

Factors that influence the consumers' choice towards the eco-friendly grocery bags

Abstract

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Abstract <p>The main cause of the most of environmental problems is plastic. Consequently, the problem of pollution requires urgent solutions both from government and citizens. People can affect the environmental issues by changing their purchasing decisions. Therefore, the study of consumer behaviour might help to find both government and companies tools of encouraging people being socially responsible and environmentally friendly. The main purpose of the study is to identify factors, which impact the students' buying behaviour towards the eco-friendly grocery bags in Lappeenranta, Finland. The study investigates general consumers' ecological awareness and their perception of eco-friendly grocery bags.</p> <p>The study implies qualitative method. The research was conducted by deductive approach what enables to identify the relationships between the gathered data. Structured interview in questionnaire form was chosen as a data collection tool in order to increase the target group. The data gathered from 27 students were categorized and coded in order to be able to recognize relationships and findings.</p> <p>The findings indicated that social and structural factors as well as marketing and consumer factors have a direct influence on consumer behaviour and their purchase decisions. The study results also showed that general importance of grocery bag purchase has a low level even if the consumer regularly uses eco-friendly grocery bags and have high ecological awareness. However, the topic of consumer behaviour towards eco-friendly products still requires further study in order to get broader understanding of consumer decisions.</p>		
Keywords sustainability marketing, consumer buying behaviour, eco-friendly products, grocery bags		

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1 Introduction

1.1 Background

The topic of ecology is especially important nowadays. Only in the twenty first century people started to notice the destructive impact of human activity on nature. According to Iberdrola, there are several big environmental issues highlighted by UN that must be resolved this decade. The list consists of the following problems: climate change mitigation and adaptation, pollution problems and their effect on health, the oceans protection, the energy transition and renewables, a sustainable food model, protection biodiversity, sustainable urban development and mobility, hydric stress and water scarcity, extreme meteorological phenomena, overpopulation and waste management. It can be easily noticed that the main focus on the environmental sustainability. (Iberdrola 2020.)

The main cause of the most of environmental problems is plastic. Plastics industry is considered as a third largest manufacturing industry in the USA. When this material first became available for people, it was the most convenient material to use in all spheres. Typical plastic products are films, fuel tanks, bottles and containers, window frames, pipes, telephone handsets, cables, food and beverage packaging, toys, cones, vending beverage cups, different tubes, food trays. Everything that is done for disposable use consists of plastic material. Nowadays only 40% of all plastic produced is packaging materials that is used ones and then thrown away (Treat 2018). Advantages of the plastic packaging are notable. Firstly, this material is a lightweight and low cost. These factors enable to produce plastic in large amounts and at affordable cost for every user. Secondly, the use of plastic packaging protects against microbial contamination, therefore, when the coronavirus pandemic started the fruit and vegetable packaging became a solution for reducing the spread of the virus. Thirdly, plastic packaging of purchases completed in stores is a convenient way of carrying different types of products. (Buckley 2012, 126-129.)

Plastic waste is now ubiquitous in the natural environment; nature is found littered in even extremely remote areas of the Earth. According to the researchers, since the early 1950s more than 8.3 billion tonnes of plastic has been produced. Over 300 million tonnes of plastic waste is produced annually. Less than 40% of this amount has been recycled or disposed. It means that approximately 160 million tonnes of plastic have ended up in either a landfill or the natural environment every year. The most common items found in the environment are drink bottles, bottle caps, food wrappers and grocery bags. The dangerous impact of plastic waste is concentrated in the theory of toxic chemicals that are formed during the slow process of the plastic distortion. These toxic chemicals seep into groundwater, flowing

downstream into lakes and rivers and polluting the water. Plastic waste that end up in the oceans and rivers can exist in the environment for centuries. Wildlife became entangled in plastic; they eat it or mistake it for food and feed it to their young. (UN Environment 2020.)

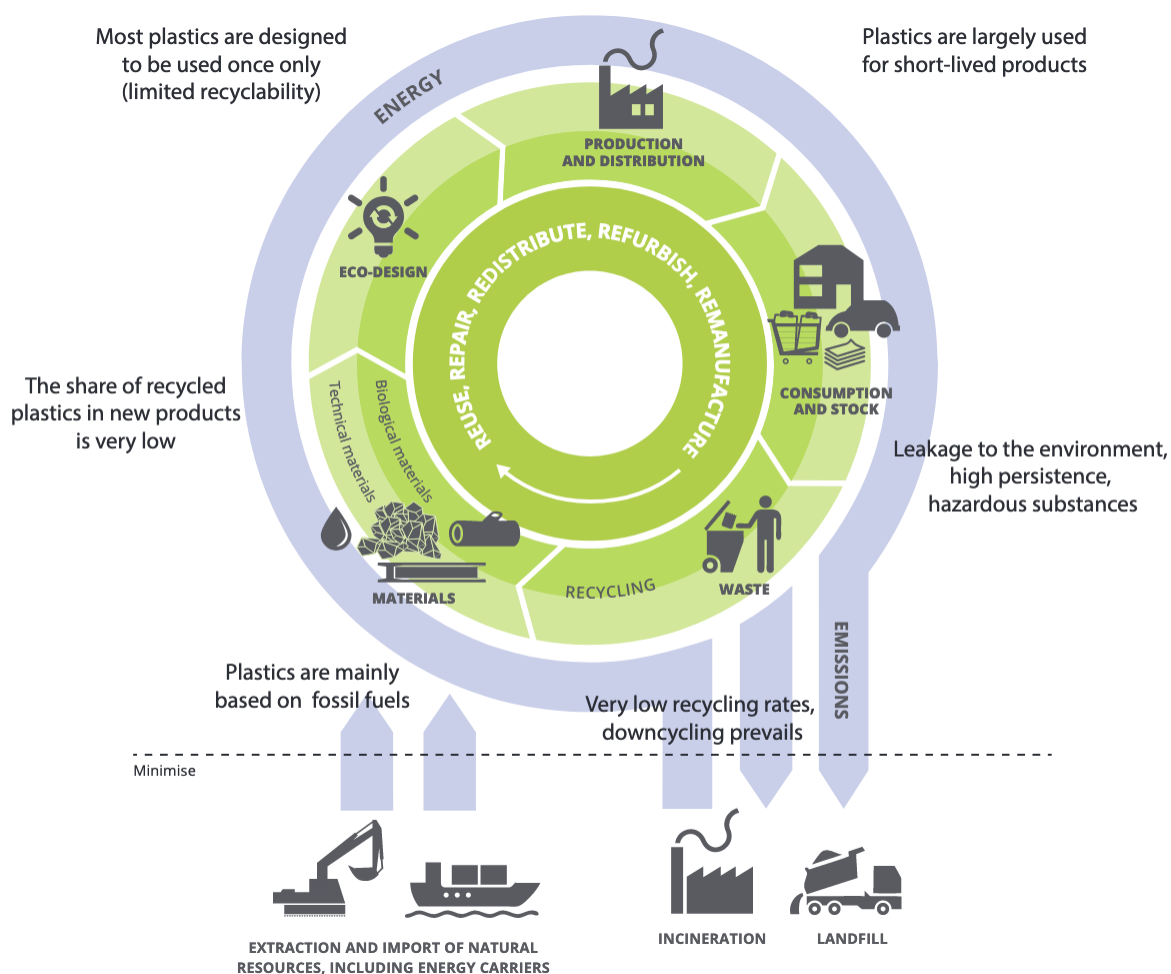


Figure 1 Environmental issues arising along the plastics value chain (EEA 2019)

European Environment Agency (EEA) presented annual review of waste prevention programmes in Europe for 2018 year. Figure 1 shows a schematic representation of plastic products' life cycle stages from a circular economy point of view. The main challenges are low recycling rates, significant quantities of plastic packages, big amount of single-use plastic products which potential to be reused is ignored (plastic carrier bags are also included in the list). The main aim of this figure is to show that current plastics value chains have some inherent characteristics that are not compatible with the main objectives of the EU waste prevention and circular economy initiatives (EEA 2019.)

However, during the last decade governments understood the severity of the ecological situation. For example, at the beginning of 2020 Ministry of Environment and Food of Den-

mark announced the plan of prohibition of thin plastic shopping bags. (Ministry of Environment and Food of Denmark 2020.) Statistics of 2018 shows that the buyers in Denmark use an average of four plastic bags a year. At the same time American buyers use almost one plastic bag per day. (Treat 2018.) It is an example of the successful work of Danish government. Such results might be achieved by educating citizens about ecological concerns. Ecological awareness plays a significant role in the reduction of plastic use. People with high ecological awareness are informed and know about the impact of human actions on the environment and ecosystems of the planet. They understand phenomena that anticipate changes in the environment and act to protect it. (L'effet Libellule 2020.) Developed countries inform citizens from their childhood about the importance of the actions towards the nature saving. According to the survey coordinated by the European Commission in 2017, main sources of information about the environment are television news, total social networks and the Internet, films and documentaries on television, total newspapers and the radio. Television news continues to be the main source of information about the environment in all European countries. The survey consists of the question about the importance of protecting the environment. Results show that 94% of respondents say that the protection of the environment is important for them personally. When respondents were asked about their personal use of single use plastic carrier bags, 72% of Finnish respondents answered that they have cut down the use of these bags. These are positive results that show the knowledge of Finnish citizens about the issue of growing plastic waste and the necessity to avoid the use of plastic bags (European Commission 2017). According to the European Environment Agency Report 2019, Finland created a policy instrument and reduced the use of plastic bags – “Plastic Carrier Bag Agreement”. (EEA 2019.) The main objective stated is the reduction of the plastic bag consumption to no more than 40 bags per person a year by 2025. Main measure is explained as following:

Companies in the trade sector are free to decide on the measures and how these are to be implemented. The issues to be included in the measures are, at least, the following: advice and information is provided to reduce the consumption of lightweight plastic carrier bags and prevent littering; there is a price for lightweight plastic carrier bags; and very thin plastic carrier bags are no longer available at retail outlets on a self-service basis. (EEA 2019. Preventing the plastic waste in Europe. Annex 4. Table A4.1.)

The level of ecological awareness in Finland is supported by several institutions. First of them is Finnish environmental administration. On their website, www.environment.fi, everyone can find information about environmental issues and risks, water protection and waste management, resource efficiency and impact of climate change. There is a wide range of

topics related to the environment and its protection. Second institution is Finnish Ministry of the Environment. On the website of the Ministry, <https://ym.fi/en/front-page>, such activities as environmental strategies and goals, projects, initiatives and actions are presented to proliferate ecological knowledge among common people.

