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SCHOOL OF ECONOMICS AND BUSINESS

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**ATTITUDES OF SLOVENIAN CONSUMERS TOWARDS
ENVIRONMENTALLY-FRIENDLY PACKAGING**

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AUTHORSHIP STATEMENT

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INTRODUCTION

Natural environment is fundamental of all human activities. It provides resources, used as inputs for social, economic and other human activities (Kotler & Armstrong, 2016, p. 107). Nowadays, our natural environment is under increasing pressure, due to increasing population, pollution and physical destruction of natural habitats, which threaten our health and the long-term existence. Our current economic system praises capital while frequently forgetting about the natural environment, which is fundamental for the capital generation. As Earth's biosphere forms an interdependent natural system, climate change can lead to numerous issues, which can then ultimately contribute to a downfall of global social and economic systems (Brady, Ebbage, Lunn, Ebbage & Lunn, 2013, p. 12–26). Packaging is also connected with environmental changes, as each packaging material affects the natural environment differently (Jerzyk, 2016). Because of increasing human activities, e.g., deforestation, manufacturing, urbanisation, transportation and processing of raw materials, carbon dioxide emissions have so far increased by more than 33% (Trudel, 2019). Packaging waste is also often disposed of in landfills, emitting methane. Lastly, throughout its life cycle, packaging uses scarce natural resources and energy, contributing to pollution and climate change amongst other environmental issues (Muthu, 2015, p. 3).

Increasing packaging waste levels, environmental degradation, plundering of the Earth's resources, and effects of global warming are becoming increasingly evident (Jerzyk, 2016). Increasing awareness of environmental damage associated with conventional product packaging has led to an increased demand for a “green”, “environmentally-friendly” or “sustainable” packaging types (Jerzyk 2016), often also referred as a “green packaging design”, eco-packaging”, eco-design”, “sustainable design”, or “design for the environment” (Thus, Boks & Stevels, 2007). In marketing, packaging often serves as one of the essential communication instruments between a product or brand and the final consumers, as it is capable of attracting consumer attention (Draskovic, Temperley & Pavicic, 2009). Nowadays, consumers show an increasing demand for more environmentally-friendly packaging alternatives. Therefore, environmentally-friendly packaging is becoming an essential topic in marketing research (Rundh, 2014). It is vital for brands to understand consumers' attitudes towards, as well as their willingness to purchase the relatively more environmentally-friendly packaging types and which individual characteristics affect them.

On the other hand, only limited information about the attitudes of Slovenian consumers towards environmentally-friendly packaging types is currently available. Therefore, the primary **purpose** of this thesis is to reveal the attitudes, purchasing behaviour, and perception of such packaging types in the eyes of Slovenian consumers. The main product segment researched in the thesis are products for everyday use (e.g., food, beverages and products for personal care). Thesis also aims to achieve several **goals**. Firstly, to determine the relative importance of environmentally-friendly packaging, while also to analyse the identification determinants of such packaging types in the eyes of Slovenian consumers and

to explore which factors affect these attitudes. More specific goals of the thesis are further represented by the following **research questions (RQs)** and even more in detail by **specific research hypotheses**, attached to each of the RQs, presented below.

RQ1: Which environmentally-friendly packaging characteristics and material do Slovenian consumers perceive as the most environmentally-friendly? H1a: Surveyed Slovenian consumers, on average, perceive all of the examined environmentally-friendly packaging characteristics (Appendix C, Question “Q2” items) as at least “5 – Somewhat important”. H1b: Surveyed Slovenian consumers, on average, perceive the “use of non-harmful materials” environmentally-friendly packaging characteristic as at least “6 – Highly important”. H1c: Surveyed Slovenian consumers, on average, perceive wood, paper and board, glass and biodegradable or plastics made out of renewable natural resources as relatively environmentally-friendly (mean scores > 4 – “Neither environmentally-unfriendly nor environmentally-friendly”) packaging materials. H1d: Surveyed Slovenian consumers, on average, perceive aluminium, steel and non-biodegradable or plastics made out of non-renewable natural resources as relatively non-environmentally-friendly (mean scores < 4 – “Neither environmentally-unfriendly nor environmentally-friendly”) packaging materials. H1e: Surveyed Slovenian consumers, on average, perceive non-biodegradable or plastics made out of non-renewable natural resources as less than 2 – “Very environmentally unfriendly” packaging material.

RQ2: How important is the environmental friendliness of packaging in comparison with other product and packaging characteristics in the eyes of Slovenian consumers? H2a: Surveyed Slovenian consumers, on average, perceive quality, price and convenience of use as a relatively more important packaging characteristic than the environmental friendliness of its packaging. H2b: Surveyed Slovenian consumers, on average, perceive aesthetics and brand as relatively less important packaging characteristic than the environmentally-friendly packaging. H2c: Surveyed Slovenian consumers, on average, perceive the relatively more in comparison with the less environmentally-friendly packed products for everyday use as superior in terms of quality and trustworthiness (means > 3 – “neutral opinion”). H2d: Surveyed Slovenian consumers, on average, perceive the relatively more in comparison with the less environmentally-friendly packed products for everyday use as more expensive, less renowned and less accessible (means < 3 – “neutral opinion”).

RQ3: How do Slovenian consumers perceive the relatively more environmentally-friendly in comparison with the less environmentally-friendly packaging alternatives? H3a: Surveyed Slovenian consumers, on average, perceive the environmental friendliness of packaging as the most important amongst the examined packaging characteristics (Appendix C, Question “Q4” items). H4: Surveyed Slovenian consumers, on average, perceive the relatively more in comparison with the less environmentally-friendly packaging alternatives as superior in terms of quality, aesthetics, user safety, convenience of use and protection function (mean scores > 3 – “neutral opinion”).

RQ4: Are Slovenian consumers able to distinguish between the relatively more and the less environmentally-friendly packaging types, how do they usually identify such packaging types and what are their attitudes towards eco-labels? H4: Surveyed Slovenian consumers, on average, pay attention to eco-labels when shopping, trust in eco-labels as being a sufficient indicator of the environmental friendliness, think to possess adequate knowledge to interpret the majority of eco-labels and use packaging according to eco-labels (mean scores of the related survey question “Q8” items > 4 – “Neither agree nor disagree”).

RQ5: Do Slovenian consumers usually purchase products, which use the relatively more environmentally-friendly packaging types and what are their motivational factors and barriers connected with these purchases? H5: The majority of Slovenian consumers usually purchase products for everyday use, packed in a relatively environmentally-friendly packaging types.

