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## 1. Executive summary

This thesis is investigating perception of the population towards the new trend of zero waste shops in Slovakia and aims to determine the ideal target group for this new type of businesses. Zero waste concept is based on the idea of more sustainable supply chain in terms of not using or to great extent limiting the waste created by packaging of products. Zero waste concept is however also facing the criticism in terms of products having shorter preservation times due to the reduced packaging. Zero waste concept is relatively new and there is still a knowledge gap about the perception of customers towards this new model of shopping experience. The litter pollution is growing from year to year even though that there are several efforts to stop or decrease the pollution all over the world. Many of these efforts are focused mostly on reduction of the already created waste in the form of recycling or reusability. The new zero waste trend can, however, help to prevent the litter pollution from happening in the first place. Research of the thesis is focused on the Slovak market as a economically developed market which is only nowadays starting to implement more environmentally friendly practices. The main competition of the zero waste shops are the traditional retailers. Some of the traditional retailer might not have the power to implement zero waste concept into their supply chain which means that their long-term profitability is also depending on whether the zero waste shops will establish themselves on the market for the long term. Zero waste shops are using mostly local supplier it is not very well-known brand. Traditional shops on other hand are using the suppliers many of which have their own well-established Brand. Thesis is therefore investigating the added value from brand of the product and impact of package advertising on the customers as well as the value added by sustainability of product and store. Further focus is on the perception of customers towards the zero waste shops and traditional retail shops in terms of product quality, pricing strategy and sustainability of products. Last but not least the focus of this thesis is also on the identification of zero waste shops potential target group on the Slovak market.

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## 2. Introduction

### 2.1. Introduction to sustainability development

Can we save our planet from ourselves? People all over the world can now feel the negative impact of actions, that were in the praxis for several hundreds of years. Even though that our ancestors might have known that mass production and growth of heavy industry might bring several issues in the future, it was probably not possible for them, to satisfy ever growing demand for goods, in the sustainable manner. However, over the years there were several social as well as technological developments, that brought us into the point, where the sustainability of our actions is becoming more and more important topic of discussion.

The intent to decrease the negative impacts of production practices can be traced back to 1987 when the United Nations created the Commission on Environment and Development better known as Brundtland Commission. Result of this commission was a document called Our Common Future which helped to define the sustainable development as "Development that meets the needs of the present without compromising the ability of future generations to meet their own needs". (Emas, 2015) Over the years there were many different definition of sustainable development however the main idea of sustainable development is still to preserve our environment for the future. BanKi-moon who is the former Secretary-General of the united states have defined sustainable development as a "pathway to the future we want for all. It offers a framework to generate economic growth, achieve social justice, exercise environmental stewardship and strengthen governance." (BanKi-moon, 2013) Based on this definition it can be seen that concept of sustainable development is developing and in addition to the environment preservation, takes into consideration also the economic and social needs of the countries. The environmental responsibility can be also very important tool for both countries as well as businesses. Social and environmental responsibility of the company or country can have large impact on the negotiation with other parties or on the overall perception of their brand or national brand. (Lund-Thomsen, 2013) More sustainable practices were often associated with the additional costs and lower economic growth, however, there are several scholars suggesting that sustainable development can in fact lead to the increased economic growth of the countries and to the increased sales of the companies. Arthur Pigou have proposed to take into consideration the additional costs and benefits of the companies' sustainable practices. In his work "The Economics of Welfare"(1920) Pigou have suggested

to take into consideration the negative impact of the companies on the environment when determining taxes. Therefore, it was suggested to increase the overall costs of the companies that are not using sustainable practices in their production. According to Michael Porter and Claas van der Linde the increasing of pollution is partially a fault of inefficient resource use in the production. They have concluded that improvement of production processes and implementation of more sustainable processes or technologies can lead to the decrease of the environmental pollution, while also satisfying the increasing demand for the products. (Porter & Linde, 1999)

## 2.2. Development of sustainable solutions

People all over the world can now feel the results of increased pollution which have resulted in plastic polluting water, air pollution, decrease of natural wildlife as well as weather and heat changes caused by global warming. (Pathak & Mandalia, 2011) We as a society have reached the point where there is a need for everyone to recognize the threat of our own actions towards the environment and to seek improvement in order to preserve our planet for future generations. (Pathak & Mandalia, 2011) There are several motions from countries, companies, celebrities or even individuals aimed at the preservation of natural wildlife and protection of the overall environment.

First steps in the process of developing more sustainable solutions with aim to decrease the negative impacts of industrialization and mass production can be traced back into the 1990's after the United Nations introduced the concept of sustainable development on the Conference on Environment and Development in 1992. (Clark, et al., 2009) The basis for the sustainable development concept was based on the results of discussions held on the Brundtland Commission in 1987. (World Commission on Environment and Development, 1987) Companies have in the 1990's started to apply new sustainable strategies such as eco-designs or green product designs with aim to reduce the impact of their production on the environment. United Nations Environmental Programme have in the year 1989 started to focus on the new approaches that would help to prevent creation of the pollution from occurring in the first place. (Clark, et al., 2009) As a result the UNEP have introduced the strategy of Cleaner Production which was defined as "the continuous application of an integrated preventive environmental strategy to processes and products to reduce risks to humans and the environment." (El-Kholy, 2002) One of these eco-design strategies have over the years developed from the general cleaner production method into the Design for Sustainability which was focusing also on environmental, economic and social aspects of the production.

According to Clark, et al., (2009) the “sustainable innovation and design is not necessarily about new technologies, but about rethinking how to meet the need for growth while at the same time reducing negative environmental and social impacts.”

Cleaner Production strategy is a strategy described as “the continuous application of an integrated preventive environmental strategy to processes and products to reduce risks to humans and the environment.” (El-Kholy, 2002) Cleaner Production strategies can consist of implementing new technologies, changes towards more sustainable materials, changes in overall operations practices, taking into consideration sustainability when developing new product, changes in the waste management, maintenance or packaging of the products. Cleaner Production strategy is already, in different forms used by many countries and companies due to its cost efficiency, higher quality products and at the same time decrease the negative impact on environment.

Design for sustainability is environmental concept that includes social and economic aspects. This design for sustainability is eco-design concept and focuses on the incorporation of the sustainability into the companies both internal and external processes. Companies using design for sustainability aim to decrease negative environmental, social and economic impacts all the way from designing of the products throughout entire supply chain and product life cycle.

*Table 1 developments of sustainable practices*

<b>Major developments of sustainable strategies</b>			
<b>Events</b>	<b>Type of development</b>	<b>Outcome</b>	<b>Introduction date</b>
Brundtland Commission	Conference meeting	Started talks about sustainability issues and laid basis for creation of sustainable development	1987
United Nations Environmental Programme development of sustainable practices	Development of strategies	Introduction of Cleaner Production Strategies	1989
Result of concept adaptation by companies	Sustainable solutions created by companies	Creation of eco-design and green product design	1990's
United Nations Conference on Environment and Development	Conference meeting	Creation of sustainable development concept	1992
Focus on three aspect of People, Prices and Planet when developing sustainable strategies	Development of strategies	Creation of design for sustainability strategies	Unknown

Table 2 Product innovation level (Ceschin & Gaziulusoy, 2016)

Approach	Focus	Limitations
Green design	Redesigning of products individual qualities to reduce environmental impact	Limited environmental impact due to a focus on single issues. Not going into the depth of environmental issues
Eco-design	Reducing environmental impact throughout the entire products life cycle	Focused only on environmental problems and disregards problems that cannot be accounted for in life-cycle assessments. Gained efficiency might not have large impact due to increased consumption
Emotionally durable design	Focused on increasing emotional attachment of the user towards the product	Due to different attachment motivators it is hard to effectively stimulate user's attachment towards product. Extension of product durability can be not beneficial to environment for some types of products. Might lead to reduced sales
Cradle to Cradle design	Focused on reuse, recycling or regeneration within the industry. Focuses also on non-human species.	Remains at the rhetorical level and is not very well technically justified
Biomimicry design	Design of products and systems is based on nature	Imitating nature design does not necessarily means improved sustainability might be misleading towards sustainability of product
Design for the Base of the Pyramid	Focused on the improving lives of low-income customers through market-based solutions	Raises the moral dilemma of targeting the poor people as a consumer not differentiating between essential and non-essential products



According to John Dernbach (1998) “effective governance requires a nation to consider and protect the environment and natural resources on which its current and future development depend.” Countries are more often recognizing the need, for more sustainable practices which can be seen also on their actions, such as participation on the summits regarding climate changes or environmental pollution. As a result of increasing pollution and climate changes, 179 states have in the year 2016 signed Paris Climate Agreement committing themselves to fight the climate changes, mostly by reducing global greenhouse gas emissions. (Clemencon, 2016) Currently 197 countries are part of the Paris Agreement including United States which have threatened to withdraw from the agreement but cannot formally do so until November 2020. All of these countries are trying to reduce the global temperature increase by decreasing their climate altering pollution, by creating concept for transparent monitoring of countries as well as by having more developed countries to help developing countries with their climate mitigation issues.

### 2.3. Concept of sustainable development

Sustainable development is a concept that was created as a result of the environmental changes and overall pollution of the environment. It seeks to decrease the impact of growing economic growth on the environment and to preserve the environment of the planet for the future generations. (Pathak & Mandalia, 2011) Sustainable development can be divided into three different categories that are however interconnected and influence each other. Society, Economy and Environment are the three stable factors influencing the new sustainable development practices. (Strange & Bayley, 2008) All three factors are very important and need to be balanced to ensure our survival. For example: without good and functioning economy the countries would not be able to ensure the basic needs such as sufficiency of food, health care or security. Therefore, the negative economic factor would have negative impact on society. It can be assumed that countries would in such case try to improve their economy by lowering standards and regulations concerning pollution in order to allow companies to produce more products even at the cost of negatively influencing the environment. Another example of need for all the aspects to be functioning and balanced would be the case of damaged environment, which could lead to the less healthy population or environmental changes which would most likely also lead to decrease of people performance in the work and in this way impacting also

economy. Countries are nowadays naturally driving to increase their economic performance in order to be able to improve the living conditions of its inhabitants. However, it often happens that countries do not focus enough, on the sustainability of their actions towards the environment which can in the long run lead to the serious consequences for their inhabitants.

*Figure 1 (University of Wisconsin, n.d.)*



It is clear that humanity cannot in the long run survive without the suitable environment. Sustainable development is therefore, very important concept not only with the goal of preserving environment but also with the goal of preserving humanity itself.