As it was previously discussed, a study carried by European Commission in 2017 showed good results. However, there are still a big percentage of people who behave irresponsibly towards the environment which requires continuing work on educating people about the importance of nature conservation. It is still essential to keep in mind that consumption habits might be changed by increasing the public ecological awareness. Educational information should be easily accessible to all members of society. (European Commission 2017). If the general public do not understand the significance of environmental protection and act towards nature without thinking of the consequences, all attempts to improve environmental planning and management will not give forward-looking results. Society has to be sure that all promoted actions to protect the environment are done in order to maintain human well-being (Buckley 2012, 29).

The use of ecologically friendly bags is a crucial step in the direction of sustainable future. In countries with high ecological awareness citizens would rather choose eco bags in shops than plastic bags. Eco bags provide clean and eco-friendly alternatives to the plastic ones and are not inferior in quality characteristics. Eco bag might be made of cotton, paper, bi-polymer, woven PP fibres and jute. Likewise, there are reusable shopping bags made of canvas, natural fibres and durable thick plastic. (Toufique & Shahidul 2014.)

People can affect the environmental issues by changing their purchasing decisions. The opportunity to change present environmental situation is created by the rising number of consumers who prefer and are willing to pay for eco-friendly products. Increasing environmental awareness straightly influence consumer's buying behaviour, consequently the market of sustainable product expands every year. Increasing focus on environmental issues indicates that businesses now have potential strategic concerns emerged from pro-environmental concerns. The consumer buying behaviour varies in accordance with the level of consumers acknowledge that sustainable products are the way of solving environmental problems in the present world (Datta, 2011). It is also vital to remember that the consumer buying behaviour towards sustainable products is a difficult process of the habit formation. However, studies showed that 33% of consumers of sustainable products stated the dependence of their purchase choice on economic situation and in the case of tough times they would stop acting responsibly, favouring cheap alternatives. (Ottman 2011.) The consumer's buying behaviour towards sustainable products, especially grocery bags are not

fully understood. Therefore, it is crucial to study consumer's buying behaviour in order to identify factors of influence that should be used by companies to attract and encourage to buy eco alternative to a grocery plastic bag. Companies need to understand the structure and the way of creating consumers buying decisions in order to correctly modify advertising techniques.

1.2 Objectives and delimitations

By acknowledging the importance of sustainable products, it is vital to further identify the factors of influence on consumer buying behaviour. The main purpose of the study is to identify factors, which impact the students' buying behaviour towards the eco-friendly grocery bags in Lappeenranta, Finland. Attention will be paid to the consumer's attitude towards the plastic bag purchase. For better understanding the thesis topic, the overall attitude and perception of plastic bag usage is taken into account.

Additional purpose of the research is an educational effect on people after investigating the reasons and the results of the study. There is a necessity to attract more attention to environmental issues related to the plastic consumption and especially consumption of plastic grocery bags.

This thesis has following delimitations. Firstly, this research requires to use a theory that will be the base for the research process. It is essential to limit theoretical concepts that can be explained and achieved. The primary theoretical concept is buying behaviour which is considered as a key element of sustainability marketing. The analysis of this topic requires limitation of consumer buying factors. These factors are divided into four categories: cultural, social, personal, and psychological. Cultural factors have been left out because the research is conducted within one city and cultural differences are unlikely. The research topic and the research questions are closely connected with the topic of sustainability marketing. This concept gives the overall understanding of the purpose to analyse a consumer buying behaviour. The minor topic to investigate is related to the grocery bags and their types and main differences. Impact of plastic bags is going to be slightly attributed to emphasize the belongingness of eco-friendly bags to safe and sustainable products. The literature on observed topics is not going to be under time-bounds because active studies and analysis of buying behaviour have not yielded unambiguous results just yet.

Secondly, this thesis uses the term eco-friendly which implies to the product feature that indicates harmless impact on the nature. The product can be named as eco-friendly when it has a small, less damaging or positive effect on the environment or its ecosystems. Eco-

friendly products are usually made of recycled materials, materials that can be easily recycled or natural materials like cotton. The main characteristic of these materials is the avoidance of toxic chemicals that harm environment. (Mertes 2020.) This thesis understands eco-friendliness as a positive characteristic of products and materials that can be used in production and manufacturing of grocery bags.

Thirdly, the present thesis uses the results and information of the previous theses written on the related topics. A study conducted by Nguyen Hoai Anh, a student of Vaasa University of Applied Sciences, on the topic “Consumer’s Buying Behaviour Towards Green Packaging in Finland” (2017) gives an example of sustainable consumer behaviour. The thesis fully explains the theory of Maslow’s hierarchy of need from the point of social responsibility and green needs which are seen as crucial factors in the consumer behaviour analysis. Another thesis on the topic “Plastic bag bans: the future of shopping bags” written by LUT School of Energy Systems student Elmarasi Mahmoud in 2017. The study thoroughly explains the main differences between the grocery bags types which is vital for current thesis in order to describe the importance of the topic. Thesis written by Samiya Nazida on the topic “Consumer Buying Behaviour and Green Marketing” (2012) describes the relationship between green marketing and consumer behaviour. The research presented in the thesis relates to the empirical study and shows the implementation of sustainability marketing as well as definition of such concepts as sustainable consumer behaviour, sustainable marketing strategy, sustainable marketing mix and benefits of sustainable marketing. All these concepts are essential for exploration the eco bags buying behaviour topic.

Finally, the present thesis study is going to analyse the buying behaviour from consumer’s point of view in Lappeenranta, Finland. The study involves one category of consumers - students. The analysis of students’ behaviour is considered as an important one because these are the people whose opinion towards the environmental concerns will affect new generation’s attitudes. The consumer category is not going to be limited by nationalities. Approximate age group of consumers is from 18 to 30. Consumers’ data will be collected with the use of structured interviews in a questionnaire-form during the work on thesis which provides qualitative data.

1.3 Research questions

This thesis is searching for factors of buying behaviour that can be used by to stimulate the eco-friendly grocery bags purchases. For recognition of the relationship between the grocery bag choice and factors of influence, the research questions are defined in order to receive relevant results.

The main research question is:

- Which factors have an impact on students' buying behaviour for eco-friendly grocery bags?

The sub question can be formulated as follows:

- What importance do students attach to grocery bag purchase?

The main research question requires the analysis of the behavioural features that mainly show the consumers' attitudes and enables to understand the decision-making process. A sub-question has to be answered to support the investigation of the main question. Students' attitude towards the overall process of grocery bag buying has to be estimated in order to evaluate the importance of the purchase. This research will come up with the ideas of triggering customers to purchase eco-friendly grocery bags. This will specifically be of help for companies that manufacture grocery bags and for governmental programs directed at solving environmental issues.

1.4 Theoretical framework

The research topic requires investigation of the sustainability marketing topic. The definition and the main concepts of sustainability are explained in the book "Sustainable Marketing: a global perspective" by Belz and Peattie (2009). This information is an introductory to the consumer behaviour concept. The book gives important justification of significance of such marketing direction by explaining the mergence process with other marketing concepts. Book gives required steps of analysis of buying behaviour that is considered as a main topic of the present research. Another book "Sustainable Marketing" written by Emery (2012) gives explanation and description to the marketing concepts that merged into sustainable marketing. This information essential for understanding the core values and principles of investigated topic.

Buying behaviour is the main topic in theory part, therefore, there are a number of research papers that are useful in explaining the topic in the present thesis research. The study investigates the consumer attitudes and perceptions towards eco products under the main influence factors. There are several research papers that give understanding of the consumer behaviour stages, factors of influence and also explains consumer behaviour from sustainability point of view. Kotler and Armstrong in the book "Principles of Marketing" (2017) give definition of consumer behaviour and explanation of the importance of this topic. Authors also recognise the factors affecting consumers' purchasing decision. Another book which is used in consumer behaviour theory analysis is "Sustainable marketing" written by

Martin and Schouten (2012). The full explanation of consumer consumption process is given. These stages are important to know due to the existing differences in consumer reactions on various consumption stages. The last significant literature source which explains the consumer behaviour from sustainability marketing point of view is the book written by Belz and Peattie (2009) "Sustainable Marketing: a global perspective". Authors present consumer behaviour as a key element in managerial approach of sustainability marketing.

Conscious consumption is a feature of a responsible person who cares about the nature and well-being of the future generations. Production and consumption of non-sustainable products created the negative impact what consequently has led to the realization of human responsibility towards the nature. For the theoretical analysis, it is important to reflect on some literature review concerning the differences in ecological impact between eco bags and plastic ones. In the article "Consumption Towards Environmentally Friendly Consumer Behaviour: The Case of Plastic Bags" written by Horská et al. (2015) gives the description of the bags impact with the paid attention on the existing usage behaviour to reuse and recycle. The article by UN Environment (2020) "Our planet is drowning in plastic pollution" highlights the destructive impact of plastic and consequently plastic bags. The data from such source is especially important because UN organization has a significant value.

1.5 Research method

The present thesis study relates to marketing research from consumer perspective which main function is to provide information to businesses to make improvements in decision-making processes. The choice of qualitative research method is proved by the presence of empirical study results in the theoretical background. This method is chosen to focus on discovering true inner meanings and new insights (Zikmund & Babin 2010, 5, 92). New trends and change of generations make new social relations that are required in the study. The research will focus on the analysis of social, personal and even psychological factors as the issue to be studied is concentrated in the area of consumer behaviour and can only be solved through qualitative research.

The empirical part of the research is implemented as a phenomenon study. The data collection is done through structured interviews. This method is conducted as it allows to increase the number of research consumers because this type of interviews does not require face-to-face meetings. The interview consists of open and some multiple-choice questions and relates to behavioural and situational questions. A distinctive feature of this type of interview is that it is conducted with exactly the same questions and the same order. (Bet-terteam 2020.) This approach allows to clearly understand the preferences in buying behaviour towards grocery bags.

The thesis will investigate students' buying behaviour in Lappeenranta. The consumption of grocery bags is where the main focus lies on. With the aim of obtaining as many results as possible, the research is not limited by nationality. Consequently, the questionnaire is conducted in English. More detailed explanation of the chosen target group, data collection and data analysis processes is placed in Chapter 5.

1.6 Structure of the thesis

The thesis consists of six main chapters.

The first chapter of the thesis gives background information about the topic of the study. Introductory information explains the significance of the issue by analysing the objectives and reasons to carry out the research. This chapter includes values of the research and briefly underlines the study tools.

The first three chapters following the introduction imply to the theory background. The second chapter basically threw light on crucial definitions of sustainability marketing, its components, values, and approaches for the research. It includes the exploration of main concepts and theories from study topic point of view. The third chapter leads to the main concept of the thesis research – buying behaviour. This chapter investigates the consumption process and factors of influence from sustainability point of view. Observation on the topic of grocery bags and their impact on the environment is written in the fourth chapter. Described information highlights the reasons and importance of the thesis study.