RQ6: Are Slovenian consumers willing to pay a relatively small price premium (and if yes, what percentage of the premium) for same product, if packed in a relatively more environmentally-friendly packaging type? H6: The majority of the surveyed Slovenian consumers would be willing to pay a relatively small price premium for a product, if packed in a relatively more environmentally-friendly packaging.

RQ7: What are attitudes of Slovenian consumers towards the environmentally-friendly packaging types, purchasing behaviour of the environmentally-friendly packed products, and which factors affect such attitudes and behaviour? H7a: Favourable attitudes towards the environmentally-friendly packaging types are significantly positively correlated with the environmental concern, collectivism level, effect of social norms, perceived consumer effectiveness, age, gender (women possess relatively more favourable attitudes than men), average disposable net monthly income level, highest achieved education level and household size of the surveyed Slovenian consumers. H7b: Purchasing behaviour of the relatively environmentally-friendly packed products for everyday use is significantly positively correlated with the favourable attitudes towards the environmentally-friendly packaging, willingness to pay the price premium for same product if packed in a relatively more environmentally-friendly packaging, environmental concern, collectivism level, effect of social norms, perceived consumer effectiveness, age, gender (women are more willing to be involved in such purchases than men), average disposable net monthly income level, highest achieved education level and household size of the surveyed Slovenian consumers. H7c: Willingness to pay the price premium for same product if packed in a relatively more environmentally-friendly packaging is significantly positively correlated with the favourable attitudes towards the environmentally-friendly packaging, environmental concern, collectivism level, effect of social norms, perceived consumer effectiveness, age, gender (women are more willing to pay the premium than men), average disposable net monthly income level, highest achieved education level and household size of the surveyed Slovenian consumers.

RQ8: Whom do Slovenian consumers perceive as the most responsible for reducing the adverse impacts of packaging on the natural environment? H8: Surveyed Slovenian consumers, on average, perceive companies and the government as the most responsible for reducing the adverse effects of packaging on the natural environment.

Added value of the thesis is provision of information about the attitudes of Slovenian consumers towards environmentally-friendly packaging. Thesis provides useful insights for marketers, researchers, policymakers and other interested parties. Therefore, indirectly, this thesis can contribute to a long-term sustainable development of Slovenia and provide information for companies, which are involved with Slovenian consumers.

The thesis consists of five main chapters. The first chapter summarizes current state of the natural environment, sustainable development and its implementation on macro, transformational and individual level. The following chapter defines packaging, packaging types, functions and its effect on the natural environment. Throughout the next chapter, the existing secondary data sources from the relevant research areas are presented. In the fourth chapter, the research methodology, along with the purpose, goals, research questions, hypotheses, questionnaire and with it obtained research sample are presented. Throughout the last chapter, results of the empirical research are provided, visualised and statistically analysed to ensure the quality and validity of the research findings. Further, a discussion and comparison of the research results with existing relevant literature is provided, followed by the theoretical and practical business implications. Finally, a summary of the research limitations and opportunities for further research is included. The thesis ends with a conclusion, where main concepts and findings in scope of the thesis are presented.

1 SUSTAINABLE DEVELOPMENT

To tackle the adverse changes in the natural environment, the United Nation's World Commission on Environment and Development introduced a term "sustainable development" and defined it as "a development meeting the needs of the present without compromising the ability of the future generations to meet their needs" (World Commission on Environment and Development, 1987). Sustainable development consists of three interdependent pillars: (1) Environmental protection, (2) Social equity and (3) Economic prosperity. Environmental protection addresses climate change, sustainable use of natural resources and preservation of biodiversity. Social equity primarily focuses on public well-being – e.g., connected with health and labour protection, while economic prosperity is directed towards ensuring sustainable living standards and keeping the three pillars in balance (EUROPEN and ECR Europe, 2009). Thus, the three pillars of sustainable development are interconnected, as our society depends on economy, while they both depend on the natural environment (Elkington, 1997).

Throughout the 20th century, numerous strategies have been developed; mainly polarising between the “soft” and “hard” approaches in terms of the trade-off between capital generation and with it connected negative externalities on the natural environment (Peattie, 2010, p. 12). The “*Status quo oriented*” strategies focus mostly on the maintenance of current state, the “*Reform orientated*” strategies are more initiative towards a development of sustainable system of production and consumption, while the “*Transformation oriented*” strategies, focus mostly on the transformation of societies into a profoundly sustainable system (Hopwood, Mellor & O’Brien, 2005). Arguing that the “*Status quo oriented*” strategies are enough to ensure sustainable future is nowadays no longer defensible, due to increasing population, inequality and negative environmental changes (Peattie, 2010, p. 1–20). Sustainability of a specific country can be assessed on three different levels. *Situational or macro-level* (1) consists of conditions, which affect individual behaviours (e.g., national policies, legislation or access to the recycling facilities). *Transformational level* (2) describes the ways of generating macro-level outcomes (e.g., through corporate activities), while *Micro-level* (3) consists of the individual attitudes and ways of how individuals, assimilate situational events (e.g., demand, attitudes and purchasing behaviour of consumers) (Swedberg, 1998).

1.1 Sustainable development on macro level

Throughout the 20th century, wealth generation has been perceived as a tool to solve the environmental pollution, health issues, and climate changes. It has been believed that advances in science will one day be able to provide adequate solutions to these rising issues. Sustainable development and the environmental strategies at that time mostly focused on stopping the most polluting practices and technologies throughout the enforcement of governmental regulation, and taxation (Peattie, 2010, p. 6–7). On the contrary, due to the rising environmental concerns and the increasing negative environmental changes, sustainable development is nowadays widely embedded in governmental and corporate policies and understood by environmentally-conscious consumers. Corporate social responsibility (CSR) – “the responsibility of enterprises for their impact on society” (European Commission, 2016a), is also frequently used as a framework for the formation of sustainable corporate strategies (Peattie, 2010, p. 6–7). Sustainable development is nowadays embedded in our everyday lives, e.g., through the United Nation’s sustainable development goals (SDGs). SDGs are a set of interconnected, but non-legally binding goals, represented as The UN 2030 Agenda, aimed at helping and encouraging nations and corporations to form their strategies according to the three pillars of sustainable development (United Nations, 2016a). SDGs suggest a profoundly sustainable use of natural resources, as well as the prevention, reduction, recycling, and reuse of the increasing waste levels. SDGs also contrast the importance of the environmental knowledge flow, especially towards consumers and the developing countries (United Nations, 2016b). The UN 2030 Agenda has also been embraced by the European Commission and is used as a framework for the Slovenian sustainable strategies (SVRK, 2019). The global environmental agreements also

play an essential role in achieving sustainable development, as they encourage countries to act more environmentally-friendly. For example - The Paris agreement was ratified on the 4th of November 2016 by 185 global parties, with a purpose to fight global climate changes and reach a profoundly sustainable, low carbon future (UNFCCC, 2016).