#### 2.4. Introduction to zero waste shops

Companies all over the world can nowadays enter the market in many different countries. Globalization of the companies, however, also means the increase in production, and most of the time also increase in the transportation distances and quantities. Even though that increased mass production of the goods does have negative impact on the environment and overall pollution it is only one part of the problem. All of the finished products need to be transported to their end user undamaged and in the proper consumable or usable state. To be able to transport and preserve the goods companies have to use various forms of packaging. This thesis focuses only on one part of the sustainability issues, which is the pollution connected to packaging of the products. Countries are implementing several measures to decrease the litter waste such as recycling, implementation of stricter packaging regulations or educating of end users. However, countries are often only threatening the outcome of the litter pollution. (TNS

Political & Social, 2014) In most of the developed countries there is several retail chain stores present allowing people easy access to many different goods from various manufacturers at one place. However, to be able to store and offer products to a large number of customers, the goods need to be packaged in order to increase their preservation time and in this way avoid food waste or product damage. (Beitzen-Heineke, et al., 2016) As a result of the public pressure and popularization of ecological and environmentally friendly lifestyles the new innovative concept of zero waste shops was introduced. Zero waste shops or in other words package free shops are the stores that are offering their customers the value of shopping necessary food or hygiene products in the more sustainable way. Products offered in these shops are usually ecological food or hygiene products which are sold without unnecessary chemical treatment. (Beitzen-Heineke, et al., 2016) It can be said that zero waste shops fit the Design for sustainability strategy in terms of selling only the products that are environmentally friendly products. The zero waste shops are selling the products mostly made by the local producers but also from well-known ecological brands that are selling their products without the unnecessary packaging. Retailers on the other hand tend to sell the product of their preferred suppliers even if it means transportation of goods from abroad. (Beitzen-Heineke, et al., 2016) In fact the sale of home produced products by retail stores have decreased by almost 13% in the period of 2010-2017 which means also higher environmental pollution due to transportation. (Jarossová, 2017)The zero waste shops are also running a unique system of selling the products to the end users without the packaging in the form of customers bringing their own dozes. However, new customers might not be aware of this system at first which means that there are some ecologically friendly bags stored in the shop in case of new customers not bringing their own shopping containers. Therefore, the zero waste shops are using the sustainable practices in their whole supply chain. In this way the zero waste shops are reducing the impact of producing and using packaging on the environment. (Beitzen-Heineke, et al., 2016) Most of the products sold in this type of shops are the basic ingredients or food that can last longer period without the additional chemicals. However, the portfolio of the goods is still growing as the concept of zero waste shopping is on the rise. Package free shops aim to educate the population about the environmental issues created by litter waste as well as to offer people more environmentally sustainable shopping. The popularity of the zero-waste shopping can be seen also on the number of the zero waste shops. This new business model is relatively new and there are currently 25 package free shops in Slovakia alone. (ECO HERO, 2019) In this thesis the research is limited on the Slovak Republic as a country that is relatively well developed country, but is only now starting to implement more environmentally friendly practices. Due

to the limited portfolio of products and their durability the zero waste shops cannot fully replace the popular retail stores which are using packaging in order to preserve the consumables. (Beitzen-Heineke, et al., 2016) Zero waste shops are currently not able to serve the whole demand for the products since they are most of the time situated in the bigger cities which allows them to reach the potential new customers easier. Furthermore, due to the limited product portfolio of zero waste shops the average consumers would have to in addition to shopping in zero waste shop also visit the retail shops in order to satisfy their traditional consumption habits. Brand preferences can also play a big role in the future development of the zero waste shops. Zero waste shops do not purchase the products from the traditional well know manufacturers due to the fact, that these branded products might not be ecological or can be chemically treated. It is also unlikely that well known manufacturers would be able to, or willing to change their production processes, to be able to sell the products without packaging. (Beitzen-Heineke, et al., 2016) Brand loyalty and package branding can play a big role in the decision making of the consumer. Zero waste shops cannot compete with the well-established manufacturers in terms of branding of products or in terms of product portfolio. Therefore, it is important to find out people perception of zero waste shops in compare to retail shops and in this way, help identify the potential target group for the new sustainable trend of zero waste shops.

The focus of this thesis is on the perception of people towards the zero waste shops compared to perception of retail shops. It is also aim of this thesis, to identify the potential target group for the zero waste shops in Slovakia. The research conducted in this thesis is focusing only on the food and hygiene products, since these products are the only products in which the zero waste shops and retail shops are competing.

### 3. Literature review

This thesis is focusing on the public perception towards the new trend of zero waste shops and on the identification of the potential target group for zero waste shops.

In this chapter of the thesis the literature concerning the public perception towards zero waste shops in comparison to public perception towards traditional retail stores is reviewed. Decision making to shop in either zero waste shop or traditional retail shop can be impacted by the package advertising. Therefore, another literature reviewed in this chapter, is the literature concerning the impact of the package advertising on the customers. Shopping in zero waste shops is usually associated with shopping in more sustainable way. Sustainability of the

product or practices of the companies can have a large impact on some customers decision making and therefore, the literature covering the impact of sustainability on the purchase decision making of customers will be reviewed as well. Another aspect which might play a role in the decision making of customers is the fear of unknown or fear of change which might influence the new trend of zero waste shops. To help determine the target group for the new emerging business model of zero waste shops in Slovakia, the literature about the customers of zero waste shops will be reviewed as well.

### 3.1. Perception of zero waste shops in compare to traditional shops

To be able to research the perception of people towards the zero waste shops it is necessary to review the already existing literature about the differences in the perception of zero waste shops and traditional retail shops. First of all, it is important to define the terms of zero waste shops and traditional shops used in this thesis. Zero waste shops are by the Kroger, et al., (2018) defined as “small supermarkets which sell (mainly organic) food and non-food without non-retournable packaging (using bulk containers and / or multiway packaging).” For the purpose of this thesis the definition of zero waste shops is that zero waste shops are the shops implementing the zero waste packaging policy in their entire supply chain and offer the the non packed products to their customers. By traditional shops it is meant the shops that are selling the product in the traditional way, meaning that the products are either packaged or threatened to last longer time period.

According to Kroger, et al., (2018) research about the buying behaviour of zero waste shop customers, the ability to purchase the products without the packaging waste was one of the main reasons for the purchase of products from these zero waste shops. Therefore it can be said that perception of the zero waste shops customers is that these shops offer unique value in terms of sustainability and litter reduction. In terms of quality of the products Kroger, et al., (2018) have found out that quality of the products is one of the main reasons while the zero waste customers are buying their products from zero waste shops. Therefore, the main factors influencing the decision making of zero waste shops are the sustainability of the product and the overall quality of the products. Even though that customers of the zero waste shops perceive the zero waste shops as more environmentally friendly and as of selling higher quality of the products it does not have to be the case for the whole population. Zero waste shops might be using the more environmentally friendly supply chain strategy than the retailers in terms of packaging waste creation, however selling products without packaging might create other environmental issues. (Beitzen-Heineke, et al., 2016) Products that have to be consumed in the

limited time might last significantly longer if they are packaged. Zero waste shops are reducing the waste created by packaging but on the other hand might be perceived as contributing to the food waste if the stores are not managed well and the products go to waste. Furthermore, the shorter life cycle of the products purchased in the zero waste shops might also impact the perception of people towards the quality of the products sold in zero waste shops. Another aspect playing a role in the perceived quality of the products can be the branding. While traditional retail stores are selling well known brands of the products the zero waste shops tend to sell the products from the small local producers that might not be known or perceived that high. People tend to perceive the zero waste products to be more expensive due to the products being mostly ecological and perceived as of higher quality. (Barks, 2017) It can be said that generally the zero waste products are perceived as of higher quality, more sustainable and more expensive than the products sold in the traditional shops.

*Table 3 Reviewed literature concerning perception of zero waste shops*

Authors	Headline	Year of publication	Type of literature	Literature topic
Gustafsson; Jonson; Smith and Sparks	Retailing Logistics and Fresh Food Packaging: Managing Change in the Supply Chain	2006	Book	Purpose of the packaging
Lindh; Williams; Olsson and Wikstrom	Elucidating the Indirect Contributions of Packaging to Sustainable Development: A Terminol-ogy of Packaging Functions and Features.	2016	Packaging Technology and Science journal	Description of traditional vs zero waste supply chain with emphasis on packaging of products
Naik; Ward; Godfrey and Hanifan	Simultaneous Sustainability and Savings	2010	Study concerning sustainable packaging	Description of the value added by zero waste supply chain
Sjölund	Zero Waste within the food sector and an evaluation of the package-free distribution of two different food products	2016	Master thesis	Role of zero waste concept in the future of resource management
RILA and CRC	The Value of Sustainability in retail marketing	2015	Journal article	Performance of brands offering additional sustainability value
Natural Marketing Institute	14th Annual Consumer Report: 2016 State of Sustainability in America	2016	Annual consumer report	Role of sustainability in the purchase decision making of customers
TNS Political and Social	ATTITUDES OF EUROPEANS TOWARDS WASTE MANAGEMENT AND RESOURCE EFFICIENCY	2014	Consumer report	Sustainability behaviour of european consumers.

### 3.2. Impact of package advertising on customers decision making

One of the main features of package advertising is providing information about the products to the customers. Packaging is also largely used for the marketing purposes and can have significant impact on the customer. Therefore, there are several different concepts that needs to be defined for the purpose of this thesis, such as brand, brand equity or package advertising. Brand can be defined as “a name, term, design, symbol, or any other feature that identifies one seller’s goods or service as distinct from those of other sellers.” (American Marketing Association, 1960) Donna Antonucci explains the brand as a known identity of the company in terms of what products and services they offer but also the essence of what the company stands for in terms of service and other emotional, non-tangible consumer concerns.” (ECON, 2016) Brand and branding is very important part of every company. Main purpose of the brand is to help customers distinguish the products of different manufacturers. Zero waste shops are selling products without the packaging which means that their customers are not able to distinguish the manufacturers based on the products packaging. Customers shopping in the traditional retail stores have the ability to distinguish individual manufacturers based on the products packaging and therefore form a brand preference or even brand loyalty to certain manufacturers. Brands and branding serve also to help companies to communicate with the customers, market their product in more attractive way and to influence the purchase decision making of the customer directly in the shop. The product packaging is used also to communicate the product features, ingredients used or even about the current activities of the company. Bonnici (2015) describes the purpose of branding strategy as to “create brands that are differentiated from the competition, thereby reducing the number of perceived substitutes in the marketplace, increasing price elasticity, and improving profits.”