The fifth chapter is entirely dedicated to the empirical study. It explains the choice of research methods taken into consideration, target group selection process, vital details of data collection and analysis processes. The interview building part is also included into this chapter.

The sixth chapter describes main results and findings of the empirical study. Conclusion is the last chapter of the thesis and consists of general information about the conducted topic research, answers to the research questions, and recommendations.

2 Sustainability marketing

The following chapter will be focused on basic explanation of sustainability marketing concept and its main components as it is seen as a crucial topic for thesis study. The chapter analyses the basic principles of sustainability marketing, its functions, values and managerial approaches used to achieve a change of institutions in favour of sustainability.

Sustainability marketing emerged in 1970s when several marketing concepts that are connected to social and ecological issues started to be implemented into business strategies. They are societal marketing, social marketing, ecological marketing, green marketing, environmental marketing, and sustainable marketing. The main difference between these concepts is an approach chosen towards problem solving. (Belz & Peattie 2009, 26). Figure 4 shows which marketing concepts were merged into sustainable marketing. It is seen that evolution of sustainability marketing is concentrated in the blend of business directed main-streams as well as concepts of relationship marketing with its various perspectives of the sustainable development actions. (Belz & Peattie 2009, 18.)

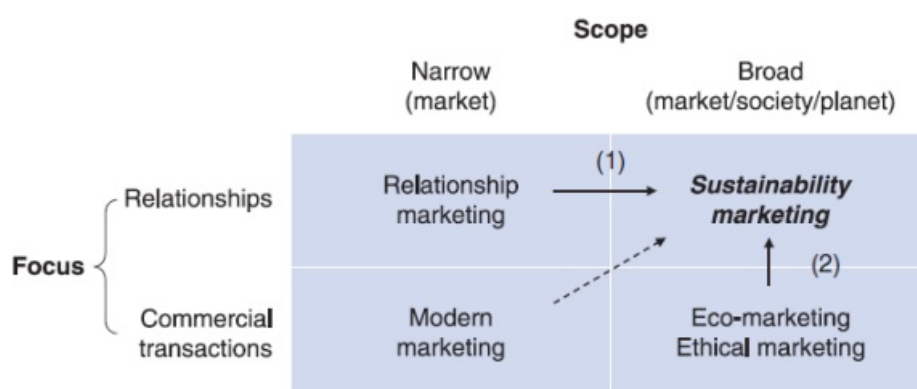


Figure 2 Towards sustainability marketing (Belz & Peattie 2009, 18)

The explanation of the marketing concepts blend is mainly focused on eco-marketing and ethical marketing which imply environmental/green marketing and social marketing. Concepts of relationship marketing and modern marketing are no longer a first priority since they are well-established.

Marketing concepts that deal with social issues can be divided into societal marketing and social marketing. Societal marketing approach is directed to achieve immediate consumer satisfaction and long-run consumer benefits. The strategy is built by considering three perspectives: organizational goals, consumer goals, and societal goals. Therefore, it can be stated that societal marketing acts towards long-term interest of society and companies' profitability. Since the fact that consumer wants are not always align to society goals, four

types of societal product can be differentiated. They are different in their level of long-run consumer benefits and immediate satisfaction. Desirable products are considered as an optimum because they give consumers both immediate satisfaction and serve long-term consumer and social interests. (Belz & Peattie 2009, 27.) Social marketing varies in its approach by using marketing tools to social change. It is not concentrated on someone's profit because its main task is to influence individuals' behaviour to be able to integrate social changes for society well-being. (Emery 2012.)

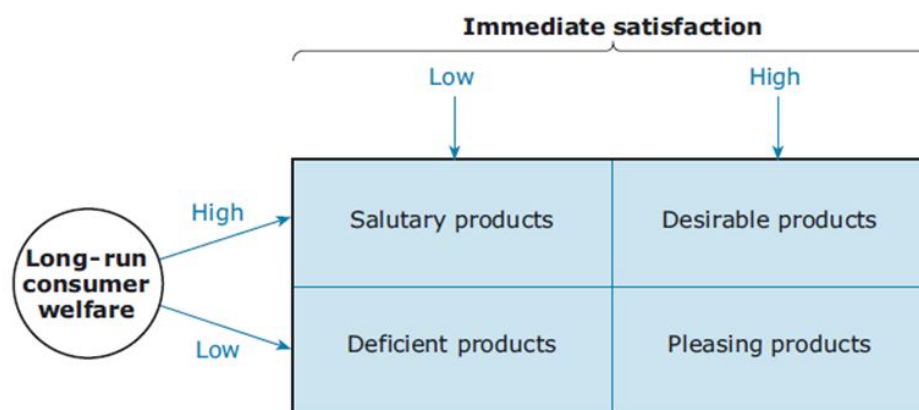


Figure 3 Societal classification of products (Belz & Peattie 2009, 27)

Ecological issues started to be taken into account only in 1970s. Consequently, since that time the differentiation of such marketing concepts as ecological, green and environmental has become a part of marketing agenda. Ecological marketing primarily deals with resolving environmental damage caused by companies' actions. (Emery 2012, 17.) Generally, there are industries which deplete energy and nonenergy natural resources and whose production and consumption cause pollution. Ecological marketing activities are directed to provide remedies for environmental problems. Green marketing and environmental marketing work from another side. They were developed to force companies to look at marketing mix from ecological point of view. (Reutlinger 2012.) As a result, the direction of eco-friendly products occurred. Green or environmental marketing focuses on achieving target group of 'green' consumers who are ready to pay higher prices for environmentally friendly products. Green marketing also considers environmental issues from the side of depopulation of species, destruction of ecosystem and its habitats, and poverty in countries. (Belz & Peattie 2009, 28-30.)

Sustainability marketing is a marketing oriented to deliver solutions to our needs considering ecological limits of the planet. Satisfaction of the needs without destroying the health of ecosystems is the core feature of sustainability marketing. Viability of products from tech-

nical feasibility and economic competitiveness perspectives is one of crucial needs sustainability marketing faces. In addition to this, sustainable marketing pays particular attention to social justice and equity by avoiding worsening the situation with injustice in existing patterns, in accordance with ethical needs. Sustainability marketing is different to conventional marketing by its relationship-based management that moves away from considering marketing only as economic exchange. (Belz & Peattie 2009, 18).

In other words, sustainability marketing represents an evolution of marketing that blends the mainstream economic and technical perspectives with the emerging concepts of relationship marketing and social, ethical, environmental and intergenerational perspective of the sustainable development agenda (Belz & Peattie 2009, 18.)

It can be said that sustainability marketing took insights and strengths from different perspectives in order to maintain relationships with customers by delivering valuable solutions considering environmental and social impact of economic growth. (Belz & Peattie 2009, 19).

Promotional actions with eco-friendly grocery bags relate to sustainability marketing as it is an important transformational solution for sustainable development in our century. For successful sustainability marketing strategy organization has to support market and customer orientation. In general terms, sustainability marketing actions can be defined as *building and maintaining sustainable relationships with customers, the social environment and the natural environment* (Belz & Peattie 2009, 31). It is a holistic approach directed to satisfy customer wants and needs while generating profit in a responsible way by considering environmental and social issues.



Figure 4 Framing sustainability marketing (Belz & Peattie 2009, 18)

Socio-ecological problems, consumer behaviour, sustainability marketing values and objectives, sustainability marketing strategies, sustainability marketing mix, and sustainability marketing transformations form managerial approach of sustainability marketing. These key elements consider an analysis of corporation's external environment, strategic marketing decisions at a corporate level and participation in public processes directed to change institutions in favour of sustainability. (Belz & Peattie 2009, 31).

Sustainability marketing provides a more realistic view of markets in which the key players have some power to influence their environment; in which companies and consumers take some responsibility for the social and environmental impacts of production and consumption; and in which the impact of today's decisions on future generations of consumers, citizens, investors and managers is considered (Belz & Peattie 2009, 32).

Sustainability marketing actions can be seen both on macro and micro levels. Macro level can be explained from the point of understanding of social and environmental problems in general, while micro level considers social and ecological impact of particular company's products. (Belz & Peattie 2009, 32).

The analysis of consumer behaviour takes an important part. Figure 4 shows consumer behaviour as a basic knowledge for sustainability marketing strategies. The most important parts of consumer behaviour from sustainability point of view are purchase, use and post-use of products. Sustainable consumption focuses on ecological and social criteria of these stages; therefore, their analysis creates significant new market opportunities both for companies and consumers. (Belz & Peattie 2009, 33).

3 Consumer buying behaviour

The present chapter of the thesis study focuses on the theoretical background of consumer buying behaviour and impact of sustainability marketing on buyer decisions. The theory is going to be explained and discussed from the thesis topic point of view. Then, its main components crucial for understanding and using in the thesis study are also analysed. The concept of consumer behaviour is described as a key element of managerial approach of sustainability marketing and a tool for analysis of corporation's external environment.

Kotler and Keller (2011) in the book "Marketing Management" stated that *consumer buying behaviour is the study of the ways of buying and disposing of goods, services, ideas or experiences by the individuals, groups and organizations in order to satisfy their needs and wants*. The importance of understanding consumer buying behaviour and the ways customers make their decisions regarding products and services are highlighted as an extremely important knowledge for both manufacturers and service providers. This type of information provides competitive advantage over rivals in several aspects. Marketing strategies are built on knowledge of consumer behaviour as it is crucial to know what right products and services are and which are not. It also hints at the knowledge of the right audience of customers, their reflections, needs and wants. (Kotler & Keller 2011.)