Slovenia seems to stand well above average when compared with the other EU countries, as it tends to successfully implement the global sustainable policies (Golob et al., 2017). In 2016 Slovenia was even declared as the world's most sustainable country, while its capital (Ljubljana) was proclaimed as Europe's greenest capital (National Geographic, 2017). Ljubljana is also the first European capital, which committed to going zero-waste by the year 2025 (Staff, 2019). Slovenia is also a member of numerous international integrations for achieving sustainable development (SVRK, 2017). In 2017, Slovenia successfully embedded The UN 2030 Agenda into its national policies by forming the Slovenian Development Strategy 2030 (SVRK, 2019). NGOs in Slovenia also play an essential role when it comes to educating consumers, helping and encouraging the government to take actions, while also suggesting specific sustainable policies. An example of such NGO is "Plan B – The initiative for sustainable development", established as a network of Slovenian NGOs, aimed towards the preservation of the natural environment (Plan B, 2019). In summary, by following the leading international pro-environmental trends and through successful implementation of the sustainable policies, Slovenia, in comparison with the other developed countries is a relatively sustainable country (Golob et al., 2017).

1.2 Sustainable development on transformational level

To create a greener economy, corporations nowadays go beyond what governments dictate. Such sustainable strategies are designed in a way to satisfy corporate needs without compromising the ability of future generations to meet theirs (Kotler & Armstrong, 2016, p. 107). Thus, marketers share the responsibility to spread sustainable development through transformation of how we live, produce and consume (Peattie, 2010, p. 11–20). As consumers are becoming increasingly environmentally conscious, corporations actively seek for new strategies, which would allow them to lower their overall adverse environmental impacts and use such changes in consumers' attitudes towards the natural environment as an opportunity to develop profoundly sustainable business practices (Cherian & Jacob, 2012). Such pro-environmental strategies can help companies to build a definite competitive advantage in the long run and raise the environmental consciousness of consumers (Zadek, 2004). Thus, according to Jerzyk (2016), due to the increasing environmental concerns, brands may benefit greatly also from using the relatively more environmentally-friendly packaging types. The increasing support for environmentally-friendly practices (e.g., single-use plastics ban), pro-environmental regulation and health-related concerns are also increasing the demand for environmentally-friendly packaged products. Therefore, packaging industry is nowadays highly motivated to create new, innovative and profoundly sustainable packaging solutions (Readycycle, 2019).

Slovenian corporations and SMEs mostly follow their global role models - often due to the increasing pressure from consumers, competitors, media, NGOs and the government, who support sustainable development (Golob, 2015). Therefore, their strategies are often driven by pressure from global competitors and green consumer demand, while also due to support of their management (Hojnik & Ruzzier, 2016). In general, Slovenian companies tend to incorporate most of with sustainability related business practice, knowing that this could add to their long-term competitive advantage. Thus, corporate social responsibility and a desire to preserve the natural environment seem to be widely embedded and often essential in Slovenian companies (Tomšič, Bojnec & Simčič, 2015). Lastly, successfully implemented sustainable practices of Slovenian corporation seem to influence macro and micro level events, which leads to environmentally-friendly business and consumption practices and initiates the development of the sustainable national policies (Golob et al., 2017).

1.3 Sustainable development on micro-level

Understanding an “environmentally-friendly” consumers is nowadays a trending research topic and an essential focus of modern marketing strategies (Paço, Shiel & Alves, 2019). The “environmentally-friendly”, “sustainable” or “green” consumers are those who voluntarily engage in environmentally-friendly practices, while “environmentally-friendly consumption” is consumption with a minimal environmental impact (Carrier, 2010). Environmentally-friendly consumers attempt to satisfy their present needs while limiting their overall negative environmental impacts, to preserve the natural environment for future generations (Kostadinova, 2016; Trudel, 2019) - often by avoiding “mindless consumption” (Kotler & Armstrong, 2016, p. 637). Nowadays, consumers seem to be aware of the impact of consumption on the natural environment. The majority tends to understand that such impacts cannot only occur during, but also before and after the product use stage (Belz & Peattie, 2012, p. 74). Positive consumer attitudes towards the natural environment are also revealed by the increasing Consumer Environmental Awareness (CEA) index, as well as demand for the relatively more environmentally-friendly products, services, practices, and rapidly drive their development (Kostadinova, 2016; Hong, Wang & Yu, 2018). For example, 82% of surveyed consumers from the United States believe that companies should act more environmentally-friendly (IPSOS, 2019). Hence, globally, 81% of the surveyed consumers expressed their concerns about the use of non-recyclable products, while only 15% seems not to possess such concerns. Moreover, climate change concerns 37%, air pollution 35%, and the increasing amount of waste 34% of the globally surveyed consumers (IPSOS, 2018a). Consumers seem to mostly concentrate on the easy noticeable environmental problems (e.g., littering and environmental degradation) and those, which they consider manageable. Therefore, the environmentally-friendly management of packaging waste can be used as a catalyst to persuade consumers into acting more environmentally-friendly (Bech-Larsen, 1996, p. 39–40).

Slovenian consumers also seem to be relatively highly environmentally conscious and often perform activities, aimed at reducing the adverse environmental impacts (e.g., recycling). Further, preservation of the natural environment is essential to 99% of the surveyed Slovenian citizens, while more than 80% believe that environmental changes influence their everyday lives. While on average European consumers are most concerned about climate change and air pollution, Slovenians seem to be mostly concerned about the increasing waste levels (European Commission, 2017a). Such concerns could lead to more positive attitudes towards the environmentally-friendly packaging types, which are often designed to minimise waste. Slovenians also score fourth-best, compared with the EU-28 citizens, when it comes to recycling activities, as 81% of the surveyed Slovenian consumers claimed to recycle most of their waste, while 79% reported reduced use of the single-use plastic bags (European Commission, 2017a). On the contrary, Jager (2011) discovered that only half of the interviewed Slovenian recycles their waste. The non-recyclers do not perform such activities either due to a lack of time, effort or simply due to insufficient knowledge, connected with the recycling activities (Jager, 2011). Lastly, the majority of surveyed Slovenian citizens seem to support all of the suggested actions, aimed at plastic waste reduction. Slovenian consumers also tend to use and often reuse products; support green taxation and the transfer of knowledge about environmentally-friendly activities (European Commission, 2017a).