Pullig (2008) describes the Brand equity as a set of assets and liabilities of the company that are impacting the customers perception of the brand. Brand value and brand equity are two different concepts that are influencing each other. (Pullig, 2008) While Brand value represent the market value of the company the Brand equity represents the perception of the company in the eyes of the customers. Companies with the good Brand equity usually have higher loyalty of their customers and therefore the brand value of the company tends to be high as well. (Tuominen, 1999) Even though that zero waste shops have their unique shop brand, they are not selling the branded products which means that customers most of the time do not know, who is the producer of the products and therefore do not have the ability to create preference



towards the individual manufacturers. While in traditional retail shops the manufacturers are helping the retailers in the form of advertising the zero waste shops have to rely only on their own marketing activities.

The definition of what is the product is needed in or to be able to describe the package advertising. Kotler and Keller define the product as “ anything that can be offered to a market to satisfy a want or need, including physical goods, services, experiences, events, persons places, properties, organizations, information, and ideas.” (Kotler & Keller, 2015) This thesis is focusing on the products sold by both zero waste shops and by traditional retail stores and therefore, focuses on food and hygiene products only.

Packaging of the products is the last chance of the manufacturers to impress the customers and influence their purchase in their favour which makes packaging very important tool of marketing communication. (Nawaz, et al., 2012) According to Mazhar, et al., (2015) Package advertising can have positive impact on the sales of the company and on the customers perception of the brand, company values, product quality and innovation. Packaging fulfills several functions from keeping the product safe and consumable through providing information to marketing activities. (Silayoi & Speece, 2007) Competition on the market is rising and package advertising might play a distinctive role in gaining new customers. (Silayoi & Speece, 2007) Product manufacturers from all around the world are paying more and more attention to make packaging of their products as attractive as possible in terms of using the right colors, materials or designs. The main purpose of the products being packaged is still to preserve the product and to provide customers with the information about the products. (Sudha & Rani, 2014)

Saeed, et al., (2013) have found out that purchase decision making of the customers is influenced more by the Brand attachment than by the Brand image. Unique packaging and good quality of the packaging is remembered by the customers for a longer period of time and might impact the decision making of the customers during the next shopping experience. (Mazhar, et al., 2015) Mazhar, et al., (2015) have researched the impact of the packaging elements and package advertising on the purchase intent of the customers. While color used in the package advertising does have significant influence on the purchase intent of customers it has been found out that packaging material does not influence the purchase decision making of the customers. It has also been found out that good design and innovative packaging does have the positive impact on the customers purchase intent. (Mazhar, et al., 2015) Subramanian,

(2017) concluded that the purpose of the product packaging as well as the design of the product packaging is constantly evolving. “ Recently, packaging has evolved to great heights and has developed way beyond its original function of product protection.” (Subramanian, 2017) Another research focusing on the impact that packaging colour has on the purchase decision making of customers was conducted by Seher, et al. (2012) The research conducted by Seher, et al., (2012) found out that color of the package advertising had impact on the purchase decision making of customers. Furthermore, it has been concluded that Brand and packaging of the product are influencing customers purchase decision making process. (Seher, et al., 2012) Fatima & Lodhi, (2015) have in their journal article researched the impact of brand equity on the purchase decision making of the customers. It has been concluded that consumers knowledge and awareness is influenced by the package advertisement. Furthermore, the results showed that, the purchase decision making of hygiene products customers was not influenced by package advertising into great extent, however the advertising of the companies did have significant impact on purchase decision making process of customers. (Fatima & Lodhi, 2015)

*Table 4 literature reviewed concerning package advertising and its impact on consumers*

Authors	Headline	Year of publication	Type of literature	Literature topic
Gustafsson; Jonson; Smith and Sparks	Retailing Logistics and Fresh Food Packaging: Managing Change in the Supply Chain	2006	Book	Purpose of the packaging
Lindh; Williams; Olsson and Wikstrom	Elucidating the Indirect Contributions of Packaging to Sustainable Development: A Terminol-ogy of Packaging Functions and Features.	2016	Packaging Technology and Science journal	Description of traditional vs zero waste supply chain with emphasis on packaging of products
Naik; Ward; Godfrey and Hanifan	Simultaneous Sustainability and Savings	2010	Study concerning sustainable packaging	Description of the value added by zero waste supply chain
Sjölund	Zero Waste within the food sector and an evaluation of the package-free distribution of two different food products	2016	Master thesis	Role of zero waste concept in the future of resource management
RILA and CRC	The Value of Sustainability in retail marketing	2015	Journal article	Performance of brands offering additional sustainability value
Natural Marketing Institute	14th Annual Consumer Report: 2016 State of Sustainability in America	2016	Annual consumer report	Role of sustainability in the purchase decision making of customers
TNS Political and Social	ATTITUDES OF EUROPEANS TOWARDS WASTE MANAGEMENT AND RESOURCE EFFICIENCY	2014	Consumer report	Sustainability behaviour of european consumers.

Authors	Headline	Year of publication	Type of literature	Findings of the literature
Yu and Lee	The Effects of Consumers' Perceived Values on Intention to Purchase Upcycled Products	2019	Journal article	Perception of sustainable products
Orzan; Cruceru; Balaceanu and Chivu	Consumers' Behaviour Concerning Sustainable Packaging: An Exploratory Study on Romanian Consumers	2018	Journal article	Impact of packaging on the customers purchase intent

### 3.3. Impact of sustainability on customers decision making

#### **Impact of different supply chains on environment (current practices)**

In terms of the impact of the different types of stores on environment it is important to look on the overall supply chain management of the traditional shops as well as on the supply chain of zero waste shops.

Products sold in the traditional retail stores are usually packaged at least at some point of their distribution. Packaging of the products might be very important especially if the products are being transported over the longer distances. Packaging helps to protect and preserve the products as well as to advertise the manufacturer and provide information about the product. (Gustafsson, et al., 2006) Traditional product packaging according to Lindh, et al., (2016) there are three different levels of packaging as it can be seen on the figure 2

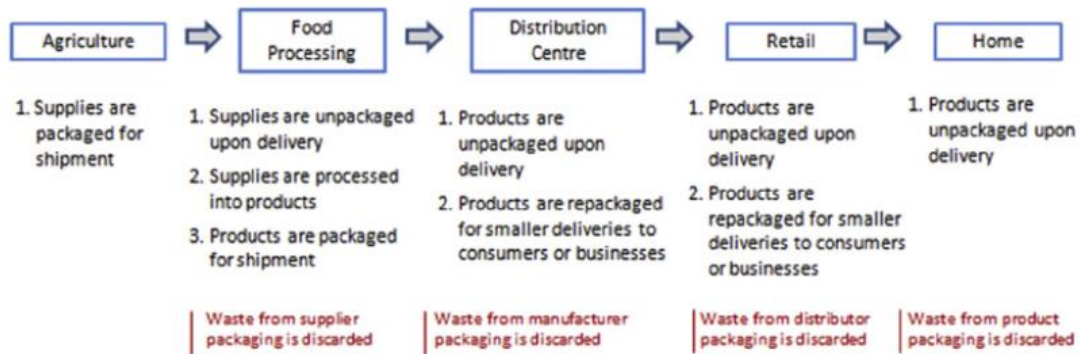
*Figure 2 (Naik, et al., 2010)*



The first layer of packaging is serving as a direct protection of the product while other two packaging serve as additional protection, stability and increase the handling of the product when transported in the bigger quantities. The supply chain of food in the traditional stores consists of several steps that might create the packaging waste as it can be seen on the figure 3. First time the food products are packaged is in the agriculture production with aim to protect the supplies in the process of transportation into the production facilities. After the raw supplies reach the production facility, they need to be unpacked, processed and packaged again, generating first package waste in the supply chain. Depending on the individual companies the products might be either shipped to distribution centre or directly to retailers. In the distribution centre the additional packaging is again removed and products are repacked in order to satisfy the individual smaller deliveries to its customers and in this way again generating package waste. Once the food products reach the store the product are either unpacked or repacked to fit the quantities necessary for end users. End users afterwards unpack the product in order to consume it. There is therefore, a lot of packaging waste created in the traditional stores supply

chain. (Naik, et al., 2010) However it can be said that packaging of the products helps to reduce the generation of food spoiling or damaging and in this way decrease the pollution from food waste.

Figure 3 (Naik, et al., 2010)



Zero waste supply chain differs from the traditional shop supply chain in many different aspects. First of all, the concept of zero waste is not considered to be the best strategy for the future resource management by everyone. (Sjölund, 2016) According to Braungart, et al., (2007) the concept of eco-effectiveness might be more suitable for the future, due to the zero waste shops being too disruptive to the economic growth. Eco-effectiveness aims on promoting the longer life cycle of the material by upcycling or in other words reusing of materials. According to Zero Waste International Alliance (ZWIA, 2009) the main advocates of Eco-effectiveness argue that zero waste concept aims to completely minimize the waste while eco-effectiveness seeks to find the optimal point between sustainability and economic growth. Zero waste shops are however selling the consumable products which have no upcycling value. In terms of supply chain the zero waste shops are using the businessmodel that aims to completely reduce the packaging waste and significantly decrease pollution from transportation of goods. The zero waste shops are purchasing their products mostly from the local small producers or from the brands that have a same sustainability views towards the packaging and eco friendliness of the products.

Based on the description of the both types of stores supply chain managements it can be said that zero waste shops are more environmentally friendly in terms of packaging waste creation.

## **Sustainability added value and its impact on customers**

In this part of the literature review the impact of sustainable product or business on the decision making of customers is reviewed.