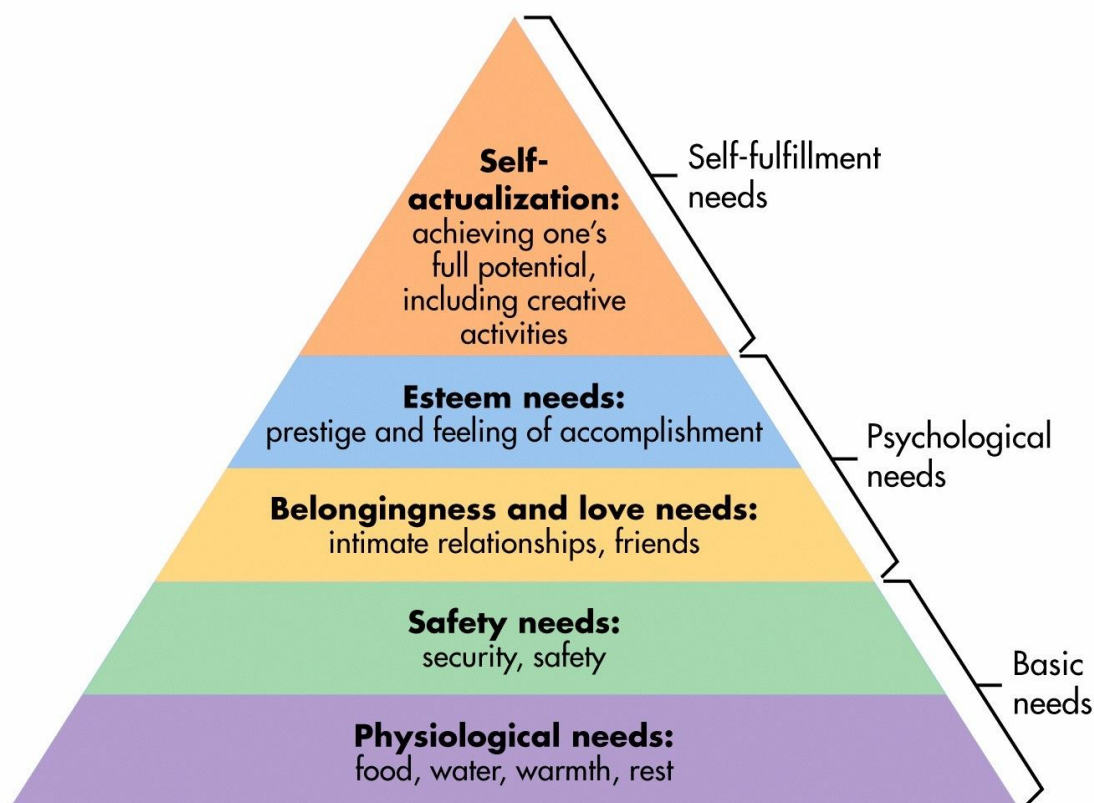


Figure 5 Maslow's hierarchy of needs (McLeod 2020)

Needs formed under the impact of various situations and under different forms. The decision-making process is activated when needs are recognized, and it is done in order to gain some desired end stage (Martin & Schouten 2012). The creation of marketing strategies starts with putting consumer needs at the center of marketing. In case of ecological direction of marketing products, consumers requirements in term of eco-friendliness and social consciousness become core concepts for marketers. (Ottman 2011.)

According to the theory developed by Abraham Maslow there are five levels of human needs. Commonly, five levels are illustrated in hierarchical order where lower level of the hierarchy is the primary need for satisfaction. From the bottom of hierarchy upwards levels applied to psychological, safety, love, esteem and self-actualisation needs. (McLeod 2020.) Needless to say, that people are motivated to satisfy their basic needs before pursuing the higher-order motivations. This hierarchy of needs can be adapted to green needs. Basic needs can be stated as following - they are mainly focused on survival, subsistence, while further safety-stage encourage people to recognize importance of clean supplying sources as well as urgent action in sustaining these providing systems. Thus, from motivation of living in a healthy and safe environment such concerns as society and environment encouraged people to take ecological products in use because they are the best solution in order to secure the well-being system of all people and animals. Psychological needs can be explained by the desire to belong to a group or a system with similar values and this motivation becomes fundamental to well-being system. The use of eco-friendly products provides consumer belongingness to one social group. In addition to this, people want to be different and valued, it means the use of eco-friendly products can also satisfy the esteem needs of people. Responsibility of actions shown by contribution to build a better environment gives people feeling of accomplishment. The last stage of hierarchy model is self-fulfillment needs. From ecological perspective it can be understood as needs for better quality of human being. Consumption of ecological products and services fulfills consumer's potential in moral requirements to ecological care. (Nguyen 2017.)

Consumer buying behaviour is a very complex structure and an inseparable part of marketing. It is a study of buyer reactions in the various situations. Understanding of consumer behaviour is required before launching a product because it helps to predict consumer reactions and approximate possibility of the purchase. This information enables a company to fix mistakes and avoid failures and losses. The study of consumer behaviour helps to achieve several aims. First of them, is to design product as best as possible to fully satisfy customer needs and demands. Secondly, to decide where the service or product is in easier access for customer. Thirdly, to define the best price and customers' preferences. And finally, to identify factors influence buying decision of the consumers. (Solomon 2009.) The

present thesis study is concentrated on the last listed marketing aim – identification of influencing factors.

3.1 The consumption process

The main focus in conventional marketing is on the actual purchase of products and services. This factor is logical since there is a contract establishment between the buyer and seller, exchange of money and products. The purchase process is also important from a legal and economic perspective. However, from social and environmental context, the impacts of a product relate to other stages of the total consumption process. Consumer attitudes and behaviour have begun to be influenced by pronounced negative social and environmental consequences of the consumer society, as well as the systems of production and consumption within it. (Belz & Peattie 2009, 74.)

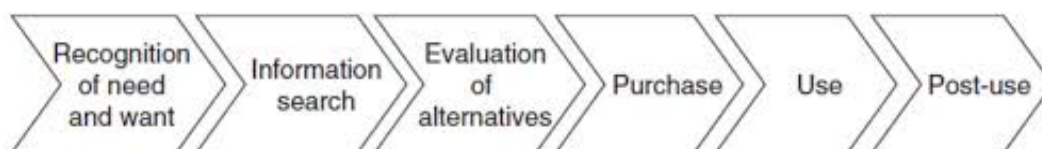


Figure 6 Total consumption process (Belz & Peattie 2009, 74)

The first stage of consumption process is a recognition of a want and need. Humans have various intrinsic, fundamental, social and emotional needs. The satisfaction of the latest are for acceptances and status, for amusement, love, and self-fulfilment. Needs and wants trigger the buying process and motivate to take actions in order to eliminate deprivation. Nevertheless, humans have complex set of wants and needs that can even conflict. These conflicts might reduce units of consumption. Sustainability marketing tries to satisfy consumer wants and meet needs without limiting consumption options. (Belz & Peattie 2009, 105-107.)

The second stage is information search. In case of grocery bag purchase this stage is always missed and the process leap straight from the recognition of want to making a purchase. However, consumers are increasingly exposed to information about environmental concerns. The connection between grocery bags and sustainability issues are communication through various information channels. If the consumer has enough knowledge about the plastic grocery bag consumption, he/she can link this information to individual purchases. (Belz & Peattie 2009, 75.)

The next stage is evaluation of alternatives. In conventional marketing this stage is assumed as decision between different products and brands. Nevertheless, from sustainability perspective, a broader set of alternatives can be taken into account. For example, if a customer does not see suitable alternative to plastic bags, he can either borrow his/her friend's reusable bag or not buy grocery bag at all. Not purchasing can be valid alternative in case consumer can not satisfy a particular want due to the environmental consequences of doing so. (Belz & Peattie 2009, 75.)

After evaluation of all alternatives the consumer makes a decision on the criteria of the most ecologically friendly grocery bag. However, here are two factors that might influence purchasing decision. First is attitudes-from-others factor that occurs when the opinion of appreciated person is given about the final consumption. Another factor is related to unexpected situations, for example negative change of financial situation. As a result, it can be stated that purchasing stage consists of a number of actions and factors that are significant to consider. In case of sustainable marketing, purchasing decision process becomes more complicated when manufacturers and product producers seek for environmental sustainability. (Martin & Schouten 2012.)

Consumption process does not end on the stage of purchase. Customer can be satisfied or dissatisfied with the purchase decision. Sustainability concerns about reaction on environmental issues have increased post-usage stage importance. Satisfaction feeling of grocery bag purchase means that this bag is eco-friendly and would not harm environment and cause any pollution. Dissatisfaction feeling might cause post-use stage action such as recycling and reuse. (Belz & Peattie 2009, pp. 76.) The post-purchase process can indicate a possibility of repeated purchasing. Sustainable marketing considers various types of post-usage activities of consumer behaviour. Disposable products might be either landfilled or recycled. The most favourable action with disposable products would be reuse or storage. In case of grocery bags, the majority of consumers prefer to store grocery bags and reuse when it is needed. However, the best option for ecology and environment would be a reusable bag made of cotton or other durable materials. Sustainability marketing is concerned about overburdened landfills and therefore, the post-use phase of consumption process accounts for increasingly big importance.

3.2 Consumer behaviour for sustainability

According to Belz and Peattie (2009), consumer behaviour can be explained from rational, psychological and social perspectives. Rational explanation emphasizes the economics of sustainable consumption and the way consumer estimates functional beliefs and affordability of a product. The concept of perceived cost and benefits includes non-economic

'costs'. They are time, convenience and social unacceptability. Rational explanations also consider the role of knowledge. Increasing level of ecological awareness and education lead to fastenings of sustainable consumption in collective interests. The level of knowledge, education and economics that tend to rely on demographic factors cannot be used in green market segment identification as it produces largely inconsistent and conflicting results. (Belz & Peattie 2009.)

Psychological explanations relate to consumer's attitudes and beliefs about sustainability issues. A set of attitudes consists of psychological factors that influence consumers' willingness to engage with sustainability issues – personal relevance, trust and social responsibility. It might be a challenge to inform and educate consumers about environmental issues due to the potentially demotivating mismatch between problem frame and personal frame. (Belz & Peattie 2009.)

Sociological explanations consider consumer behaviour *as not simply a reflection on rational dimensions of the costs and benefits of a particular consumption activity*. (Belz & Peattie 2009.) As a part of society consumers consider other opinion and perception on the consumption activities. Therefore, it can be stated that sustainable marketing differentiates 'consumer society' whose consumption moves beyond the identification of individual needs and wants.

In a consumer society, the process of consumption becomes the accepted route to individual happiness, expression, meaning and status and to national wealth and success (Belz & Peattie 2009, 85).

3.3 Factors affecting consumers' purchasing decision

A consumers' buying behaviour is strongly influenced by several factors. Three of them – social, personal and psychological are explained in this thesis study. Most of these factors are not under marketers' control, but their considerations support marketing strategies considerably. (Kotler & Armstrong 2017.)

Identification of social factors of consumer behaviour influence plays a significant role in marketing strategies. Social factors might be the following: small groups, social networks, family and social roles and status. By personal characteristics of behaviour influences such factors as occupation, age and stage, economic situation, lifestyle, personality and self-concept can be understood. Psychological factors influence consumer behaviour mainly by motivation, perception, learning, beliefs and attitudes. This type of factors drive a consumer to gain satisfaction. (Kotler & Armstrong 2017.) In sustainable consumer behaviour these

three major factors still form a basic buying behaviour and lead to consumption stages. However, there are additional concerns added. (Peattie 1995.)