2 ENVIRONMENTALLY-FRIENDLY PACKAGING

Packaging refers to all products made out of any materials of any nature to be used for containment, protection, handling, delivery and presentation of the included goods, from producers to the users or consumers (European Commission, 2018). From a marketer's perspective, packaging also involves designing and producing containers or wrappers for products (Kotler & Armstrong, 2016, p. 107). Packaging can be divided into three distinct packaging types. *Primary or sales packaging* (1) is in direct contact with a product and forms a sales unit for users or final consumers (e.g., a mayonnaise jar with a cap and label). *Secondary or grouped packaging* (2) contains both - product and one or more primary packages (e.g., a wrapper connecting a two-pack of mayonnaise jars), while *tertiary or distribution packaging* (3) is mainly used for distribution or industrial use. It can contain primary and/or secondary packaging (e.g., a pallet containing multiple two-packs of mayonnaise jars). It is often designed in a way to aid the handling and transportation of contained product(s) in order to prevent their damage (Giovannetti, 1995; Selke, 2012, p. 447–448).

2.1 Packaging functions

Packaging enables product delivery from the place of production to final consumption. During that procedure, it can serve various functions (Selke, 2012, p. 443–446). The primary function of packaging is protection and preservation of the contained product and is one of

the main purchasing factors in the eyes of consumers (Dobson & Yadav, 2012). The main functions of packaging are (1) *Product containment and protection*, (2) *Information and promotion*, (3) *Convenience and handling* and (4) *Waste reduction*.

Product containment and protection (1) function refers to an ability of packaging to ensure the containment of its content throughout entire life. Packaging should be designed in a way to protect and reduce physical, biologic, or chemical damage, which could lead to destruction or spoilage of the contained product (Emblem 2012). Therefore, the difference in quality between packaging designs can be measured through a comparison in capacity to extend the expected shelf life or prevent spoilage of the contained product (Dobson & Yadav 2012). Packaging should also minimise the consequences of shock and vibration damage and maintain adequate conditions to prevent spoilage of the contained product. More specific protection needs also depend on the product type and environment in which it is to be handled (EUROPEN and ECR Europe, 2009; Emblem, 2012).

Information and promotion (2) function refers to explicit (e.g., logos, texts or graphics) or implicit (e.g., packaging colour, material or shape) messages, which packaging sends to the potential consumers. Packaging design should also include all the legally required information (e.g., weight/volume of the contained product, nutritional facts, storage instructions and the safety warnings), as well as other useful information regarding both – packaging and the contained product (e.g., handling information, usage or storage instructions and end-of-life management information). In the eyes of consumers, packaging can often be a decisive factor when it comes to everyday purchasing situations. Therefore, a well-designed packaging should always include adequate promotional content. However, there is often a trade-off between the constant packaging design innovation - to make the contained product visually appealing - and not changing it too much, so loyal consumers can still identify the contained product(s) (EUROPEN and ECR Europe, 2009; Emblem, 2012; Dobson & Yadav, 2012).

Convenience and handling function (3) refers to packaging characteristics, which provide any added value to its potential users and allows them to use the contained product easily, efficiently and safely (e.g., additional handles or zipper bags). Throughout the past two decades, fast lifestyles of consumers resulted in an increased demand for packaging, which save them money and time (e.g., the packaging of the ready-to-eat meals). The increasing segment of the environmentally-conscious consumers nowadays results in a demand for environmentally-friendly (e.g., recyclable) packed products. Convenience function is therefore not limited only to product use, but also to all the other stages in its life cycle (e.g., disposal) (EUROPEN and ECR Europe, 2009; Emblem, 2012; Dobson & Yadav, 2012).

Finally, according to EUROPEN and ECR Europe (2009), there is an additional packaging function - *waste reduction* (4). Thus, packaging should be designed in a way to reduce waste. Waste reduction can be achieved either directly (by downsizing the packaging volume/weight) or indirectly, through provision of information about portioning and storage

of the contained product. In other words, packaging should be designed in a way to maximise shelf life of the contained product(s), while also to reduce the energy required for its processing and transportation. In order to reduce the generated waste levels, packaging should also consist of the environmentally-friendly materials.

2.2 Packaging materials

A wide variety of materials is used for packaging. The choice of a particular material often reflects the logistical and consumer needs (Dobson & Yadav, 2012). There is no such thing as a fundamentally “good” or “bad” packaging material since each possesses distinct properties, which may be either advantages or disadvantages - depending on the context within which the packaging is used (EUROPEN and ECR Europe, 2009). However, the most commonly used packaging materials are paper and board, aluminium, steel, glass, and polymers (Verghese, Lewis & Fitzpatrick, 2012).

Paper and board materials are produced out of wood and biomass fibres. Their production is relatively inexpensive; therefore, they are widely used for packaging purposes (Verghese, Lewis & Fitzpatrick, 2012, p. 95–96). Different varieties of paper and board materials exist – e.g., paper, carton board, liquid paperboard, and moulded paper. Paper and board packaging offer an excellent printing surface and are highly versatile. Such materials can be either rigid or flexible and formulated to offer a range of properties. Paper and board packaging materials also serve as an excellent liquid/gas barrier if laminated with other types of materials (mostly polymers) (Readycycle, 2019). However, the impact resistance of such materials is relatively low, in comparison with other packaging materials. Moreover, the use of paper and board materials can be linked with deforestation and consequently and loss of biodiversity, while fertilisers and chemicals used in wood production industry also result in numerous adverse environmental impacts (Verghese, Lewis & Fitzpatrick, 2012, p. 95–98). Modern recycling technologies may nowadays allow paper and board materials to be entirely recycled, but often virgin wood fibres need to be mixed with the recycled ones in order to ensure same material properties, e.g., whiteness, brightness, purity or strength. However, if laminated or coated with polymers paper and board materials may not be recyclable (Sustainable packaging coalition, 2019). Even bottles can nowadays be produced entirely from recycled cardboard and newspapers materials, and are already very popular for a variety of products, e.g., wine, pet food, and protein powders (Readycycle, 2019). Paper and board are still among the most environmentally-friendly materials and are, therefore, in high demand (Sustainable packaging coalition, 2019).

