q 28: I produce/growth food myself.

Q 29: I choose food with the longest expiration dates

Q 30: I eat healthy.

Q 31: I cook in an energy saving way.

Q 32: I cook my own meals with fresh ingredient.

Section C: Demographic Questions

Q33: What is your age? (in years)

Q34: Please indicate your gender

1. Female
2. Male

Q35: Which category better describes your income? (per month in rubles)

1. Less than 14999
2. 15 000-24 999
3. 25 000-34 999
4. 35 000-44 999
5. 45 000-54 999
6. 55 000 - 64 999
7. 65 000 - 74 999
8. 75 000 - 84 999
9. 85 000 - 94 999
10. 95 000 - 104 999
11. More than 105 000

Q 36: If you have comments/suggestions which might be relevant to the research, please indicate them here. Also, if you do not mind that the thesis author contacts you for additional information, please leave your contact information below.

Appendix 3. Attitude items.

Sustainability dimensions	**Attitude components**		
	Affective	*Cognitive*	*Behavioral*
Environmental	**Q2:** I like the idea behind concept of sustainable consumption as it helps to reduce the environmental impact. **Q4:** I'm not worried about my personal impact of my activity on the environment. **Q5:** I admire people who contribute to the solution of the environmental problems.	**Q3:** I can personally contribute to the solution of the environmental problems. **Q6:** The benefits of modern consumer products are more important than the pollution that results from their production and use. **Q7:** Environmental protection and people's quality of life are directly linked.	**Q8:** I would be willing to accept cuts in my standards of living, if it helped to protect the environment. **Q9:** I would be willing to recycle.
Socio-economic	**Q13:** I like the idea that by buying products from ethical companies I can contribute to the solution of some social problems. (for example, by buying Fair Trade products) **Q 14:** I am more concerned with my own financial problems than with the elimination of poverty in the under-developed countries of the so-called Third World.	**Q 10:** People from developed countries have to pay more attention to the social problems in the developing countries. **Q 11:** I can personally contribute to the solution of the social problems. **Q 12:** I can personally contribute to the solution of the economic problems.	**Q 15:** I will not buy a product if I know that the company that sells it is socially irresponsible. (using child labor, forced labor, poor working conditions) **Q 16:** I would be willingly to accept cuts in my standards of living if it helped to solve socio-economic issues.

Appendix 4. Behavioral items.

Sustainability dimension	**Consumption phase**		
	Acquisition	*Usage*	*Disposal*
Ecological	**Q 17:** I eat meat. **Q18:** I eat dairy products. **Q 19:** I buy certified organic food. **Q 20:** I buy imported food.	**Q21:** I buy frozen foods and meals. **Q31:** I cook in an energy saving way.	**Q22:** I recycle. **Q23:** I refrain from foods with excessive packaging. **Q24:** I freeze leftovers for the next meal. **Q 25:** I buy food in one-way packaging (fast food, delivery).
Socio-economic	**Q26:** I buy fair trade food products. **Q27:** I buy local food products. **Q28:** I produce/ grown food myself	**Q30:** I eat healthy. **Q32:** I cook my own meals with fresh ingredient.	**Q29:** I choose food. with the longest expiration dates.