Belz and Peattie highlighted different types of influence on consumer behaviour. Their explanations can be formed in the table.

Social and structural contexts	social norms, infrastructure, government campaigns, taxes, institutions, laws, influence of family, friends and community, market guides, media coverage
Purchase factors	purchase type, purchase value and frequency, for self or others, situational factors, available time, social significance
Marketing factors	suitability of solutions, perceived benefits and costs, convenience, communication campaigns
Consumer factors	demographics, values, attitudes and knowledge, intentions, experience, lifestyle, psychographics, perceives consumer effectiveness and self-efficiency

Table 1 Influences on the consumption process: A sustainability perspective (adapted from Belz & Peattie 2009)

In the Table 1 it can be seen that social and structural contexts as well as consumer factors have a predominant number of components among other factors. It can be explained by the relationship between public opinion and ecological issue as a part of social responsibility.

4 Grocery bags

This chapter serves as an overview on the topic of grocery bags. The summarised information of essential previous researches and studies about shopping bags, their materials and ecological impact on the environment is an important ground for further thesis topic study.

Nowadays, it is hard to imagine the world without grocery bags. They play significant role in the global packaging. There are two competitors in the global packaging market – ecologically friendly bags and plastic bags. In the analysis of 2018 for retail bags market, the market demand for grocery bags was estimated at 36% (Goldsberry 2020). The global packaging statistics compared material types, and results show 34% of packaging materials are paper and board, and 37% of the rigid and flexible plastic jointly. The percentages are calculated from total packaging materials. (Ernst & Young Limited & EY 2013)

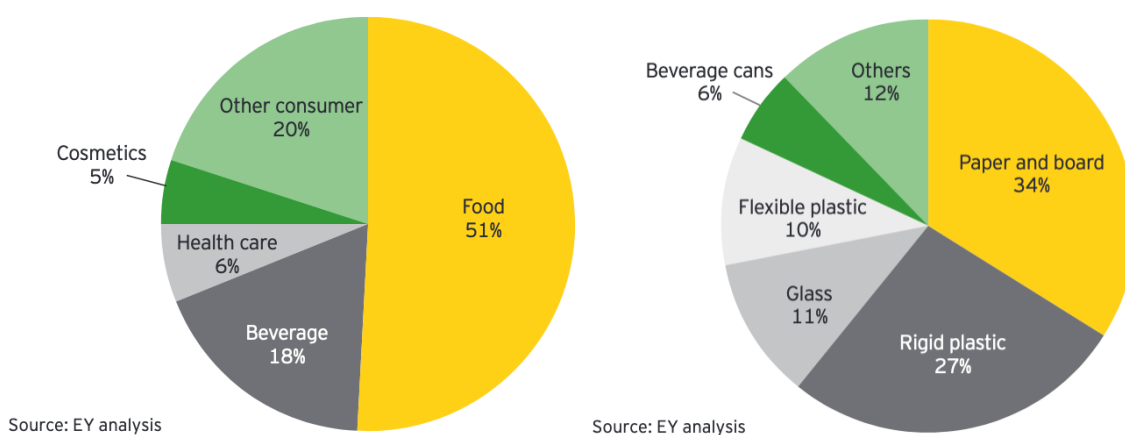


Figure 7 Global packaging by type and end market - 2012 (Ernst & Young Limited 2013)

The Ernst & Young analysis figure shows that food packaging embraces the largest percentage of 51% with favors to the packaging end market. Shown percentages constitute big money as global consumer packaging market is valued at approximately \$400 billion. It is expected that packaging sales in emerging markets continue to grow because a growing middle class increases consumption and demand for consumer goods as well as drives the need for more sophisticated packaging (Ernst & Young Limited 2013.)

However, by focusing on the industry of grocery bags, it is crucial to understand the main differences between plastic bags and eco-friendly bags in order to prove the necessity of encouraging consumers to buy eco-friendly alternatives.

4.1 Plastic bags

Despite the fact that today's market is full of different types of shopping bags, plastic bag is the most popular type of carrier bags worldwide. The main feature of plastic bags is non-renewable resources of which plastic bags are made from. The key ingredients are petroleum and natural gas. Polyethylene – high-density polyethylene (HDPE), low-density polyethylene (LDPE), linear low-density polyethylene (LLDPE) are raw materials that are widely in manufacturing process of plastic bags. LLDPE material is used in grocery bags production because it provides desired thickness and glossy look. (Muthu 2012.) Due to the slenderness and lightweight plastic bags provide ease of use. All these functionalities and low cost contributed to their popularity both among retailers and consumers. The convenience of plastic bags has converted them into the valuable product. For this reason, it can be easily noticed that the majority of all goods are transported in plastic bags on the daily basis. (Horská et al. 2015.)

4.2 Eco-friendly bags

Eco-friendly bags are mainly the bags whose impact on the nature is minimized. The product can be named as eco-friendly when it has a small, less damaging or positive effect on the environment or its ecosystems. Eco-friendly bags are usually made of recycled materials, materials that can be easily recycled or natural materials like cotton. The main characteristic of these materials is the avoidance of toxic chemicals that harm environment. (Meretes 2020.) The following types of materials fall into the category of eco-friendly bags: paper, biodegradable plastic, biobased plastic, compostable plastic, cotton. Grocery bags made of the listed materials are available in Finnish supermarkets and grocery shops.

4.2.1 Paper bags

Paper bags are made out of Pulpwood from trees and this resource is considered as renewable (Muthu 2012). Paper material is also considered as a high-performance packaging resource because it is natural, renewable, easily recyclable, high quality, and it is harmless for nature as the accumulation in the environment does not lead to any consequences. (Elmarasi 2017.) Manufacture of paper bags requires high amount of trees, water, material and energy. Thus, it might be considered that paper bags production does not have a positive effect on nature. However, the issue of resources can be easily solved by sustainable forests management and use of renewable energy sources such as wind, solar. Generally speaking, paper bags are a good alternative to plastic bags. (Elmarasi 2017.)

4.2.2 Biodegradable plastic bags

Biodegradable plastic material has the ability to deteriorate in the environment under certain conditions. However, biodegradable materials do not imply being recyclable or compostable. The degradation process naturally occurs due to such microorganisms as bacteria, fungi, and algae. (Xiao 2014.) This type material is commonly used in single-use packaging and food waste disposable bags.

4.2.3 Biobased plastic bags

A biobased plastic material bags are made from renewable resources such as corn, potatoes, rice, soy, sugarcane, wheat, and vegetable oil. These resources are much more sustainable material alternative for bag production than plastics which includes fossil fuels as key ingredients. Biobased plastic does not assume to be compostable or biodegradable, but it can be fully or partly biobased. (Xiao 2014.)

4.2.4 Compostable plastic bags

Compostable plastic material is used in bag production and this material is biodegradable in a composting environment. Certain conditions are needed to activate this process. Such type of bags does not leave visual or toxic residues. (Xiao 2014.)

4.2.5 Reusable shopping bags

The main definition of reusable bags was formulated as *a bag with handles that is specifically designed and manufactured for multiple reuse and is either made of cloth or other machine washable fabric, and/or thick, durable plastic* (ICF International 2010). Reusable shopping bags are presented almost in every supermarket nowadays. The most popular among them are made from cotton, canvas, woven synthetic fibers and durable thick plastic. The main benefit of using reusable shopping bag is minimization of disposable bags that end up in landfills. (Toufique & Shahidul 2014.)

4.3 Environmental impact of grocery bags

As of today, many studies have already proven harmful effect of plastic on the environment which includes nature, animals and also human health. It was investigated and proved that toxic chemicals leach out of plastic and can be found even in human's blood. These chemicals accumulate in the organism causing such illnesses as cancer, birth defect, impaired

immunity, endocrine disruption and other ailments. (Harth 2010.) Narrowing down the environmental impact of plastic materials to grocery plastic bags reveals the ugly side of these products.

Disposable shopping bags are convenient in use, but they are the main source of pollution in the world. Plastic shopping bags have formed huge debris in North Pacific Ocean. They are called the Great Pacific Garbage Patch. This debris is estimated to be double the size of Hawaii, and it is the cause of drains that go to the ocean. (Lober 2020.) Ocean suffers from plastic litter and its increasing amounts lead to injury or death of marine flora and fauna. Some plastic compound can deteriorate in ultraviolet (UV), but cold ocean water and haline environments prolong deterioration process which requires very long-time exposure. Mainly, plastic bags end up in the ocean waters from littering at sea and from land when plastic is blown from landfills, sewage effluents, street littering and transportation accidents. (Barnes, Galgani, Thompson & Barlaz 2009.) Wildlife becomes entangled in plastic; they eat it or mistake it for food and feed it to their young. (UN Environment 2020.)

Statistic	Number
Total number of plastic bags used worldwide annually	1 trillion
Total number of plastic bags China consumes every day	3 billion
Total number of plastic bags used every minute	1 million
Total number of years it takes for a plastic bag to degrade	1,000 years
Total amount of plastic bags that were discarded in 2008	3.5 million tons
Total amount of plastic floating in every square mile of ocean	46,000 pieces
Average amount of plastic bags consumed per family in 4 trips to a grocery store	60
Per cent of plastic made every year that will end up in an ocean	10%
Total amount of plastic bags used by U.S. citizens every year	100 billion
Average amount of plastic bottles a U.S. household will use each year	500 plastic bottles
Percent of household waste that is plastic	11%

Table 2 Plastic bag consumption statistics (Horská et al. 2015)

Shown statistics represents the worldwide plastic bag consumption. Huge number of utilized plastic bags proved the popularity of these type of material. From the table it can be seen that number of plastic bags floating in every square mile of ocean is dramatically high and requires urgent solutions and action. (Horská et al. 2015.)

Plastic shopping bags can cause such natural disasters as floods. For example, there were floods in Bangladesh due to the blockage of the drainage system with plastic shopping

bags. (Lober 2020.) The dangerous impact of plastic waste is also concentrated in the theory of toxic chemicals that are formed during the slow process of the plastic distortion. These toxic chemicals seep into groundwater, flowing downstream into lakes and rivers and polluting the water. (UN Environment 2020.) Thus, plastic bags can pose health risks to human population because these toxins might leach into water supplies. (Lober 2020.)

According to the recent study hosted by UN Environment Programme, the environmental impact of a bag is proportional to its weight. Studies show that conventional SUPB weighs 20 g in Finland. However, in some countries the weight can reach 5 g what suggests that there is a correlation between light weight of the common plastic bag and a large number of bags per household in the country. At the same time, the weight of paper bags remains almost the same in all countries – 55 g. (Ekvall et al. 2020.)