Aluminium packaging serves as an excellent liquid/gas barrier, and it is often used to contain food and beverage products. Its unique material properties allow it to be easily pressed and drawn in different shapes. The environmental impacts of aluminium are mostly connected with mining, refining and smelting processes, which are highly energetically consumptive. (Verghese, Lewis & Fitzpatrick, 2012, p. 95–98). However, packaging made of recycled

aluminium materials rarely face any aesthetic or functional deficiencies and can be continuously recycled (Sustainable packaging coalition, 2019). *Steel*, on the other hand, is a durable alloy of iron, carbon and other elements (e.g., manganese). In comparison with aluminium, steel corrodes (if not coated) and is relatively more substantial. Similar to aluminium, steel can be continuously recycled, while its recycling process is connected with a relatively small loss of technical and aesthetic properties, but requires a relatively high amount of energy. Adverse effects of steel on the natural environment are somewhat similar to those of aluminium. However, its magnetic properties allow it to be easily sorted at recycling facilities. Hence, both aluminium and steel do hardly degrade if landfilled (Verghese, Lewis & Fitzpatrick, 2012, p. 95–98).

Glass materials often form packaging which is user-friendly, hygienic and convenient for use (e.g., glass jars and bottles) (EUROPEN and ECR Europe, 2009). Glass is a strong, but relatively easy breakable and heavy, in comparison with other packaging materials. It often offers transparency, which is a crucial packaging property in the eyes of consumers. Material properties of the recycled glass remain similar to those of virgin glass materials. However, the global recycling rate of glass is relatively low as its transportation and recycling are often cost and energy inefficient (Sustainable packaging coalition, 2019). Similarly to steel and aluminium, glass packaging consumes a relatively high amount of energy (especially its processing and transportation) and generates a significant amount of greenhouse gas emissions. However, glass can be easily reused or recycled, but if landfilled, it hardly degrades (Verghese, Lewis & Fitzpatrick, 2012, p. 95–98).

Polymers are also widely used for packaging purposes. Based on their impacts on the natural environment, polymers can be roughly divided into four groups: (1) renewable and biodegradable (e.g., polymers derived from corn starch, wood or other renewable materials); (2) renewable but non-biodegradable (e.g., renewable thermoplastics made out of starch and cellulose fibres, designed not to degrade); (3) non-renewable but biodegradable (e.g., polymers made out of crude oil or the natural gas) and (4) non-renewable and non-biodegradable (e.g., PET, HDPE, PP, PVC, LDPE). Polymers made out of non-renewable natural sources are usually superior in terms of mechanical properties and strength, but often offer limited thermal stability and may be affected by light. On the other hand, such polymers are also mainly lightweight and relatively energy-efficient in production. Because of these distinct properties, packaging designs, which consist of the non-renewable polymers, usually require a fewer amount of material, to offer the same functionality as if they were made out of renewable polymers. Moreover, renewable polymers often need to be modified in order to be functionally equal to the non-renewables (e.g., laminated to prevent the moisture uptake and ensure product containment). Non-biodegradable polymers can be recycled, if adequate recycling facilities exist. However, using recycled polymers to form new packaging can often cause visual (e.g., loss of transparency, unity or colour), or functional (e.g., lesser firmness or lower crack resistance) deficiencies. On the other hand, biodegradable polymers are often compostable and, therefore, produce less waste than the non-biodegradables. Non-

renewable polymers can be either landfilled, incinerated for energy (energy recycling) or mechanically recycled, while if landfilled their degradability properties are generally limited. Due to their lower specific gravity, they cause a constant threat to marine wildlife. On the contrary, the overall impact of biodegradable polymers is still non-sufficiently examined. Thus, degradation of biodegradable polymers can cause greenhouse gas emissions, while the production of raw materials, used for their production additionally harms the natural environment (Verghese, Lewis & Fitzpatrick, 2012, p. 98–101). On the other hand, recycled polymers mostly consume less energy and are less greenhouse-gas intensive. However, lack of recycling facilities often results in a relatively low supply and, therefore, high production costs (Sustainable packaging coalition, 2019).

Due to rising concerns, composites and renewable thermoplastics alternatives (e.g., cellulose, calico, jute, and palm or sugar cane based polymers) are also becoming frequently used for packaging. Moreover, biodegradable and even edible food packaging derived from plant or animal sources (e.g., collagen, gelatine and whey-based polymers) are nowadays becoming increasingly used for packaging (Verghese, Lewis & Fitzpatrick, 2012, p. 213).

2.3 Packaging as a marketing tool

Consumers make more than 75% of their purchasing decisions in stores and pass by some 300 items per minute. In this highly competitive environment, packaging may be seller's first, best and last chance to influence the potential buyers. Therefore, packaging itself has become an essential promotional medium (Kotler & Armstrong, 2016, p. 107). Packaging often offers consumers the first contact with a product and contains all the crucial information about it. Due to its relative importance in the purchase process, packaging is often referred to as the "silent salesman" (Giovannetti, 1995). Thus, consumers often select products based on their packaging (Orth & Malkewitz, 2008). In certain purchasing situations, packaging can even overtake the product in terms of importance in the eyes of the consumers. Therefore, successful packaging design should be unique but also easily recognisable in order to stand out on the shelf and convince consumers to purchase the contained product (Emblem, 2012). Moreover, brands may have a higher chance of success if using distinct packaging designs, which communicate the essential product benefits uniquely (IPSOS, 2019).

Packaging attracts and communicates a variety of marketing messages to its potential consumers. Such communication can be either direct or verbal (e.g., brand, product information, name of the producer, country of origin, promotional messages and labels) or indirect – (e.g., shape, colour, design, material and structure). Packaging should also convince potential consumers that the contained product has the ability to fulfil their needs and desires. For example, by increasing the convenience of use or adding comfortable disposal option consumers can be persuaded to repeat the purchase (Agariya, Johari, Sharma, Chandraul & Singh, 2012; Mazhar, Sayeda, Bhutto & Mubeen, 2015). Direct or verbal

packaging elements are connected with the affective, while the non-verbal ones are connected with cognitive aspects of the decision-making process (Dobson & Yadav, 2012). On the other hand, the non-verbal elements play a crucial role in attracting the initial consumers' attention, affect memory and influence the attitudes of consumers towards a product or brand (Speece & Silayoi, 2007).