Sustainability of the products or businesses is constantly improving due to the growing focus of the society on the environmental issues. The brands that are offering additional value in terms of for example functionality benefit, reusability or improvement of personal or collective wellbeing tend to have a better performance than the businesses offering simply the product without these added values. (RILA and CRC, 2015) Brands offering some form of added value in terms of sustainability generally have around 60% bigger share on the market than the brands without the added sustainability value practices. (RILA and CRC, 2015) In the year 2016 around 68 million Americans (one fourth of the population) are basing their purchase decision making on their sustainability values. (Natural Marketing Institute, 2016) The survey conducted by Natural Marketing Institute also showed that people are willing spend up to 20% more money on the environmentally friendly products. (Natural\_Marketing\_Institute, 2016) Based on the survey conducted in 60 different countries Nielsen.com (2014) have concluded that around 55% of the consumers are willing to pay more for the environmentally friendly products from the responsible manufacturers. In addition, 62% of Europeans are avoiding the purchase of overpackaged products, which means that sustainability does have some impact on the purchase decision making of customers. (TNS Political & Social, 2014) Even some of the traditional retail stores are implementing in some way the products with the added sustainability value. Sales of products with sustainability added value generated 15% of the entire U.S. retailers revenue in 2015. (Natural\_Marketing\_Institute, 2016) There is also a steady sales growth of the product with sustainable packaging and products with sustainability marketing programs. Over the years 2013 and 2014 the growth of product with sustainable packaging increased by two percent while product with sustainable marketing programs grew by five %. (Natural\_Marketing\_Institute, 2016) The literature concerning the extend into which are the customers influenced by sustainable practices of zero waste shops or products is quite limited due to the lack of long term data. Zero waste shops are relatively new concept which needs to be observed for the longer period of time to be able to determine the impact on the consumers. Yu & Lee, (2019) have however researched the consumers' perceived values towards the added values of Upcycled Products. Upcycled Products are similar to zero waste

products in term of having simillar sustainability added value. Upcycled products are product made from the material that can be further reused in the process of creating new products. (Yu & Lee, 2019) The results of the Yu & Lee, (2019) article suggests that the these types of products are perceived as green and ecologically friendly, as having more emotional value and creating a sense of good feeling and as more aesthetically attractive than product packaged in non reusable materials. Orzan, et al., (2018) have in their survey concerning behaviour of customers towards the sustainable packaging in Romania found out that 88% of the respondents are trying to buy the products in ecological packaging which might suggest that ecological value of the products packaging is one of the factors significantly influencing customers purchase decision making.



Table 5 literature reviewed about impact of sustainability on customers

Authors	Headline	Year of publication	Type of literature	Literature topic
Gustafsson; Jonson; Smith and Sparks	Retailing Logistics and Fresh Food Packaging: Managing Change in the Supply Chain	2006	Book	Purpose of the packaging
Lindh; Williams; Olsson and Wikstrom	Elucidating the Indirect Contributions of Packaging to Sustainable Development: A Terminol-ogy of Packaging Functions and Features.	2016	Packaging Technology and Science journal	Description of traditional vs zero waste supply chain with emphasis on packaging of products
Naik; Ward; Godfrey and Hanifan	Simultaneous Sustainability and Savings	2010	Study concerning sustainable packaging	Description of the value added by zero waste supply chain
Sjölund	Zero Waste within the food sector and an evaluation of the package-free distribution of two different food products	2016	Master thesis	Role of zero waste concept in the future of resource management
RILA and CRC	The Value of Sustainability in retail marketing	2015	Journal article	Performance of brands offering additional sustainability value
Natural Marketing Institute	14th Annual Consumer Report: 2016 State of Sustainability in America	2016	Annual consumer report	Role of sustainability in the purchase decision making of customers
TNS Political and Social	ATTITUDES OF EUROPEANS TOWARDS WASTE MANAGEMENT AND RESOURCE EFFICIENCY	2014	Consumer report	Sustainability behaviour of european consumers.
Yu and Lee	The Effects of Consumers´ Perceived Values on Intention to Purchase Upcycled Products	2019	Journal article	Perception of sustainable products
Orzan; Cruceru; Balaceanu and Chivu	Consumers´ Behaviour Concerning Sustainable Packaging: An Exploratory Study on Romanian Consumers	2018	Journal article	Impact of packaging on the customers purchase intent

### 3.4. Fear of unknown or fear of change

Another aspect impacting the success ability of the zero waste shops might be the fear of unknown or fear of change. The business model of the zero waste shops is relatively new concept that is not very well known by traditional customers. ‘‘People are very open-minded about new things, as long as they’re exactly like the old ones.’’ (Kettering, n.d.) Fear of change is a basic human nature that can have a significant impact on the new emerging trends such as zero waste shops. Zero waste shops have a unique business model which provides added sustainability value but can be avoided by some traditional shoppers due to the differences in shopping experience. Customers of zero waste shops are shopping by bringing their own containers into which the products are dispensed while the products in retail stores are sold already packed. Zero waste shops are generally able to provide enough information about the process of shopping in their stores with emphasis on the friendly attitude of the staff members and in this way limit the fears of the potential customers from the new shopping experience. Impact of this fear from the different kind of shopping will not be part of the thesis research due to the ability of zero waste shops to help customers overcome it.

### 3.5. Target group of zero waste shops

Around 92% of respondent participating in the survey conducted at the request of European Commission (TNS Political & Social, 2014) about the perceptions of Europeans towards the waste management and resource efficiency are trying to reduce the waste generated by their household. Even though that 87% of respondents have stated that their country is generating too much waste only 43% of respondents thinks that their household is generating too much waste. (TNS Political & Social, 2014) Based on these data it can be seen that majority of the Europeans are trying to decrease their waste creation. In fact 91% of respondents from Slovakia have stated that they are trying to reduce their waste which means that the Slovak market does have the effort to become more environmentally friendly. (TNS Political & Social, 2014) From the demographic point of view the more females have stated that their household is trying to reduce the waste. In terms of age, the older the respondent were the higher percentage of them stated that they tend to reduce their household waste. In fact, only 89% of respondents aged 15-24 are trying to reduce their household waste in comparison 95% of respondents aged 55 and more are trying to reduce their household waste. (TNS Political & Social, 2014) Out of all

the respondents in the TNS Political & Social, (2014) report 83% are avoiding food waste by buying only what they need and 62% are not buying overpackaged products. In Slovakia 80% of respondents is buying only the food they need and 63% are not buying overpackaged goods. Again more females than males have responded that they are reducing waste by buying only food they need by avoiding buying overpackaged goods. 41% of the respondents are not trying to reduce household waste by saying that it is responsibility of the producer (TNS Political & Social, 2014). Zero waste shops therefore might have appealing business model to the large portion of the population. Even though that the differences in the percentages in different groups were not high it might be said that the most likely target group for zero waste shops are females and are in the age category of 55 years and more.

#### 4. Problem statement

More and more companies all over the world are implementing the sustainability strategies into their processes to prevent or decrease the environmental pollution. Topics such as food waste, waste recycling and packaging waste are becoming the part of growing discussions especially due to the high plastic pollution in the environment as well as the use of extensive packaging of goods. Even though that countries and companies are more often implementing the ecological strategies into their development plans, it can be said that countries with their more ecological waste management strategies such as recycling, focus only on the threatening of the problem of unnecessary packaging and not on prevention of the litter waste from emerging. It is the change in the overall lifestyle of the population as well as the negative consequences of the pollution that are driving the need for the change in the business strategies and attitude towards the sustainability. There are, however, options to reduce the creation of the litter in the first place. There is currently a growing demand for the more sustainable way of shopping from the people that have motivation and aim to live in the more ecologically friendly way. The new emerging trend of zero waste shops offers the customers to purchase the goods without creating any unnecessary packaging waste. Therefore, this thesis is focusing on the relatively new emerging trend of zero waste shops allowing the end users to shop products without any unnecessary packaging. Even though that zero waste shops are more environmentally friendly options to the shopping of food and hygiene products the success of this new trend can highly depend on the people perception towards this new concept. People are traditionally used to shop food and hygiene products from the retailers or shops that provide the products in the packaging. Packaging of the products is necessary to preserve the product and therefore the public image of the zero waste products might not be very good in terms of their preservation

time. Another difference between the zero-waste concept of shopping and the traditional retail shop shopping is in the branding area. While the zero waste shops are using mostly local suppliers most of the products sold by retailers are from abroad and from well know brands with their unique package advertising.

Purpose of this thesis is to investigate the people perception towards the package free shops in compare to the perception of retail stores in Slovakia. Another aim of the project is to identify the suitable target group for the new trend of zero waste shops in Slovakia. This thesis is looking also on the perception of people towards the traditional retail shops in order to be able to determine the perception of zero waste shops in compare to their competitors. Furthermore, based on the collected data, target group for the emerging trend of zero waste shops will be assessed and tested to the results of previous more generic researches. Based on the reviewed literature several hypotheses concerning the perception of people towards the traditional and zero waste shops were created and will be tested.

First hypothesis is focusing on the impact of package advertising on the consumers of food and hygiene products.

*Table 6 literature supporting Hypothesis number 1*

Authors	Headline	Year of publication	Type of literature	Findings of the literature
Yu and Lee	The Effects of Consumers' Perceived Values on Intention to Purchase Upcycled Products	2019	Journal article	Perception of sustainable products
Orzan; Cruceru; Balaceanu and Chivu	Consumers' Behaviour Concerning Sustainable Packaging: An Exploratory Study on Romanian Consumers	2018	Journal article	Impact of packaging on the customers purchase intent
Mazhar; Daud; Bhutto and Mubeen	Impact of product packaging on Consumers Buying Behaviour: Evidence from Karachi.	2015	Journal of marketing and Consumer research	Design and colour of the packaging does have impact on customers purchase decision making

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**Hypothesis 1: Consumers of food and hygiene products are significantly influenced by package advertising of companies selling products in retail shops.**

Hypothesis number two is about the impact sustainability on the decision-making process of customers. This hypothesis is based on the review of literature Orzan, et al., (2018) Yu & Lee, (2019) and Kroger, et al., (2018)

**Hypothesis number 2: Consumers of food and hygiene products are significantly influenced by the sustainability of products and shops when making purchase decision.**

Literature of Mazhar, et al., (2015) and Kroger, et al., (2018) suggest that in terms of quality of the products the zero waste shops are perceive as selling better quality than retail shops. Therefore the hypothesis number 3 states that package free shops sell better quality food and cosmetics products than retails stores.

**Hypothesis number 3: Package free shops are by consumers of food and hygiene products perceived better than retail shops in terms of quality of products.**

Barks, (2017) and Kroger, et al., (2018) in their research suggest that the perception of the package free shops is that the package free products are more expensive than labeled products sold in retail stores. Therefore the hypotheses number 4 is that the package free shops are perceived as more expensive than retail shops.

**Hypothesis number 4: Package free shops are by consumers of food and hygiene products perceived as more expensive than retail shops.**

Works of Yu & Lee, (2019), Orzan, et al., (2018), Kroger, et al., (2018) suggest that perception of the zero waste products in terms of sustainability development is better than the perception of retail stores. In the hypothesis number 5 the results of questionnaire will be tested with a focus on sustainability perception of zero waste shops in compare to retail shops.

**Hypothesis number 5: Package free shops are by consumers of food and hygiene products perceived better than retail shops in terms of sustainability.**

Hypothesis number 6 is concerning the potential target group of zero waste shops. According to research conducted by TNS Political & Social, (2014) females are paying bigger attention to sustainability of product. Furthermore, higher aged respondents are more inclined to purchase zero waste products. It can be said that people from different age and gender will have different views of the zero waste shops.