Single-use LDPE or HDPE bags rank worse than other bags in terms of littering potential. However, the ranking order of bags in terms of littering potential is more or less opposite to the ranking in terms of other environmental indicators. The weight of the bags contributes to this difference: making a bag heavier will make it more difficult for the wind to catch, hence reducing probability to become litter, but it will increase all other environmental impacts of the bag. (Ekvall et al. 2020.)

After comparing different types of single-use bags, regardless of the material they are made of, and reusable bags, it was proved that latter option cause lower impact on the environment in case of actually being used several times (ICF International 2010). Obviously, reusable shopping bags are considered as best eco-friendly alternative to plastic bag because it is not a single-use product. However, compostable, biodegradable and biobased grocery bags are the best options in the choice of single-used bags due to their decomposable characteristics. Needless to say, that such bags have their own shortcomings. Biodegradable and biobased bags require certain conditions for their distortion. However, their environmental impact is lower than plastics and for this reason they can be esteemed as eco-friendly.

5 Empirical study

The thesis is focused on analysing students' buying behaviour and identifying main influencing factors towards such sustainable products as eco-friendly grocery bags. In order to successfully answer the research questions and accomplish the research objective, it is important to determine the research method that fits to study. Thus, this chapter fully explains research method, research design, limitations for data gathering and data analysis process.

5.1 Research method

Research is a process that people undertake in a systematic way in order to find out things, thereby increasing their knowledge (Saunders et al. 2015, 5).

A systematic way in this context is considered as a research conducted with logical relationships. Data collection and interpretation for study topic are always done systematically. The research results describe, explain, analyse and criticise the observed phenomenon. (Saunders et al. 2015, 5.) In this research a deductive approach is followed, which is connected with *developing a hypothesis (or hypotheses) based on existing theory, and then designing a research strategy to test the hypothesis* (Business Research Methodology 2020). This type of approach is chosen because the main purpose of the study is to identify factors which impact the students' buying behaviour towards the eco-friendly grocery bags in Lappeenranta, Finland. It means that the research is based on the theory and test to see the existence of relationship or link by a particular phenomenon.

As it was previously mentioned, the research aims to answer the following questions:

- Which factors have an impact on students' buying behaviour for eco-friendly grocery bags?
- What importance do students attach to grocery bag purchase?

To answer the research questions and to meet the objective, it is important to determine the type of data collection. The thesis process consists of two types of data collection: primary and secondary. The secondary data is the data collected for some other purposes which might include both raw data and published summaries. The analysis of this type of data enables to get additional knowledge, interpretation and different ideas on the studied topic. The primary data is the actual data collected for current purpose. (Saunders et al. 2015, 316.)

Primary data in the present thesis applies to qualitative data. According to Cook and Reichardt (1979), the qualitative research method emphasises on understanding rather than testing or verification. The main focus is on understanding the process from respondent's point of view. (Cook & Reichardt 1979.) Qualitative research is something similar to interpretive philosophy because its main purpose is to make sense of subjective and socially constructed meanings concerning the research phenomenon. (Saunders et al. 2015, 168.) The main approaches of qualitative research are interpretation and rational. Qualitative research method requires observations and measurements to be done in natural settings. The research results occur after the generalization of the collected information (Cook & Reichardt 1979). The present qualitative research requires interviews while the main objective of interviews is *to collect data from interviewees who are treated as witnesses to a reality that exists independently from them* (Saunders et al. 2015, 388).

The study implies the exploratory type of research. This type of research aims to discover what is happening and gain the insights of the topic of interest. The exploratory research clarifies the undertraining of the phenomenon. (Saunders et al. 2015, 168.)

5.2 Target group

Data collection is gathered only in one town in Finland – Lappeenranta. The research objective implies an analysis of consumer behaviour. In order to narrow the target group only one category of consumers was chosen – students. It is a big group of people as there are two universities in Lappeenranta – Lappeenranta University of Technology (LUT) and LAB University of Applied Sciences (LAB). Universities offer both bachelor's and master's programmes therefore it can be stated that there are students of different age. For this reason, the age group was narrowed down to the range from 18 to 30 years. There was a possibility to get an exchange student as a respondent therefore the nationality of the student was not the limiting factor.

Students as a target group were also chosen for another reason. It is an important group of people who graduate from universities. As soon as they start to earn money, they will act more actively as consumers due to the change of financial situation. For this reason, it is crucial to understand the behaviour of such type of consumers and their attitude towards the ecological issues. Students in the age of 25-30 implies to the Generation Y or Millennials while those who are in the 18-24 age group from called Zoomers or Generation Z. According to the research conducted by Topic (2020), generation Z is engaged in pro-environmental activities and understand the importance of being educated on recycling and waste collection. These tendencies are not very similar to the generation Y's attitude towards the environmental concerns. Millennials have paid less attention to the packaging materials and

some of them buy product regardless of their recyclability. However, they mentioned the ocean pollution as a pressing factor that forces to reduce plastic use. (Topic 2020.) Students as a group of people in next 10 years will become parents and it is important to understand what is the attitude towards the environmental issues and what values they will convey.

5.3 Data collection

The main data collection method is interview. This method is used when objective of the study is to describe the phenomenon deeply or to find explanation to the process. It also provides an understanding of possible consumer buying decisions. However, it is crucial to define the type of interview that is used for study process. There are several types of interviews: structured, semi-structured, and unstructured or in-depth interviews. The main difference between these types is number of respondents from target group. As study demands increased numbers of opinions the structured interview was chosen. Structured interview allows to increase target group and gain information without having personal interviews. The interview is formed in questionnaires and consists of set of questions asked in the same order to every respondent. This type of interview is not flexible and does not allow to include additional questions during the interview what might cause bias. (Saunders et al. 2015, 440.)

The questions in questionnaire were based on information gained from theory analysis. It enables to formulate questions accurately and in easily understandable form for respondents in order to avoid bias.

The interview in questionnaire-form was placed in Google Forms and included interview purpose explanation and questions. The choice of questionnaire distribution channels was done according to latest social media statistics summary for 2020. Statistics shows that the world's most-used social platforms are Facebook, YouTube, WhatsApp, FB Messenger, Instagram and TikTok (Chaffey 2020). For structured interview the most suitable distribution channels were Facebook students' group and chats, and Instagram. The interview was conducted in English in order not to limit respondents of various nationalities.

5.4 Structure

The interview was structured in questionnaire-form and consists of both open questions and questions with multiple choice. However, the majority of questions were open due to qualitative method of the research. Questions with multiple choice were used to get accurate answers on the specific stage of the consumer's behaviour.

The first part was focused on getting information about the respondent and proving the student status.

Questions of the second part of the interview were directed to understand respondent's attitude towards ecological awareness and ecological issues. Answers to these questions help to understand the reasons of consumer's actions and general attitude towards ecological values.

Part I	Questions 1 - 4	Background info of the respondent
Part II	Questions 5 - 14	General consumer perception towards ecological values
Part III	Questions 15 - 23	Consumer behaviour towards eco-friendly grocery bags

Table 3 Interview structure

The third and the last part of the interview was aimed at getting consumer's actions towards the eco-friendly bags. Questions were directed to find main consumer preferences and post-usage actions.

Considering the chosen research method, the questions were formulated in such a way that received answers are accurate and proper. Three parts of the interview are places in the hierarchal order – the last part of the interview contains the main questions. The structure of the interview enables to see the reasons of the respondent's choice towards to grocery bag choice.

5.5 Data validity and reliability

In order to ensure the validity and reliability of the research method, the interview was tested on three respondents. It enables to notice required changes in the questions while identifying the possibility of bias. Several questions have been formatted and replaced. The final version of the interview was used in the research.

The data collection period was only a week (26.10.2020 – 1.11.2020) due to the time constraints. During this period, 27 students participated in the interview. This number of respondents does not represent large group of people. However, these students are from different facilities and study groups. Such conditions allow to receive different opinions towards the study topic. The research method is qualitative and does not focus on statistics, for this reason interview of 27 respondents was considered as sufficient information to start results analysis.

5.6 Data analysis

After receiving all the interview results the process of data analysis has to be defined. It is important to remember that qualitative data is based on meanings expressed through words. Analysis of qualitative data requires classification of non-standardised data into categories. The analysis results will be conducted through the use of conceptualization. (Saunders et al. 2015, 569.) As it was previously explained, the research approach is deductive. For this reason, the analysis of the data is done by identifying the relationships between the data. (Saunders et al. 2015, 572.)

Deductive explanation building is an analysis technique that is mainly focused on explanation building. This technique implies explanation of the phenomenon by *testing and refining a predetermined theoretical preposition*. (Saunders et al. 2015, 592.)

For the beginning of the analysis, received data is categorised by coding. It implies labelling of each data item with a code that symbolises the extract's meaning. This stage enables to get each piece of data accessible for further analysis. In present thesis coding is based on actual answers of the respondents. It is done in order not to alter the true meaning of respondents' expressions. The coding process is used in present deductive approach because it also allows to recognize relationships within other answers. (Saunders et al. 2015, 592.)

Current research purpose is to identify factors; therefore, the main attention is paid to the analysis of criteria of grocery bags choice. After coding system is completed, the search of patterns and relationships is possible to complete. For example, the relationship between ecological awareness, general importance of ecological issues for respondents and grocery bags choice is important to examine in order to answer the research questions.

6 Results and findings

This chapter presents the results of data gathered through 27 qualitative interviews. Results are grouped based on three interview stages. Based on analysis results the main findings that help to answer the research questions are presented.

6.1 Results

6.1.1 Respondents background information

The total number of participants is 27. Women contributed a higher amount in responding as there is 41% of men respondents. However, such difference in contribution is not considered as a significant and, consequently, does not cause any bias.