Enabling consumers to interact with a product (e.g., by squeezing, sniffing or the transparency) may also positively affect their attitudes towards the contained product. Additionally, by reducing the packaging volume/size, marketers can tackle busy lifestyles of consumers and simultaneously decrease the overall packaging costs (Nielsen, 2008). Throughout recent decades, importance of the natural environment in the eyes of consumers has increased significantly (Jerzyk, 2016). Thus, due to increasing environmental awareness, packaging designs should include a more natural look (Nielsen, 2008). By using the environmentally-friendly packaging materials, packaging can segment the contained products (Emblem, 2012). Slovenian consumers also seem to often judge the environmental friendliness of brands and companies based on the perceived environmental-friendliness of their packaging (Jager, 2011). Therefore, the relatively more environmentally-friendly packaging types could be an essential determinant of their purchasing behaviour.

Packaging labels perform several functions - they identify a product or a brand, provide it with specific non-verbal information and help with their promotion. As consumers often become firmly attached to logos as symbols, packaging labels have become a vital packaging element. Due to their relatively high importance, information on packaging labels can also easily mislead potential consumers. Therefore, labels are frequently regulated by law and must include some mandatory information (e.g., product weight, nutritional values or place of origin), which depend on product type (Kotler & Armstrong, 2016, p. 638). Quality of packaging and the contained product can also be communicated through eco-labelling and the self-declared environmental claims (Ertz, François & Durif, 2017). Packaging labels inform consumers about the materials used and recycling possibilities. For example, if packaging is recyclable, an adequate symbol (e.g., the Mobius loop) is often added to packaging to inform its users about its disposal options (Verghese, Lewis & Fitzpatrick, 2012, p. 145). Eco-labels also provide information about the overall environmental performance of a product, while the eco-labelled products must meet specific environmental standards to be entitled to carry such labels (European Commission website, 2019). A variety of symbols is available when it comes to classification and disposal options of packaging materials. For example, the resin identification codes (RIC) classify polymers (Sustainable Packaging Coalition, 2017), while the Forest Stewardship Council eco-label is used to communicate the environmental friendliness of paper and timber materials (Verghese, Lewis & Fitzpatrick, 2012, p. 147). Further, the "Green dot" eco-label signifies that a brand contributes to recovery and recycling of packaging in Europe. The "Mobius Loop" symbol signals recyclability, while the "Tidyman" is intended only to remind product users to avoid littering. Further, the "Recyclable aluminium" eco-label signals that packaging is made out

of recycled aluminium materials, “Compostable” symbol signals the industrial compostability option of packaging, while the “Home composting” eco-label identifies that packaging can be home composted (Recyclenow, 2019).

Standards, on the other hand, are also mostly voluntary guidelines, which provide technical specification for products, services, and processes. They are usually developed on the initiative of stakeholders - e.g., consumers, investors or due to pressure from the business competitors. Standards can help with preservation of the natural environment by providing reliable information about impacts and consequences of the product on the natural environment, as well as its overall credibility and the user safety. Although often not being mandatory, standards are often used to avoid the “greenwashing” – the false environmental claims and misleading information about the environmental friendliness of products or services. To avoid greenwashing, standards can ensure that consumers obtain valid information about environmental friendliness of the purchased products (European Commission, 2019a). According to the International Standardization Organization - ISO, three types of environmental labelling standards exist – “Type I”, “Type II” and Type “III”. The “Type I” environmental labelling standards consist of a mark or a logo based on the fulfilment of a set of different environmental criterion. The “Type II” standards are based on self-declared environmental claims and are developed directly by the manufacturers or the product owners. Lastly, the “Type III” standards, often also referred to as the “Life-cycle data declarations” consider environmental impact of standardised product throughout their entire life cycle (ISO, 2019). Within the EU, standardisation currently exists for more than 85% of the traded products. Thus, products for which such standardisation exists must comply with it before they can be freely traded within the EU (European Commission, 2016b).

2.4 Packaging and the natural environment

To discuss relative environmental friendliness of different packaging types, it is firstly important to understand how environmentally-friendly products are defined. A “green”, “environmentally-friendly” or “sustainable” product is a product whose design, attributes and production use relatively more environmentally-friendly (e.g., recyclable, renewable, toxic-free or biodegradable) natural resources and minimises the overall environmental impacts throughout its entire life cycle (Durif, Boivin & Julien, 2010; Palevich, 2012). Such products allow for the economic development while simultaneously aiming to preserve the natural environment for future generations (Speer, 2012). The entirely environmentally-friendly products do not exist since each product impacts the natural environment to a different extent. Therefore, environmentally-friendly products should be assessed in terms of their relative environmental impacts (EUROPEN and ECR Europe, 2009; Palevich, 2012). Environmentally-friendly packaging types are, therefore, those which reduce the negative environmental impacts - either by using less, recyclable, reusable or biodegradable materials, as well as the minimum required amount of energy throughout their entire life

cycle (Muthu, 2015, p. 182). By using the environmentally-friendly materials and procedures, corporations can also reduce their costs - e.g., by light-weighting the packaging they can reduce transportation, as well as material and processing costs. Moreover, environmentally-conscious consumers may gain personal and moral benefits when purchasing and using relatively more environmentally-friendly packed products. Therefore, brands may benefit from using such packaging types (Verghese, Lewis & Fitzpatrick, 2012).

Environmental friendliness of packaging can be achieved in different ways – e.g., with reducing/removing the packaging volume/amount, by offering its reusability (e.g., refillable glass bottles, reusable crates) or using recyclable, biodegradable or renewable packaging materials. Further, in order to be considered as relatively more environmentally-friendly; packaging should be energy efficient throughout its entire life cycle (Verghese, Lewis & Fitzpatrick, 2012). “Renewability” refers to a property of the natural resource to be continually regenerated at a higher rate than the rate of its depletion (ISO, 2016), while “reusability” means that packaging can be reused several times before disposal (EUROPEN and ECR Europe, 2009). Environmentally-friendly packaging should also consist of recoverable materials. Recovery refers to a variety of waste management operations which divert waste from final disposal (landfill) - e.g., recycling, composting of packaging or its incineration to obtain energy (EUROPEN and ECR Europe, 2009). Lastly, “recycling” can be interpreted as a recovery operation by which waste is reproduced into new products, materials or substances, for original or other purposes, but does not include the energy recovery (Eurostat, 2014).