**Hypothesis number 6: Age and gender of the respondents is influencing their perception of zero waste products.**

## 5. Philosophy of science

Philosophy of science chapter is important part of the project which helps the researcher to explain how the research problem area is investigated. Research philosophy therefore helps to determine the framework of overall research approach of this project. Purpose of this chapter of the project is to state the philosophical views of the researchers and therefore the research paradigm used to conduct this project. Furthermore, the described ontological and epistemological views help to determine which methods of data gathering are suitable for the investigated phenomena and chosen research approach. This project seeks to research the

phenomena of impact of sustainability and brand added values on the customers purchase decision making. Another topic investigated in this project is focusing on the improvement of package free shops strategy and on reaching the target group with biggest potential. For the purpose of conducting this project the philosophical paradigm of positivism was chosen. My ontological and epistemological views leading to the decision of using positivism paradigm are outlined in the Ontology and Epistemology parts of the project.

### 5.1. Ontology

Ontology is philosophical element that seek to study the being or in other words it seeks to answer the question: What is the nature of reality? Ontology is often referred to, as “science or study of being” (Blaikie, 2009). Over the years several different opinions and views about the nature of reality were formed. Ontological view of the reality can also depend on the individual research phenomenon, however, there are two most popularised views of reality today and those are Objectivism and social constructivism. While objectivists researchers believe that existence of the social phenomena is not dependent on the social factors to give it meaning, Social constructivists believe that nature of the phenomena is determined by the society. My ontological view towards the nature of reality is that phenomenon can exist without the society to give it a meaning. I as a researcher also believe that that researched phenomenon of sustainability and brand added value in the eyes of the customers can be researched in objective manner.

### 5.2. Epistemology

Epistemology is part of research philosophy that focuses on the nature of knowledge. It focuses on the way the knowledge is gathered as well as a scope and limits of knowledge. Based on the choice of the objectivist ontological view, the process of gathering the knowledge is through positivism paradigm. Positivism as a philosophy was popularised in the 19<sup>th</sup> century by August Comte who have in his work consisting from several text series explained the concept of positivism. This series of texts called The Course on Positive Philosophy was later developed in his work Law of Three Stages where he introduced the idea of society being developed in three different stages. (Maheshwari, 2013) This development of society described by Comte is supposed to be happening in Theological, Metaphysical and Positive stages. However, depending on the individuals in the society the three stages can also be happening all at the same time. Theological stage is the stage of society development where people did not understand or were not able to explain some natural phenomena and therefore were seeking to find answer in some higher power or something divine. Metaphysical stage of society is

extension of the theological stage where people will start to believe in abstract concepts of higher power. Or in other words they believe in being that determines the events in the world or in their lives. Positive stage is according to Comte most evolved stage of society where people will start to rationalise phenomenon through objective data gathered by observation, experiments or comparison of already existing data. (Maheshwari, 2013) Comte also stated that positivists researchers should stay objective and independent from their research. In this way positivists researchers should be able to find single truth about the nature of reality. Furthermore feelings, emotions or motives of individuals should not be investigated into details. (Maheshwari, 2013) Therefore, the objective approach to the data gathering and analysis should be used in positivists studies. The nature of knowledge in positivism studies should be empirical which means that the knowledge should not be created from human experience. (Collins, 2010) Positivism as a research paradigm was criticised by several scholars in the late 20<sup>th</sup> century. Werner Heisenberg have stated that positivism can be applied only to objective or clearly stated knowledge of which there is too little. Therefore, Heisenberg said that ‘‘If we omitted all that is unclear we would probably be left with completely uninteresting and trivial tautologies’’. (Nanshen, 1972) However, the positivism is still very popular research paradigm that seeks to gain new knowledge through gathering and analysis of objective statistical data.

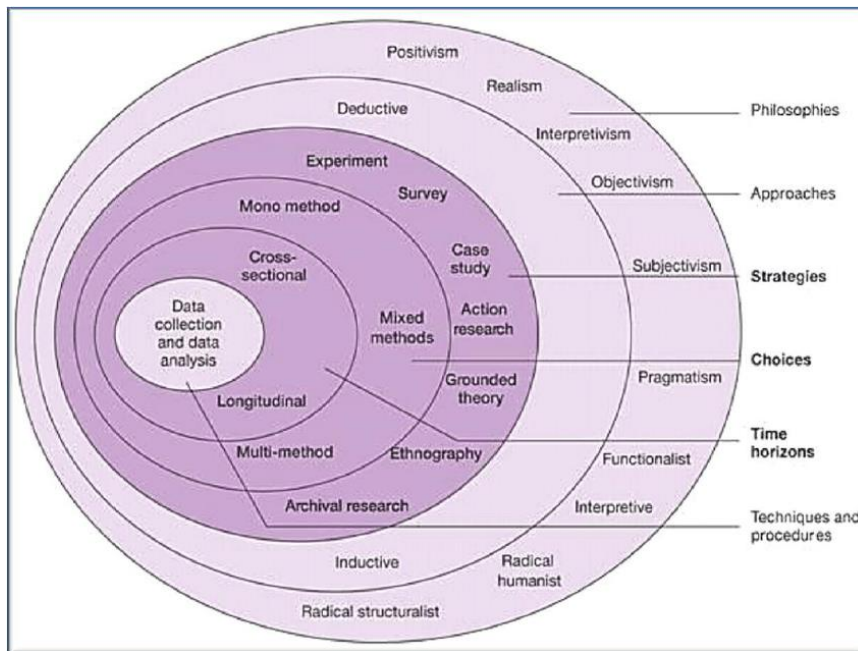
Based on the chosen ontological view it is my believe that most suitable way of the researching chosen phenomena is trough objective approach using scientific methods of enquiry.

### 5.3. Methodology

Methodology chapter of the project serves to determine the right choice of research approach and research strategy. Right research approach is very important in order to research chosen hypotheses in objective way. In the process of creating the strategy of the research the Research Onion model is used (please see figure 4). Research onion is a model developed by Saunders et al. (2009) which consists of six different layers that need to be adressed when developing project structure.



Figure 4



First step of creating overall project framework is to determine researchers' philosophical views of reality and knowledge. Based on my philosophical views which were described in philosophy of science chapter of the project, the philosophy used for the purpose of this project is positivism.

Another step of creating project framework is to determine the research approach of the project. Research approach can be either Inductive or deductive depending on the goal and purpose of the project. While inductive research is concerning with creation of new knowledge emerging from the data the deductive research aims to test already existing knowledge. Inductive research approach consists of general data collection in which the researcher looks for pattern and through generalization creates new theory. Based on the chosen philosophy and aim of the project to research already existing theory of sustainability and brand added values the deductive research approach is chosen for this project.

Third step of this model is to determine the most suitable strategy for research of chosen hypotheses. Chosen phenomenon can be investigated through several different research strategies. Based on the chosen deductive research approach and the purpose of the project the strategy of case study is used. Case study does not have one clear definition however Gustafsson have defined case study as "intensive study about a person, a group of people or a unit, which is aimed to generalize over several units." (Gustafsson, 2017) In this case the project is focusing on the sample of consumers of food and hygienic products.

Next aspect of project design consists of choices. These choices refer to the type and number of data collection methods that are going to be used in the project. Mono method means that one method of data gathering will be used while multi method indicates more data collection methods being used. I believe that all of the researched hypotheses can be tested by using only one quantitative method of data collection and therefore the mono method is used.

Time horizons of the research onion seek to answer the questions whether the research will be carried out only once in specific time or at several points in time. Another aspect taken into consideration is the type of sample. Whereas Cross sectional research is conducted at one point in time, each time with different sample the Longitudinal research happens at several points in time with the same sample. Research conducted in this project is cross sectional as the researched hypotheses don't need to be tested repeatedly on the same research sample.

Data collection and data analysis is a part of the research onion that specifies the method of data collection used in the project. Several different types of data collection methods could have been used to find out whether the hypotheses are true or false. By defining all the designs of the project, it is clear that chosen hypotheses will be best investigated through quantitative method of data collection. For the purpose of testing identified hypotheses I have decided to use online questionnaire as a method of data collection. Online questionnaire was chosen based on its ability to provide the researcher with representative sample size in relatively short time period while allowing the researcher to stay independent of social factors. Population of the food and hygiene products consumers in Slovakia can be quite high and therefore I have decided to focus only on the people of with age above 14 because they are more likely to be financially self-sufficient and able to visit also package free shops.

Current population of Slovakia (as of July 2018) was 5 445 040 with people at age 14 or below creating 15.2% of whole population. Therefore, the population for this project is 4 617 394 people. The representativeness of the sample size will not be on a high level as the researched population is quite high. One of the goal for this project is the number of completed questionnaire to be at least 250 respondents.

### **Construction of questionnaire**

In this part of the project the reasoning as well as the literature and models used for the structuring of the online questionnaire are described. In order to provide the reader of this project with understanding of how and why the questions were formulated in that particular way. First of all, to gather better understanding of the respondents as well as to be able to

determine whether the respondents fit into the target sample of the research, several demographic questions were asked. These questions will further provide the researcher with the means of more in detail analysis of the data with the aim of determining the target group of zero waste shops. All the questions formulated in the questionnaire are based on the literature concerning creation of online questionnaires or on the work of other researchers. The constructed questionnaire can be seen in the appendix number 1 called Questionnaire.

First question of whether the respondent is living in the Slovakia is necessary in order to be able to assess the validity of the respondents and whether he or she are part of the target sample. This question provides simple yes /no question and is based on the projects focus to investigate the researched phenomenon in that specific country.

Second question concerning the age category of the respondents was conducted with the aim of first of all determining whether the respondents are above the age of 14 years old, and therefore, whether they fit target sample. Another use of the data gathered from this question is to be able to find possible correlation between the age category of respondents and investigated hypotheses. Which means that people from different age categories can have different perceptions on the phenomenon. The question concerning the age of the respondents can be very tricky as some of the respondents might not want to state their exact age and therefore this question is not open ended but responded can choose into which age category he or she fits. This concept of the question was based on the chapter in the International Handbook of Survey Methodology book written by Fowler & Cosenza, (2008) who have stated that giving respondents options of choosing age category is more effective.

Third question of the questionnaire about the gender of the respondents is based on the method of gathering data from respondents taking into consideration gender minorities. This method of gender related data was described in the work of Herman, (2014).

Question number four focuses on the highest completed degree or a school of questionnaire participants. This demographic question was included in the project as the education level of the respondents can have some impact on their lifestyle and purchase decision making. Structure of the research question concerning the education level of respondents was based on the example set by Malhotra, (2006) in "The Handbook of Marketing Research".