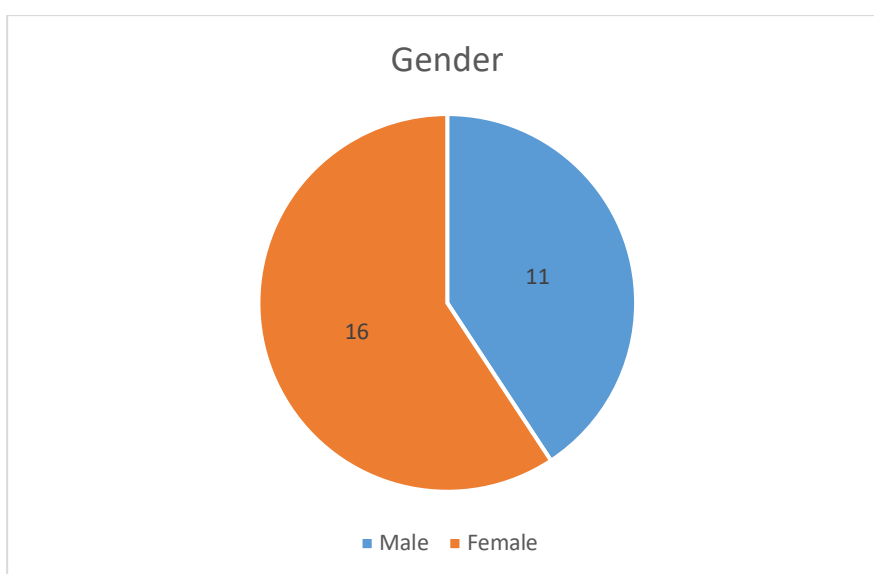


Figure 8 Question 1 - Gender

Since the objective of the study was to research consumer behaviour of people of ages 18-30, the results were positive in regards that 100% of respondents were in established age-range. None of the respondents were under 18 years old or over 30 years old. Most of the respondents were in the 21-22 age group (78%).

All the respondents proved their student statuses by providing information about the field and place of study. Two students from LUT and twenty-five students from LAB participated in the interview. Half of the respondents' study International Business, the rest are students of Tourism and Hospitality Management and Mechanical Engineering facilities.

6.1.2 General consumer perception towards ecological values

The second category of interview questions imply to general consumers attitude towards ecological issues and values. This interview stage gives a ground information for relationships identification. First question of this stage of the interview was focused on explanation of the “ecological awareness” term. The received answers on this question have been categorized into six groups. Each group was coded regarding the existence of correct meaning. Two codes are used to label received answer expressions. Codes 5P and 5N indicate the question number and positive or negative respondent’s understanding of the term, respectively. Positive indicator implies in cases when the respondent is aware of the term meaning or has right idea about it. Negative indicator shows that the respondent has a false idea about the term or does not understand at all. Such type of coding allows to recognize relationships between consumers knowledge and grocery bag choice.

Code	Expression
5P	being aware of human impact on the environment
	being aware of environmental problems and possible solutions
	know how to act responsibly towards the environment
5N	following guidelines prescribed by the government
	marketing
	do not understand

Table 4 Question 5 – Coding

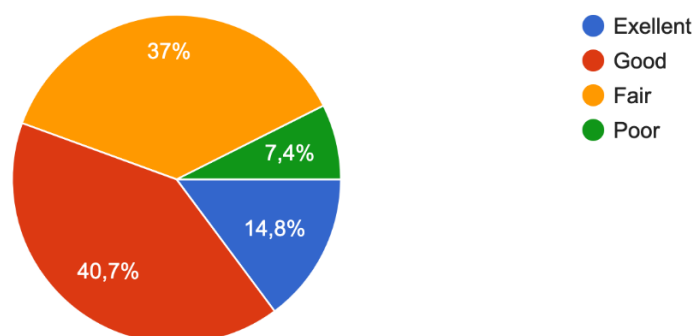


Figure 9 Question 6 - How do you estimate your ecological awareness?

Figure 9 presents respondents' evaluation of ecological awareness. Results show that 15 respondents (4 excellent and 11 good) evaluate their ecological awareness positively. It can also be seen that percentages of good and fair levels of ecological awareness are close in value, 40,7% and 37% respectively. Only two respondents consider their ecological awareness as poor and the rest of interviewed estimated their knowledge as fair.

The main explanations for the ecological awareness estimations were categorised in 4 groups and presented in the table below.

Code	Explanation
EX1	Constantly learn about the ecology topic and act responsibly
EX2	Understand the importance of ecology care but do not have enough knowledge and motivation to act eco-friendly
EX3	Consider industry impact as a main cause of ecological problems, and, consequently, do not see importance in changing lifestyle
EX4	Not interested in the topic of ecology

Table 5 Questions 7 - Explanation of the level of ecology awareness

The most common explanation was related to the lack of knowledge and motivation. Moreover, it was found that a significant number of interviewed students do not consider human impact as a destructive and convinced that industries have to be socially responsible for ecological issues.

Analysis of the main sources of information about ecological issues and eco-friendly products enables to group answers in five categories: TV, total social networks and the Internet, friends and family, educational institutions and social advertisements. Each category has been coded for further analysis. The main sources of information for the majority of respondents are total social networks and the Internet, and surroundings. Only two of all respondents mentioned educational institution as their source of information about ecology.

By looking at the degree of importance of environmental issues it can be found that only 2 respondents consider it inessential. At the same time, the majority understands the necessity of increasing the importance of ecological care and wish to be eco-friendly.

Waste and pollution turned out to be the most worrisome environmental issues for respondents. It was good to see students' awareness about the importance of plastic reduction. Some respondents link pollution problems with other environmental issues as loss of biodiversity and extinction of flora and fauna.

The last questions in the part of analysis of general consumer perception towards ecological values were directed to understand respondents' attitude and awareness about ecologically friendly behaviour and its main components. Received answers on the understanding the "environmentally friendly behaviour" have been grouped into six categories.

Code	Expression
11P	type of behaviour where eco-friendly habits are part of lifestyle
	responsible consumption (which relates to animal products, use of transport and electricity, water, ignorance of fast fashion)
	behaviour that does not sharpen the environmental problems and contribute to their solutions
	use of non-toxic for the environment and the nature resources
11N	do not understand

Table 6 Question 11 - Understanding of "ecologically friendly behaviour" term

Results show that the majority (23 out of 27 respondents) understand what ecologically friendly behaviour means. However, there were answers that show respondents' failure in understanding.

Pro-environmental behaviour refers to behaviour that harms the environment as little as possible, or even benefits the environment (Steg & Vlek, 2009).

Table 7 presents the number of respondents who agree or disagree with the statement that their behaviour is ecologically friendly.

Respondent's choice	Number of respondents	Explanation of the choice

Strongly agree	2 (7,4%)	Adhere to responsible behaviour by consuming only what is really needed, reduce plastic use/reduce waste in general, buy long-lasting products (no single use), vegetarian/vegan diet, use green electricity
Agree	10 (37%)	Do not do harmful actions on purpose, but now learning how to recycle waste and learn about new ways of controlling the spread of plastic around the planet
Neutral	11 (40%)	Try to not to harm the environment but do not have enough motivation
Disagree	4 (14,8%)	Do not see importance of human actions and are not ready to change habits and lifestyle
Strongly disagree	0	-

Table 7 Questions 12-13 - Degree of agreement towards ecologically friendly behaviour and justification of answers

The explanations of the choices have been placed and made to the table. It can be seen that most of the respondents consider their behaviour as neutral and explain such choice by the lack of motivation to responsible actions.

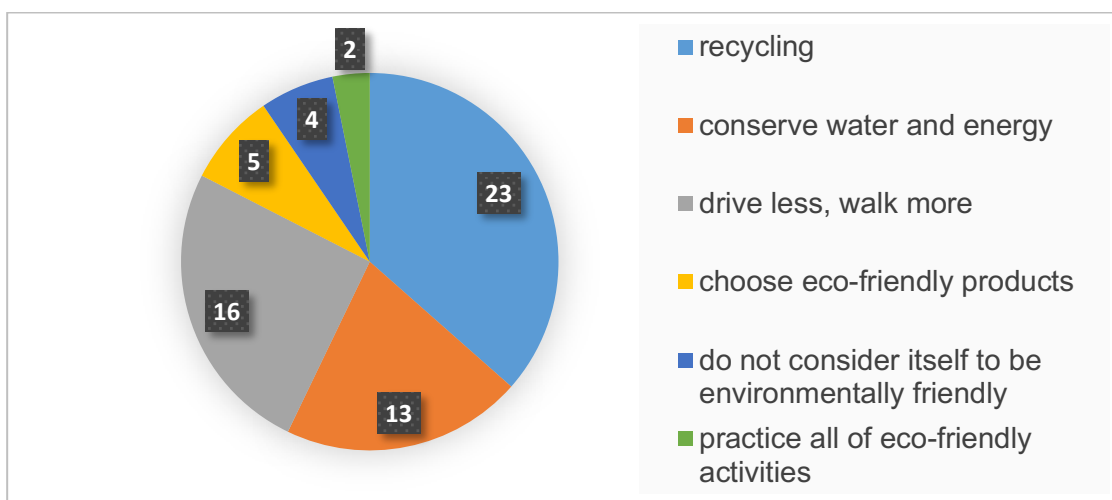


Figure 10 Question 14 - Environmentally friendly activities

Figure 10 shows results on the question concerning the environmentally friendly activities that respondents undertake. It can be noticed that most of the interviewed students practice waste recycling. The second and the third activities that are also actively practiced among respondents are water and energy conservation, and reduction of the transport use.

Questions of these part of the interview were directed to understand general respondents' attitude towards the environment and evaluate the degree of awareness about solutions and possible beneficial actions for environment and nature. Current answers will be linked to the results of the last stage of the interview which enables to find links.

6.1.3 Consumer behaviour towards eco-friendly grocery bags

Last part of the interview consists of questions directed to find actual consumer behaviour, choices and preferences towards grocery bags.

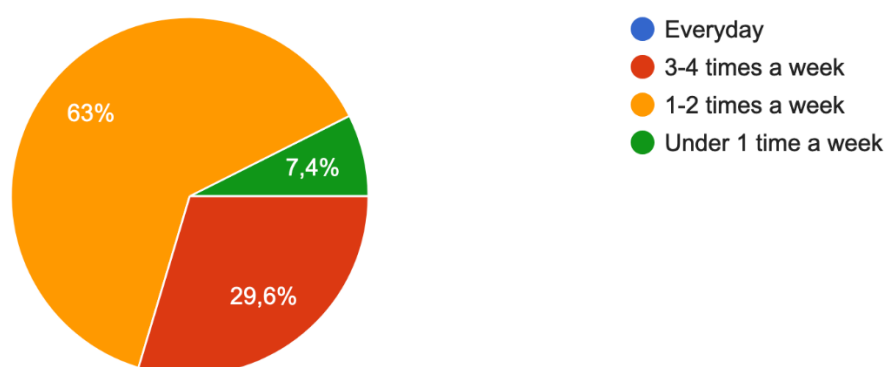


Figure 11 Question 15 - Frequency of grocery shopping

The question concerning the frequency of grocery shopping was asked in order to further identify the existence of the relationship between this factor and the choice of grocery bag.