Multiple criteria for defining the environmentally-friendly packaging exists in literature. According to the Sustainable Packaging Coalition (2011), environmentally-friendly packaging types are those, which: (1) are beneficial, safe and non-harmful for individuals throughout their entire life cycle – the LCA assessment principle; (2) meet market criterion in terms of performance and costs; (3) are sourced, manufactured, transported and recycled using renewable energy sources; (4) use recycled materials; (5) are manufactured through clean production technologies; (6) are physically designed to optimize the use of materials and energy and (7) can be effectively recoverable and utilisable in biological and/or industrial closed-loop cycles. On the other hand, according to Wever and Vogtländer (2013a), the relatively more environmentally-friendly packaging types are those, which are: (1) Effective - achieve functional requirements with a minimal environmental and social impact; (2) Efficient – use a minimal amount of materials and energy throughout their entire life cycle; (3) Cyclic – incorporate the use of renewable, recyclable and recoverable materials and (4) Safe – are non-polluting and non-toxic and, therefore, pose no threats to their users or the ecosystems. Thus, Singh, Kumar & Rao (2018) developed a detailed framework, which consists of sixteen complex factors used to assess the relative environmental friendliness of each packaging material. Based on their model, glass is ranked as the most environmentally-friendly, followed by aluminium and lastly plastics.

When assessing the impact of packaging on the natural environment, its whole life cycle needs to be considered, since each step in the life cycle impacts the natural environment in a different way (Pongrácz 2007; BPF 2019). However, the environmental friendliness often comes with a decrease in value, either through a lower physical or intangible functionality of a product or packaging (Wever & Vogtländer, 2013). The life cycle assessment (hereinafter the LCA) principle focuses on impacts of packaging on the natural environment throughout its entire life cycle, but the overall environmental burden also depends on other packaging attributes (e.g., its functionality and durability). If a particular packaging design is significantly less durable than its (according to the LCA principle) relatively less environmentally-friendly alternatives, several packaging units of the by the LCA relatively more environmentally-friendly assessed product would need to be used in order to maintain the same packaging functionality, in comparison with the relatively less environmentally-friendly but at the same time more durable packaging unit. In order to calculate the overall environmental burden of the relatively less durable packaging, the total burden of several such packaging units would need to be considered when applying the LCA (Svanes et al., 2010). Lastly, the “Eco-cost: value ratio” (EVR) model also incorporates an idea that packaging is useful only if it can sell the contained product to consumers, as is otherwise disposed or destroyed. Therefore, packaging should reduce the environmental burden throughout its entire life cycle (LCA principle), but also meet the functional and consumer expectations, while remaining cost-efficient for producers (Wever & Vogtländer, 2013).

2.5 Packaging and waste management

Packaging generates a large amount of waste (Marzena & Maria, 2015). Claims that a particular type of packaging is recyclable itself is not enough to avoid littering. Hence, system available for collection and recycling, as well as an adequate legislation must exist as a prerequisite to offer consumers a possibility to recycle and act environmentally-friendly (ISO, 2016). Globally, governments vary in their concern and efforts to preserve the natural environment. In general, the relatively developed countries (e.g., Germany) tend to pursue, while the developing countries on average concern less about the sustainability of their strategies - either due to the lack in funds or the political will (Kotler & Armstrong, 2016). When it comes to selection of an appropriate waste management system, no unique solution exists as it depends on local conditions of each country - especially the demographic characteristics of citizens and the degree of investments available for such systems (EUROPEN and ECR Europe, 2009).

Packaging marketed within the EU must comply with the general environmental requirements, as well as specific standards designed to prevent the health hazards (European Commission, 2017b). Core of the European legal framework regarding packaging is based on The European Parliament and Council Directive 94/62/EC on packaging and packaging waste (hereinafter PPWD), OJ. L. 365, no. 62/1994. PPWD defines packaging, its reuse, recovery, waste management options and sets the minimal required amounts of recycled

materials, allowed for each packaging type. It also introduces standard rules for packaging to facilitate its free movement throughout the EU. PPWD is also intended to reduce the environmental impact of packaging and contains detailed rules for achieving sustainability through packaging. Thus, the EU members are obligated to adopt principles of the PPWD to the national laws. PPWD has been adopted in 1994 and is reviewed roughly every ten years. The last significant changes to PPWD were made in 2015, by limiting use of the single-use carrier bags (APEAL, no date). Moreover, in October 2018, the European Parliament banned the single-use plastics (e.g., plates, cutlery, straws, balloon sticks and cotton buds) and set further goals to reduce waste, make a shift towards the relatively more environmentally-friendly packaging alternatives and determined recycling targets (European Commission, 2019b). Compliance with this the PPWD and its revisions is often represented by standards from the European Committee for Standardization (hereinafter CEN), which guarantee sustainability of the standardised products or services (EUROPEAN and ECR Europe, 2009).

Slovenian legislation regarding packaging and its use is determined in The Regulation on the management of packaging and packaging waste, OG. RS, no. 35/17/2013. It relies highly on the PPWD. It defines packaging materials (paper and paperboard, plastics, wood, metal, glass amongst others) and an obligation of each citizen to recycle. It also sets the environmental standards related to packaging, prohibits the free retail of plastic bags in supermarkets, defines recycling and waste disposal rules and defines Slovenian waste management framework. Thus, since 2018, companies that operate in Slovenia and produce packaging waste are obliged to report the generated waste amounts to Slovenian Environment Agency. Such companies may also be obliged to form a contract with a certified waste management company, report and pay additional fees (e-Okolje, 2019). In Slovenia, waste separation was introduced in 2002 with a separate collection of the paper, glass, packaging, and biological waste types. Since 2013, every Slovenian household has an access to recycling facilities and is obliged to recycle by law (Staff, 2019).

The generation of packaging waste in EU-28 and EEA/EFTA countries is increasing, but so is their recyclability rate. Slovenian citizens, on average, generate a relatively low amount of waste and are among the top recyclers if compared with the other EU-28 countries (European Commission, 2017a). The generation of packaging materials per inhabitant in EU-28 countries has risen by 1.9% from 2015 to 2016, while their recycling/recoverability has risen by 4.0% and 3.7% respectively. Moreover, recycling rates for the EU-28 countries have risen from 59.2% in 2007 to 67.2% in 2017, mostly due to a successful implementation of the EU environmental directive in the local policies (Eurostat, 2017). In 2017 Slovenia, in total, produced over 5.9 million tons of waste (478 kg per inhabitant), 17% (994,000 kg) of which were municipal. Thus, 70% of the municipal waste was recycled, which puts Slovenia considerably below the EU-28 average in terms of the amount of generated waste and ranks it as the eighth best in terms of overall recycling rate in comparison with the EU-28 and EEA/EFTA countries (Eurostat, 2017). Due to availability of the recycling facilities and local policies, an average resident of Ljubljana – the capital of Slovenia - nowadays

produces only 115 kilograms of the non-recyclable waste, putting Ljubljana among the top EU capitals in terms of the recycling activities (Staff, 2019).