Question number five focuses on the marital or relationship status of the respondents with the purpose to be able to analyse the results of the questionnaire more into detail and find out whether the marital status influences respondents perception towards researched phenomenon.

Question number five about the income category of the respondents is based on the same principle of giving the respondent to choose category that describes his income in order to not influence respondents willingness to answer. (Fowler & Cosenza, 2008) Furthermore the annual income of the household is investigated in order to be able to see whether the income does have impact on the respondents perception towards the researched phenomena.

Next couple of questions are focused on the sustainability behaviour of the respondents. These questions are important for the purpose of analysing overall knowledge and behaviour of the respondents towards the concept of sustainability and sustainable development.

Question number 7 is another yes/ no question with aim to find out whether the respondents have knowledge about the sustainability and sustainable development. If respondents states that he/she does not know what the sustainability is the short description of the sustainability and sustainable development follows.

Questions eight nine and ten seek to assess the importance of the sustainability in the eyes of the customers. Question number 8 is multiple choice questions which is aimed at the efforts of individual respondent to live more sustainable life. Question number nine is based on the 5 point Likert scale system which seeks to find out how important is the sustainability of the brand and product in general. Likert scale system is a set of answer options covering the range of options in the closed ended questions. The Likert scale ranges from one extreme option to another with the negative attitude answer in the middle. (Mathers, et al., 2007)

Hypothesis number 2 will be tested based on the data gathered from question number 9.

Question number 10 is about the preference of the respondents when he has to choose between the product of his favourite brand and more sustainable version of the product with the same quality at the same price. Question number 11 was again constructed on the Likert 5 point scale with aim to find out influence of the product packaging on the purchase decision. Answers from Question number 11 therefore aims to test hypothesis number 1.

Question number 12 was constructed with aim to find out whether respondents know about the concept of zero waste shops. If the answer to this question is no then the short definition of package free shops was shown.

Question number 13 seeks to find out whether the respondent have purchased something in the package free shop and therefore, the extent into which he/she is familiar with the concept.

In the question number 14 the data for the research hypothesis number 5 are gathered. In this Question the respondent can on a 5 point Likert scale choose whether he sees package free shops as more sustainable or wheter he sees retail stores as more sustainable.

Question number 15 is focused on the comparisson of product quality of package free shops with the quality of retail store products. This question was constructed with the purpose of gathering data necessary to test hypothesis number 3.

Question number 16 about the perception of package free shops prices in compare to retail shop prices seeks to answer hypothesis number 4. This question was also constructed based on the 5 point Likert scale and based on the reviewed literature concerning perception of zero waste pricing strategies.

Last question included in the questionnaire is open ended with an option for respondent to write which factors would influence him/her to visit zero waste shops rather than retailers.

## 6. Delimitation

- Impact of the fear of change can have influence on the customers, however it is not investigated in this thesis.
- Reliability of the sample was not tested due to the non-inclusion of control questions in questionnaire.
- The sustainability added value of packaged products and individual brands sold by retailers' stores was not part of the research inquiry.

## 7. Analysis and findings of questionnaire

### 7.1. Validity and reliability of sample

Goal of the questionnaire was to gather the complete data from at least 250 respondents and this goal was reached. Total number of completed questionnaires was 268. The questionnaire was randomly distributed through the social media and e-mails. This thesis is based on the data gathered through the questionnaire seeking to test six different hypotheses. Before all of the hypotheses are individually tested the validity and reliability of the data should be assessed. The reliability of the data refers to how consistent are the respondents. There are different ways to test the sample in terms of reliability. Since the questionnaire was randomly and anonymously distributed it is not possible to test the same sample again after certain period of time to compare consistency of responses. Furthermore, there were not included any questions with the same meaning in order to minimize the number of questions and in this way increase

the response rate. The reliability of the questionnaire data is therefore, not possible to test using Inter-Item correlation method either. Due to the random distribution of questionnaire through social media groups it can be said that reliability of the respondents was not influenced by the author of questionnaire. This thesis is meant to investigate the perception of people living in Slovakia towards the new trend of zero waste shops. Other criteria for the questionnaire to be valid was the age above 14 years old since people below this age category have lower purchase power. The sample of the questionnaire should therefore represent the population of Slovakia aged above 14 years. The investigated population is quite large in compare to the sample size which might result in the lower validity of the data in terms of generalization. On the other hand, based on the demographic data gathered from questionnaire it can be seen that sample of respondents follows the population pyramid of Slovakia in terms of gender representation. For the purpose of researching the right sample the question number 1 was asking respondents whether they are residing in Slovakia. Respondents answering non to question 1 have been excluded from the data. Another condition for the sample was the age of the respondents to be above 14 years old. Only the respondents that have fully completed the questionnaire were included in the data analysis and therefore the number of completed questionnaires is 268. First part of the questionnaires consisted of demographic and behavioural questions to get a better overview of the sample and their sustainability behaviour in general.

*Pivot label number 1 age representativeness of sample*

<b>Age category</b>	<b>Number of completed questionnaires</b>
15-24 years old	77
25-34 years old	73
35-44 years old	70
45-54 years old	38
over 55 years old	10
<b>Grand Total</b>	<b>268</b>

In terms of age the sample of the respondents does not follow the age curve of the Slovakia. (PopulationPyramid.net, 2019) While the population of Slovakia have in the year 2017 consisted of 41.6% people in the age categories of 15 to 24 years (10.2%) old, 25 to 34 year old (14.6%) and 35 to 44 year old (16.8%) , the sample of the questionnaire consists of around 82% of respondents being from these age categories. The respondents in age categories of 45 to 54 years and aged above 55 years are creating only around 18% of all respondents which is small in compare to the age curve of Slovak residents which is 42.8%. The age difference

between the population of Slovakia aged above 14 years and sample of the questionnaire is different to a large extent. However, this difference could have been expected due to the low level of digitalization in Slovakia where many older people do not have internet access or do not use social media platforms on which the questionnaire was mostly distributed. These results of having significantly lower response rate among older people might result in the data being less valid in terms of determining the zero-waste target group. Another demographic area compared to the population of Slovakia is the gender to be able to find out whether the sample represents the population in terms of gender. None of the respondents have identified as of different gender than Male or Female and therefore only these two options can be seen on the pivot table number 2. The table number two consists of proportion of gender within individual age category to be able to determine whether there was significantly higher representation of one gender in some age categories or whether the questionnaire was evenly distributed.

*Pivot table number 2*

<b>Number of completed questionnaires</b>	<b>Age category</b>					
<b>Gender</b>	<b>15-24 years old</b>	<b>25-34 years old</b>	<b>35-44 years old</b>	<b>45-54 years old</b>	<b>over 55 years old</b>	<b>Grand Total</b>
Female	47	26	36	27	4	140
Male	30	47	34	11	6	128
<b>Grand Total</b>	<b>77</b>	<b>73</b>	<b>70</b>	<b>38</b>	<b>10</b>	<b>268</b>

In terms of Gender the population of Slovakia consists of 48% of people being Males and 52% of people being females. (PopulationPyramid.net, 2019) The data from the questionnaire are also created by the females creating 52% and Males creating 48% of the sample. It was not a goal of the thesis to mimic the population of Slovakia by putting limitations on the questionnaire. The proportion of Gender of the sample with the gender of the population is coincidental. In terms of gender the proportions show that the questionnaire is investigating the population based on the similar sample of the respondents. It can also be seen that there were no major differences in terms of some age categories of the sample being dominated by only one gender. Further demographic questions are used mainly with the purpose of determining the potential target group of zero waste shops. Throughout the questionnaire there were implemented several questions aimed to see whether the respondents have knowledge of the area they are asked about. If the respondents chose that they do not know the concept they have been directed to a small paragraph with short explanation. These questions are question number

7 about the knowledge of sustainability and sustainable development and question number 12 about the concept of zero waste shops.

## 7.2. Hypotheses concerning impact of brand added value and sustainability added value

**Hypothesis 1: Consumers of food and hygiene products are significantly influenced by package advertising of companies selling products in retail shops.**

To be able to test the hypothesis number 1 the question number 11 was constructed to see the extent to which the customers claim to be influenced by package advertising of the company. The results of the question can be seen on the pivot table number 3. From all of the respondents 85% have stated that they are influenced by the packaging and brand of the manufacturer when making purchase decision. Based on the results of this question it can be said that the hypothesis number 1 is true and package advertising does have significant impact on the customers purchase decision making.

*Pivot table number 3*

<b>How are you influenced by brand and product packaging?</b>	<b>Sum of Number of completed questionnaires</b>
Not at all	13
Not really	11
Undecided	14
Somewhat	212
Very much	18
<b>Grand Total</b>	<b>268</b>

Therefore, it can be generalized that population of Slovakia aged above 14 years believes that product packaging and brand equity do have significant impact on their purchase decision making

**Hypothesis number 2: Consumers of food and hygiene products are significantly influenced by the sustainability of products and shops when making purchase decision.**



The impact of sustainability added value on the customers was tested based on the results of question number 9 about the importance of sustainability on the customers. Five-point Likert scale was used to determine the importance of sustainability added value for each respondent.

*Pivot table number 4*

<b>Importance of sustainability on the purchase decision</b>	<b>Sum of Number of completed questionnaires</b>
Very Important	17
Important	62
Moderately Important	21
Of Little importance	131
Unimportant	37
<b>Grand Total</b>	<b>268</b>

Results concluded in pivot table number 4 show that customers do not pay a big attention to the sustainability of the products and sustainability of shop practices when making a decision to purchase. Out of all the respondent's, majority of 62.7% have stated that sustainability added value is of either little importance or completely unimportant to them when making purchase decision connected to food and hygiene products. Hypothesis number two is investigating whether there is significant influence of product and company sustainability on the customers decision making. By significant influence it was meant that majority of the respondents would find sustainability processes as either very important or important. Only 29.5% of respondents found sustainability to be Very important or Important in their decision-making process. Hypotheses number two is therefore rejected and sustainability of the product and brand does not have significant impact on purchase decision making of customers.

### 7.3. Hypotheses concerning perception of zero waste shops

**Hypothesis number 3: Package free shops are by consumers of food and hygiene products perceived better than retail shops in terms of quality of products.**

The hypothesis number 3 was investigated through five-point Likert scale where the respondents had to choose which shops are selling more quality products. Results of question

number 15 regarding the perception of the shops in terms of product quality can be seen on the pivot table number 5.