Analysis of the respondents' choice show that 20 of interviewed (74%) prefer to use eco-friendly reusable grocery bags made of cotton or durable thick plastic. The main explanations of such choice are convenience, money save and avoidance of single-use bags. However, 8 respondents (40%) of these group avouched that they quite often forget to take reusable bag to the grocery. They explain their forgetfulness by simple laziness and absence of the habit. When such situations happen, these respondents do not pay attention to the grocery bag choice and can buy a plastic one. In such case, it can be stated that only 12 respondents (44%) use reusable bags regularly. Biodegradable, paper and bio-based grocery bags were preferred by only three interviewed students who chose such bags due to their eco-friendliness. Four respondents (15%) use only single-use plastic bags because

they consider poor awareness about the impact of plastic bags and laziness as the main factors of their choice.

Analysis of post-use of plastic bags shows that all of the respondents use them as trash bags. The same actions are made with single-use eco-friendly grocery bags, but those who sort garbage use these bags for organic litter. None of respondents mentioned the reusability of such types of grocery bags.

The majority of respondents correctly described eco-friendly bag term as a reusable bag or bag made of natural resources that are not harmful for the environment. The analysis of results shows that six respondents (22%) has positive attitude towards the single-use plastic bags. This attitude is explained by their big volume and strength and by general low ecological awareness. The rest of respondents group has negative attitude towards this type of bags. They reckon there is a necessity to ban plastic bag in all stores as there are enough eco-friendly alternatives.

Several criteria for grocery bag choice have been recognized: material and its impact on the environment, size and capacity, durability, quality and price. Three respondents said that they do not have special preferences to the grocery bag.

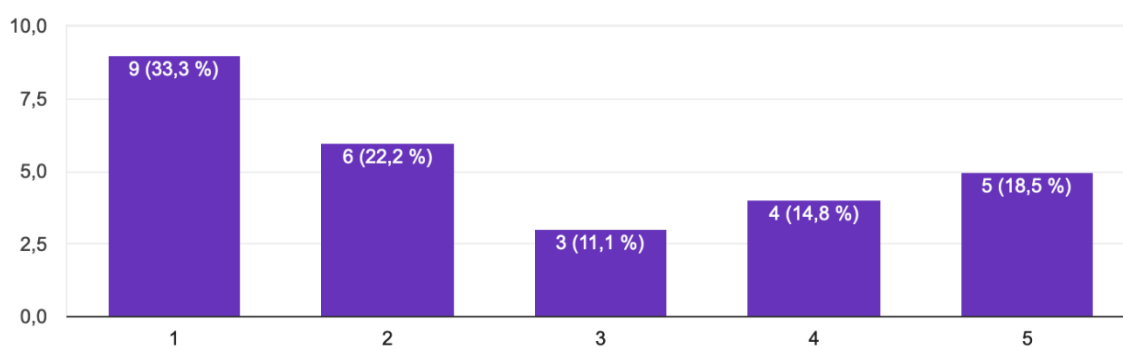


Figure 12 Question 24 - Degree of importance of grocery bag purchase

Figure 12 presents answers on the question about the degree of importance of grocery bag purchase where 1 is not important and 5 is very important. It is seen that more than a half of respondents estimate the purchase as not important, less important or medium important to this type of products. Only nine respondents (33%) labeled their grocery bag purchase as important (four respondents) and very important (five respondents).

6.2 Findings

Based on the gathered and analysed results there are several findings and relationships have been identified.

First of all, it was interesting to find that not all studied consumer factors have impact on the choice of eco-friendly grocery bag. There is a stereotype that women are always more socially responsible and more interested in the topic of ecology. The study shows that interviewed men and women have equally positive and negative consumer behaviour towards the eco-friendly grocery bags and general perception of ecological values. Respondents with clear understanding of ecological awareness and high importance of ecology care show strong social and environmental values which shape appropriate behaviour and lifestyle. The relationship between the knowledge about ecological issues and stable environmentally friendly behaviour has been recognized. The more respondent knew about the issues and their solution, the more environmentally friendly habits he had. However, it was found that even the understanding of importance of ecology care and knowledge about the ecological issues might be not enough to have strong motivation to consume responsibly.

Secondly, taking into account social and structural factors of influence it was found that the main sources of information about ecological issues and eco-friendly products for interviewed students are social networks, the Internet, friends and family. Those who have lack of motivations do not have external sources of information such as educational institution, family, and friends. Therefore, it can be stated that such types of information strongly form eco-friendly habits and preferences what consequently influence the choice of eco-friendly grocery bag. One respondent mentioned social trend to be eco-friendly as a significant influence on his behaviour. Thus, it can be highlighted that public opinion, social trends, community and media coverage have a high impact on consumer choices towards eco-friendly grocery bags.

Thirdly, taking into account purchase factors, the relationship between purchase frequency and the choice of eco-friendly grocery bag has not been identified. However, such situational factor as losing or forgetting a reusable bag at home makes student consumers inattentive to the grocery bag choice. Laziness and forgetfulness are the main factors that affect the regular use of reusable eco-friendly bags.

Fourthly, speaking of marketing factors it is important to mention that they have impacts on the consumers' choice of grocery bags. Material and its impact on the environment, size and capacity, durability, convenience, perceived benefits and costs are the main criteria of the choice for interviewed students.

7 Conclusion

Topic of ecology relates to all human beings and has a high impact on every life. Such environmental issue as plastic pollution has become a very important topic to care about in the twenty first century. As it was already discussed, the decrease of plastic bags consumption is a solution for plastic waste problem. However, not all citizens understand the necessity of this step towards sustainable future. Therefore, the study of consumer behaviour enables to get reasons of destructive human actions. This knowledge helps to identify or create solutions that will encourage consumers to be eco-friendly.

The main purpose of the study was to identify factors of influence on the students' buying behaviour towards the eco-friendly grocery bags in Lappeenranta, Finland. The thesis includes both primary and secondary data. The secondary data was published summaries. The analysis of this type of data enables to get additional knowledge, interpretation and different ideas on the studied topic. Primary data was an empirical study of the research. The topic required qualitative method of the research. Data collection method was structured interview which participated 27 students of Lappeenranta University of Technology and LAB University of Applied Sciences. The study was conducted by deductive approach what enables to identify the relationships between the gathered data.

The topic was covered by the concepts of sustainability marketing, consumer buying behaviour, general understanding of grocery bags, their types and impact on the environment. During the study, the direct relationships been social, consumer, marketing factors and students' consumer choices towards grocery bags have been recognized. Gained results can be a useful data for sustainable products promotion.

Interview results enable to answer the main research question "Which factors have an impact on students' buying behaviour for eco-friendly grocery bags?". According to the analysed results and recognized findings, influence of three groups of factors can be identified.

Social and structural factors pay a key role in shaping environmentally friendly behaviour towards eco-friendly grocery bags. Educational institutions, family, friends and community, social trends and public opinion have a big impact on the consumer behaviour. The most important sources of information about ecological issues and eco-friendly products are family, friends and educational institution. These sources have a direct coherence with student's perception of ecology. Since the topic of ecology is related to all human beings, social factors play the significant role.

The influence of social factors is directly linked to consumer factors which also have a high degree of importance. Students' knowledge, attitude and values influence general consumer behaviour by highlighting vitality in being socially responsible and eco-friendly. Significant level of knowledge and understanding of ecological issues form appropriate lifestyle and values what then has a big impact on the choice of eco-friendly grocery bag.

Marketing factors are the criteria of students' choice. Several interviewed students pay attention to the general appearance of the reusable grocery bags. Convenience, size, capacity, and durability are important criteria of choice. However, the biggest impact has a material grocery bag is made of and its impact on the environment.

The answer to the sub-question "What importance do students attach to grocery bag purchase?" was also recognized. More than a half of respondents (18 interviewed students) do not give any importance to the grocery bag purchase or consider it less vital. Only nine respondents give significance to this type of product purchase. Therefore, it can be stated that general importance of grocery bag purchase is low even if the respondent regularly uses eco-friendly bags.

Understanding of consumer behaviour and ability to predict the purchase decisions are very essential factors to follow in order to be competitive in the market. According to the research results, it can be stated the investigation of consumer behaviour towards eco-friendly products requires further study. Results also show the significant importance in increasing ecological awareness among students in order to shape environmentally friendly behaviour.

In addition to this, the further research topics can be related to investigation of marketing techniques that can be used in grocery shops in order to encourage consumers to buy eco-friendly products. The possibility of making groceries as a source of information about the importance of ecology care should also be studied. It is vital because there is a big number of consumers who are not interested in the topic of ecology and consequently cannot gain enough information about the ecological values. Thus, the topic of increasing ecological awareness about the environment in groceries by products and other marketing techniques should be conducted both by sustainable companies and environmental organizations. The results of these studies will enable to encourage more consumer to behave environmentally friendly what is a significant step for nature conservation and sustainable future.

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Appendices

Appendix 1. Interview structure

I am Mariia Farvazova, the fourth-year student at LAB University of Applied Science. The questionnaire is designed as part of my thesis in order to investigate influencing factors of consumer buying behaviour towards eco-friendly grocery bags. I am very appreciated if you spend few minutes to participate in this interview by kindly answer below questions.

1. Gender:
 - Female
 - Male
 - Rather not say
2. What is your age?
3. What do you study?
4. Where do you study?
5. Explain what 'ecological awareness' means to you.
6. How do you estimate your ecological awareness?
 - Excellent
 - Good
 - Fair
 - Poor
7. Explain why you estimated ecological awareness on the chosen level.
8. What are the main sources of your information about ecological issues and eco-friendly products?
9. How important environmental issues to you?
10. What kind of environmental issues cares you the most?
11. Explain what environmentally friendly behaviour means to you.
12. Do you agree that your behaviour environmentally friendly?
 - Strongly agree
 - Agree
 - Neutral

- Disagree
- Strongly disagree

13. Justify your choice to the previous question.

14. What kind of environmentally friendly activities do you undertake?

- Recycling
- Conserve water and energy
- Drive less, walk more
- I don't consider myself to be environmentally friendly
- Others (please specify)

15. How many times a week do you shop groceries?

- Everyday
- 3-4- times a week
- 1-2- times a week
- Under 1 time a week

16. What type of grocery bags do you choose (plastic / eco-friendly (plastic/eco-friendly; paper, biobased, compostable, biodegradable, reusable)? Explain your choice.

17. If you prefer to buy single-use plastic bags, what do you do with them once you have used them for carrying your shopping home?

18. If you prefer to buy single-use eco-friendly bags, what do you do with them once you have used them for carrying your shopping home?

19. If you do not use reusable shopping bag, what are the reasons behind your choice?

20. Please describe what "environmentally friendly grocery bag" means to you.

21. What is your attitude towards plastic grocery bags?

22. Based on what criteria do you choose a grocery bag?

23. How important for you the grocery bag purchase?

Thank you very much for your precious time spent in filling up this questionnaire.