*Pivot table number 5*

<b>quality of products</b>	<b>Sum of Number of completed questionnaires</b>
I do not know	9
Package free shops have better quality	83
Package free shops have slightly better quality	116
They are on the same level	33
Retail shops have slightly better quality	21
Retail shops have better quality	6
<b>Grand Total</b>	<b>268</b>

Results of the questionnaire shows that majority of respondents considers the products of zero waste shops as better in terms of quality than products sold in traditional retail shops. Around 74% of all the respondents have stated that zero waste products are of higher quality than products of retail stores which indicates that population of Slovakia aged above 14 is considering zero waste shops to be selling higher quality if the products and therefore the hypothesis number three can be accepted.

**Hypothesis number 4: Package free shops are by consumers of food and hygiene products perceived as more expensive than retail shops.**

Research concerning the hypothesis number 4 was again conducted through 5 point Likert scale where respondents had to state their perception of zero waste shops in terms of product prices compared to traditional retail shops. Results of the question number 16 show that the products sold by zero waste shops are perceived as more expensive by the majority of respondents. In fact 59.3% of respondents considers zero waste shops to be more expensive and only around 23% of respondents find the products of traditional retailers to be more expensive. It can be

therefore concluded that population of Slovakia aged above 14 years perceives the products of zero waste shops as more expensive.

*Pivot table number 6*

<b>Prices of products</b>	<b>Sum of Number of completed questionnaires</b>
I do not know	7
Package free shops have better prices	6
Package free shops have slightly better prices	56
They are on the same level	40
Retail shops have slightly better prices	92
Retail shops have better prices	67
<b>Grand Total</b>	<b>268</b>

**Hypothesis number 5: Package free shops are by consumers of food and hygiene products perceived better than retail shops in terms of sustainability.**

Question number 14 was focused on the perception of the sustainability value of both types of shops. Perception of zero waste shops in the literature is not clear due to the zero-waste packaging waste reduction but also because of possibility of increasing food waste pollution. Therefore, the perception of both shopping approaches in terms of sustainability was gathered.

*Pivot table number 7*

<b>Perceived sustainability of the shops</b>	<b>Sum of Number of completed questionnaires</b>
Package free shops are more sustainable	172
Package free shops are slightly more sustainable	71
Retail shops are slightly more sustainable	5
They are on the same level	20
<b>Grand Total</b>	<b>268</b>

Questionnaire participants were made to choose whether they perceive zero waste stores as more sustainable or whether they perceive traditional retail stores as more sustainable. Pivot table number 7 is showing the results of the question number 14 which are showing that majority of the respondents considers zero waste shops as more sustainable type of business. Large percentage of respondents almost 91% perceive the zero-waste concept to be more sustainable than the concept used by traditional retail stores. It can be therefore, said that hypothesis number 5 is true and food and hygiene customers in Slovakia are perceiving the products sold by zero waste shops as more sustainable.

#### 7.4. Hypothesis concerning potential target group of zero waste shops

In this part of the analysis the Hypothesis number 6 will be tested in the form of age and gender correlations with questions number 14, 15, 16 and 17 about the perception of zero waste shops. Furthermore, correlation between additional demographic questions and questions about perception of zero waste shops will be tested.

**Hypothesis number 6** is about the **Age and gender of the respondents influencing customers perception of sustainability.**

Even though that hypothesis number six is concerning only the age and gender of the respondents several other aspects will be taken into consideration when determining target group for zero waste shops. Correlation between demographic questions and other questions

Table number seven contains the general sustainability behaviour of respondents based on the gender differentiation. It can be seen that percentwise the females are trying to live more sustainable in terms of using alternative sources of energy while Males are more sustainable in the form of alternative transportation and consumption reduction.

Table number 7

Gender	Females	Males
Sum of 8. What kinds of efforts do you make, if any, to live in a more sustainable way? - Recycling	115 (82%)	106 (82%)
Sum of 8. What kinds of efforts do you make, if any, to live in a more sustainable way? - Using alternative sources of energy	58 (41%)	32 (25%)
Sum of 8. What kinds of efforts do you make, if any, to live in a more sustainable way? - Alternative transportation	87 (62%)	81 (63%)
Sum of 8. What kinds of efforts do you make, if any, to live in a more sustainable way? - Community service	4 (3%)	4 (3%)
Sum of 8. What kinds of efforts do you make, if any, to live in a more sustainable way? - Consumption reduction	117 (83%)	108 (84%)

Based on the results of the analysis it can be seen that both genders have similar percentages in terms of sustainable practices. Based on these results it cannot be said that there will be significant differences between the genders in terms of zero waste products perception.

Hypothesis number 6 is based on the literature suggesting that there is a difference in the perception of zero waste products from different genders. To be able to test this claim it was necessary to put the answers of respondents to the percentual representation of the gender group they are associated with since there was nit the same amount of male and female respondents. Most of the males and females think, that the quality of the zero waste products is higher than quality of traditional retail products. For both genders, the percentage of people thinking that zero waste product are better in terms of quality was very similar with females (75%) perception of zero waste products as of better quality bigger by only 1% in compare to males. (74%)

Table number 8

Quality of products compared to retailers	Column Labels		
	Female	Male	Grand Total
I do not know	4%	3%	9
Package free shops have better quality	32%	30%	83
Package free shops have slightly better quality	43%	44%	116
They are on the same level	14%	11%	33
Retail shops have slightly better quality	6%	9%	21
Retail shops have better quality	1%	3%	6
Grand Total	140	128	268

It cannot be said that the difference in perception of zero waste products between the genders is significantly different and therefore the hypothesis number 6 is from the gender point of view rejected.

Table number 9

Row Labels	Sum of 8. Consumption reduction	Sum of 8. Alternative transportation	Sum of 8. Using alternative sources of energy	Sum of 8. Community service	Sum of 8. Recycling	Sum of Number of completed questionnaires
15-24 years old	63 (81%)	46 (59%)	24 (31%)	1 (1%)	61 (79%)	77
25-34 years old	62 (84%)	45 (61%)	22 (30%)	5 (6%)	59 (80%)	73
35-44 years old	62 (88%)	48 (68%)	29 (41%)	1 (1%)	58 (82%)	70
45-54 years old	31 (81%)	24 (63%)	11 (28%)	0 (0%)	35 (92%)	38
over 55 years old	7 (70%)	5 (50%)	4 (40%)	1 (10%)	8 (80%)	10
<b>Grand Total</b>	225	168	90	8	221	<b>268</b>

In terms of age groups sustainability behaviour, the age group of 35-44 years has highest percentage of respondents in terms of their intention to reduce consumption, use alternative sources of energy as well as usage of alternative sources of energy. In terms of recycling the highest percentage of respondents stating that they do recycle is in the age group of 45 to 54 years old. Highest percentage in terms of community service applies to the age group of 55 years and older as it can be seen on the table number 9. These results might suggest that the ideal target group for the zero waste shops might in fact range from the 35 to 54 years old.

The hypothesis number 6 is tested based on the results of question number 15 and question number 17 about the perception of product quality and perception of service quality. In the table number 10 the percentage of all people within a specific age group is displayed next to their answers due to the number of respondents from each age group being different. All together 78% of people from age group of 15-24 thinks that zero waste shops have, to some extend better quality products. Furthermore, 69% of 25-34 years old, 81% of 35-44 years old, 71% of 45-54 years old and 50% of over 55 years old thinks that zero waste products have better quality. We can see that respondents aged 35 to 44 years old perceive the quality of zero waste products highest in compare to other age groups.

*Table number 10*

<b>Quality in compare to retailers</b>	<b>Column Labels</b>					
<b>Row Labels</b>	<b>15-24 years old</b>	<b>25-34 years old</b>	<b>35-44 years old</b>	<b>45-54 years old</b>	<b>over 55 years old</b>	<b>Grand Total</b>
I do not know	4%	1%	3%	5%	10%	3%
Package free shops have better quality	35%	32%	30%	29%	10%	31%
Package free shops have slightly better quality	43%	37%	51%	42%	40%	43%
They are on the same level	6%	19%	10%	13%	20%	12%
Retail shops have slightly better quality	8%	8%	4%	11%	20%	8%
Retail shops have better quality	4%	3%	1%	0%	0%	2%
<b>Grand Total</b>	<b>77</b>	<b>73</b>	<b>70</b>	<b>38</b>	<b>10</b>	<b>268</b>

The results that can be seen in table number 10 correlate with the results of table number 9 when the age group of 35 to 45 years old had most sustainable behaviour. This correlation might suggest that age of the respondents does have impact on the perception of customers towards the sustainability and it also plays a role in the perception of zero waste products. Therefore, it can be said that perception of zero waste products is influenced by age and at least part of the hypothesis number 6 is true.



The target group of zero waste shops for the Slovak market should be based on the hypothesis number 6, consisting mainly of people in the age category of 35 to 45 years old due to their already existing sustainability lifestyle and good perception of zero waste products. There was no significant change in terms of gender and therefore it would be best if the zero waste shops would focus equally on men and women.

Another aspect that might influence the perception of people towards zero waste shopping can be the level of education. Table number 11 shows the results of the highest reached education on the perception of zero waste shops.

Table number 11

Impact of education on perception of products	Column Labels					
Row Labels	Bachelor's degree	Doctorate or engineering degree	High school degree or equivalent	Less than a high school diploma	Master's degree	Grand Total
I do not know	3%	0%	7%	0%	2%	9
Package free shops have better quality	28%	27%	34%	26%	35%	83
Package free shops have slightly better quality	46%	51%	43%	43%	35%	116
They are on the same level	13%	16%	8%	11%	17%	33
Retail shops have slightly better quality	8%	5%	7%	17%	4%	21
Retail shops have better quality	2%	0%	1%	3%	6%	6
<b>Grand Total</b>	<b>61</b>	<b>37</b>	<b>87</b>	<b>35</b>	<b>48</b>	<b>268</b>

As it can be seen on table number 11, the positive perception of zero waste products is not significantly different for any group of respondents. The highest combined percentage of positive perception towards zero waste shops is from the people that have a doctorate or engineering degree (78%). However, all other education levels have similar results, with the lowest perception of people having less than a high school diploma being 69%. It can therefore be said that there is no correlation between the level of education and the perception of zero waste products.

Another investigated demographic aspect is the marital status and its impact on the perception of zero waste shops which can be seen in able number 12.

Table number 12

Impact of marital status	Column Labels					Grand Total
	Divorced	In a domestic partnership	Married	Single	Widowed	
I do not know	5%	3%	5%	1%	0%	9
Package free shops have better quality	26%	36%	32%	23%	75%	83
Package free shops have slightly better quality	42%	36%	46%	47%	25%	116
Retail shops have better quality	0%	1%	2%	4%	0%	6
Retail shops have slightly better quality	5%	12%	5%	10%	0%	21
They are on the same level	21%	12%	10%	14%	0%	33
<b>Grand Total</b>	<b>19</b>	<b>69</b>	<b>106</b>	<b>70</b>	<b>4</b>	<b>268</b>

The highest positive perception of zero waste products comes from the people that are widowed (100%) which is however, most likely influenced by the sample size being only 4 people. Second group with the highest perception of zero waste products are people that are married (78%) and third group with the highest perception are people in domestic relationship (72%). Therefore, the ideal target group for the zero waste shops would be in terms of marital status the people that are married or in the domestic relationship.

Another demographic aspect taken into consideration when trying to determine the target group of zero waste shops was the income of the respondents which can be seen in the form of percentage of respondents in table number 13.

Table number 13

Sum of Number of completed questionnaires	Column Labels				Grand Total
	100k-150k	50k-100k	20k-50k	Below 20k	
I do not know	0%	3%	4%	0%	9
Package free shops have better quality	50%	31%	32%	23%	83
Package free shops have slightly better quality	17%	53%	38%	45%	116
Retail shops have better quality	0%	0%	3%	5%	6
Retail shops have slightly better quality	0%	6%	8%	13%	21
They are on the same level	33%	6%	15%	15%	33
<b>Grand Total</b>	<b>6</b>	<b>86</b>	<b>136</b>	<b>40</b>	<b>268</b>

In terms of a household income there are no significant differences in the income categories towards the perception of zero waste products. Therefore, it is not advised to focus on the target group based on the income.

## 8. Discussion and Conclusion

Knowledge gathered from the literature was by author limited only by the age and location of the participants. Only the people living in Slovakia with age above 14 years have been allowed to participate in the questionnaire. The responses not fitting the requirements have not been allowed to continue the questionnaire and therefore don't have impact on the results. Age of the respondents does not mimic the age curve of investigated population and there is also not the same number of respondents from each age group. However, this occurrence can be explained by distribution of questionnaire through channels such as social media where researcher cannot impact or effectively control the nature of respondents. In terms of gender the sample of respondents mimics the population of Slovakia without any influence from the researcher on the proportion of males and females taking part in questionnaire. Furthermore, the difference in terms of genders was only 4% percent which means that both genders are almost evenly represented in the sample. Most of the questionnaire participants did not know about the meaning of sustainability and sustainable practices which might suggest that their engagement in the topic is not very good. However, it was also found out that people in the population are at least in some way trying to improve their sustainability practices with most of the respondents focusing their sustainability practices on reduction of food waste, recycling and on using alternative sources of transportation.

Main purpose of the thesis was to test 6 different hypotheses and the results of the hypotheses testing can be seen on the table number 14

*Table number 14*

<b>Hypothesis 1: Consumers of food and hygiene products are significantly influenced by package advertising of companies selling products in retail shops.</b>	<b>TRUE</b>
<b>Hypothesis number 2: Consumers of food and hygiene products are significantly influenced by the sustainability of products and shops when making purchase decision.</b>	<b>FALSE</b>
<b>Hypothesis number 3: Package free shops are by consumers of food and hygiene products perceived better than retail shops in terms of quality of products.</b>	<b>TRUE</b>
<b>Hypothesis number 4: Package free shops are by consumers of food and hygiene products perceived as more expensive than retail shops.</b>	<b>TRUE</b>
<b>Hypothesis number 5: Package free shops are by consumers of food and hygiene products perceived better than retail shops in terms of sustainability.</b>	<b>TRUE</b>
<b>Hypothesis number 6: Age and gender of the respondents is influencing their perception of zero waste products.</b>	<b>NEITHER TRUE OR FALSE</b>

Hypothesis number 1 was based on the data gathered from online questionnaire found to be true. All of these hypotheses were tested on the sample of 268 respondent from Slovakia aged above 14 years. Results of hypothesis number 1 analysis shows, that package advertising of manufacturers have significant impact on the purchase decision making of customers and therefore proves the theories formed from the reviewed literature. Customers themselves have stated that package advertising and brand of the product does have impact on them which suggest the high focus of customers on the packaging of the products.

Hypothesis number 2 about the influence of the product and shop sustainability having impact on customers decision making was found to be false. Majority of the respondents have stated

that sustainability of the product and company is of little importance to them when making purchase decision. The results of this hypotheses suggest that customers do not consider sustainable practices as a major contributor to the purchase decision making process.

Purpose of the hypotheses number three, four and five was to investigate the perception of the customers towards the new concept of zero waste with the focus on the quality of the products, price of the product and perception of product sustainability. All of these hypotheses were conducted on the data gathered from the online questionnaire. Respondents had to choose in each category whether they perceive the zero waste shops better or whether they perceive traditional retail stores better. Hypothesis number 3 is investigating the category of product quality of zero waste shops. The conclusion of the analysis is that hypothesis number 3 is true and zero waste products are perceived as of higher quality than the products offered by traditional retail stores. In the hypotheses number 4 the focus was on the perception of the zero waste and traditional retail stores pricing strategy. The hypothesis that zero waste products are perceived to be more expensive is true. However, in combination with the result from the hypotheses number three it can be said that overall value of the zero waste products is considered to be higher than the value of products sold by traditional retail shops. The hypotheses number 5 is about the perception of the stores and products sustainability. The results of the hypothesis number 5 shown that zero waste concept is perceived by majority of respondents to be more environmentally friendly than the concept of traditional retail shops. Therefore, it can be concluded that zero waste shops are perceived as selling products of higher quality for the higher price but at the lower negative environmental impact

Hypothesis number 6 was focusing on whether the age and gender are influencing the perception of the zero waste products. Even though that literature suggests that the older the people are the bigger is the tendency to behave in more sustainable way based on the results of this thesis it can be seen that the age group of 35 to 45 years old is paying biggest attention to their sustainability practices. The age category of 35 to 45 years old has also the highest percentage of people who think that zero waste products are better in terms of quality than products of traditional retail stores. It can be said that the age of the respondents does play a role in the perception of zero waste products even though that there is a difference in terms of age category that is most aware and active in the sustainability actions. As for the gender influencing the perception of zero waste products it can be concluded that there was no significant difference between males and females even though that females perceive the zero waste products slightly better than males. In hypothesis number 6 it has been found out that

age of the customer can be significant factor in terms of sustainability actions while gender of the customer does not play a big role in the sustainability actions.

The target group identified based on the demographic of the sample and their perception towards the zero waste products is the people in the age category 35 to 45 years old that are either married or are sharing home with their partner. Furthermore, the question of affordability of the products may come into place in which case the zero waste shops can focus on the people with household income above 20 thousand euro.

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## 10. Appendixes

### 10.1. Questionnaire:

#### Demographic questions

##### 1. Are you living in Slovakia?

- (1)  Yes
- (2)  No

##### 2. What is your age?

- (1)  14 years old or below
- (2)  15-24 years old
- (3)  25-34 years old
- (4)  35-44 years old
- (5)  45-54 years old
- (6)  over 55 years old

##### 3. What is your gender?

- (1)  Male
- (2)  Female
- (3)  Other (please specify) \_\_\_\_\_

##### 4. What is the highest degree or school you have completed?

- (1)  Less than a high school diploma
- (2)  High school degree or equivalent
- (3)  Bachelor's degree
- (4)  Master's degree
- (5)  Doctorate
- (6)  Other (please specify) \_\_\_\_\_

##### 5. What is your marital status?

- (1)  Single
- (2)  Married
- (3)  In a domestic partnership

- (4)  Divorced
- (5)  Widowed

**6. What is your annual household income?**

- (1)  Below 20k
- (2)  20k - 50k
- (3)  50k - 100k
- (4)  100k - 150k
- (5)  Over 150k

**Sustainability knowledge and influence on purchase behaviour**

**7. Do you know about concept of sustainability and sustainable development?**

- (1)  Yes
- (2)  No (short explanation)

Sustainable development can be defined as the motion to decrease the negative impacts of for example mass production or increased transportation on the social environmental and environmental aspects. Or in other words any motion that is helping to decrease negative impacts of industrial or other development.

**8. What kinds of efforts do you make, if any, to live in a more sustainable way?**

- (1)  Consumption reduction
- (2)  Alternative transportation
- (3)  Using alternative sources of energy
- (4)  Community service
- (5)  Recycling
- (6)  Other \_\_\_\_\_

**9. How important is sustainability of the grocery products and sustainability of the brand when you are making purchase decision?**

- (1)  Very Important

- (2)  Important
- (3)  Moderately Important
- (4)  Of Little Importance
- (5)  Unimportant

**10. Would you choose your favourite food or beverages brand even if there was same quality and price product with lower negative impact on environment?**

- (1)  Yes
- (2)  No
- (3)  I do not know

**11. How much are you influenced by packaging of the product and the brand equity when making purchase decision?**

- (1)  Very much
- (3)  Somewhat
- (4)  Undecided
- (5)  Not really
- (2)  Not at all

**12. Do you know what are package free shops?**

- (1)  Yes
- (2)  No (short explanation)

Explanation of package free shops

Package free shops are shops that are selling mainly ecologically friendly products without packaging or labels. In this type of store the products are usually stored in containers. Customer will bring his /hers own container in which he can take the products home. In this way the customer can purchase the product without creating any litter.

**13. Did you ever buy something in package free shops?**

- (1)  Yes
- (2)  No

**14. What is your opinion of package free shops in terms of sustainability in compare to retail shops?**

- (1)  Package free shops are more sustainable
- (2)  Package free shops are slightly more sustainable
- (3)  They are on the same level
- (4)  Retail shops are slightly more sustainable
- (5)  Retail shops are more sustainable
- (6)  I do not know

**15. What is your opinion of package free shops in terms of quality compared to retail shops?**

- (1)  Package free shops have better quality
- (2)  Package free shops have slightly better
- (3)  They are on the same level
- (4)  Retail shops have slightly better quality
- (5)  Retail shops have better quality
- (6)  I do not know

**16. What is your opinion of package free shops in terms of price in compare to retail shops?**

- (1)  Package free shops have better prices
- (2)  Package free shops have slightly better prices
- (3)  They are on the same level
- (4)  Retail shops have slightly better prices
- (5)  Retail shops have better prices
- (6)  I do not know

**17. What is your opinion of package free shops in terms of services compared to retail shops?**

- (1)  Package free shops have better services
- (2)  Package free shops have slightly better services
- (3)  They are on the same level
- (4)  Retail shops have slightly better services
- (5)  Retail shops have netter services
- (6)  I do not know

**18. What would change your store preference from retail stores to package free shops?  
(optional)**

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