3 ENVIRONMENTALLY-FRIENDLY PACKAGING IN THE EYES OF CONSUMERS

Consumer behaviour is the behaviour that consumers show while purchasing, using, evaluating, and disposing product or services to satisfy their needs (Poonam, Lakra & Gupta, 2014). Consumer behaviour is not only about understanding the purchasing, but also how having (or not having) things affects consumer lives, feelings and a state of being (Solomon, Bamossy, Askegaard & Hogg, 2013, p. 6). Consumer behaviour is influenced by the internal (personal) characteristics and the external environment (Orzan, Cruceru, Bălăceanu & Chivu, 2018), as well as social values (Nair, Krishna & Bangalore, 2015). The self-concept also strongly influences consumer behaviour, while the individual's purchase decisions often also play a crucial role in defining the self-concept (Solomon, Bamossy, Askegaard & Hogg, 2013). Nowadays, consumers often identify themselves (or want to be perceived) as environmentally-friendly and prefer the environmentally-friendly packed products.

Attitudes, on the other hand, is defined as a "...lasting, general evaluation of people (including oneself), objects, advertisements or issues, while anything towards which one has an attitude is called an "Attitude object" (Solomon, Bamossy, Askegaard & Hogg, 2013, p. 292). Moreover, attitudes towards the natural environment are defined as a set of beliefs, desires, feelings, and behaviours related to the environment (Esmailpour & Rajabi, 2016). Different theories and models about the formation of attitudes exist, for example, the "ABC model of attitudes" (Solomon, Bamossy, Askegaard & Hogg, 2013). However, recent studies have broadened the investigation of attitudes and behaviour towards identification of specific emotions, which are frequently evoked in consumers by the environmentally-friendly packaging options (Herbes, Beuthner & Ramme, 2018). Thus, positive and negative emotions can significantly influence attitudes, as well as purchasing decision connected with the environmentally-friendly packaging types (Koenig-Lewis, Palmer, Dermody & Urbye, 2014). While making decisions, consumers may also face different types of perceived risks. For example, the monetary (risk of expensiveness), functional (risk of inferior functionality), physical (health-related), psychological (risk of a product not providing the expected affiliation or status) or social (risk of not being accepted by others) risk (Solomon, 2016, p. 190–191). In order to minimise the perceived risks, cognitive packaging components (e.g., scientific claims about the environmental friendliness) are essential to minimise the consumer mistrust (Koenig-Lewis, Palmer, Dermody & Urbye, 2014).

When studying the attitudes and behaviour towards the relatively more environmentally-friendly products and packaging, many recent studies; e.g., Kostadinova (2016), Prakash and Pathak (2017), Scott and Vigar-Ellis (2014) and Herbes, Beuthner and Ramme (2018), rely on the *Theory of Reasoned Action (TRA)* (Ajzen & Fishbein, 1980) or the *Theory of Planned*

Behaviour (TPB) (Ajzen, 2011). TRA consists of attitudes towards behaviour, and social norms, which combined result in a behavioural intention of an individual. Attitudes are determined by the individual's personal characteristics and his/her environment. Each of these factors is internally evaluated in terms of the individual's personal and social beliefs about the behaviour and accounted for the perceived relative importance of each factor. With the combined scores for all the external factors, behavioural intention can then be predicted and suggested to be an accurate measure to predict the actual behaviour (Peter & Olson, 2004, p. 152–157). TPB, in addition to TRA, incorporates the perceived behavioural control. Behaviour intention is, therefore, formed based on the individual's attitudes towards the behaviour, subjective norms and the perceived behavioural control (an individual's ability to perform the evaluated behaviour) - e.g., product accessibility or price (Ajzen, 2005).

3.1 Preference for environmentally-friendly packaging

From the reviewed literature, it can be concluded that the global consumers mostly possess positive attitudes towards the environmentally-friendly packaging types and still believe that packaging still brings more pros than cons (e.g., environmental pollution) to humanity (BillerudKorsnäs, 2017; Madushanka & Ragel, 2016). Negative attitudes towards packaging are mainly present when asking consumers about packaging in general. However, when asked about specific packaging characteristic - e.g., material or functions, consumers mostly focus on its positive characteristics (Bech-Larsen, 1996, p. 340). The environmental-friendliness has nowadays become a vital packaging attribute. European consumers seem to be aware of, concerned about and possess adequate knowledge about the environmental issues and their connection to packaging (Anh, 2017). However, when assessing the impact of packaging on the natural environment, consumers mostly seem to perceive it negatively. For example, 80% of the globally surveyed consumers think that humanity is heading towards the environmental disaster unless we change the use and disposal of packaging (IPSOS, 2019). Moreover, increasing food waste levels concern 63% of the surveyed North Americans and 74% of Canadians consumers, while the environmentally-friendly management of waste is vital to 51% and 73% of the surveyed consumers respectively (APP, 2019). The most environmentally-conscious consumers show evidence of their willingness to give up packaging entirely if that would help with the environmental preservation (Nielsen, 2008). Younger generations also often perceive brands more favourably if they use the relatively more environmentally-friendly packaging (IPSOS, 2019) and are more willing to promote products or brands if their owners are renown for the pro-environmental efforts (Smith, 2010). Consumers worldwide are nowadays mostly willing to take specific actions to reduce the negative environmental impacts of packaging waste. On the contrary, when it comes to changing their actual purchasing behaviour, only about half of those with favourable attitudes seem to also perform the environmentally-friendly purchasing activities, but such purchasing activities seem to also increase over time (IPSOS, 2018a).

Despite the favourable attitudes and pro-environmental intentions, consumers often possess inadequate knowledge about the difference between packaging types. For example, 42% of the surveyed North Americans (35% of Canadians) (APP, 2019), and a majority of the examined South African (Scott & Vigar-Ellis, 2014) consumers were discovered to not being able to distinguish the recyclable from non-recyclable packaging types. Therefore, it is vital to educate consumers about different packaging types and their impacts on the natural environment (Nordin & Selke, 2010). Such education can be achieved through media and the advertising activities since these two are the two primary informational sources, based on which individuals tend to assess the environmental friendliness of products and brands (Smith, 2010). Furthermore, opinion of the young consumers' peers and influencers also seem to be an essential factor when it comes to shaping attitudes towards the relatively more environmentally-friendly products or brands (Smith, 2010). Slovenian consumers also tend to show highly favourable attitudes towards environmental preservation, as recyclability, biodegradability, energy efficiency and use of the environmentally-friendly materials seem to be important to them (Golob et al., 2017). Thus, 95% of the surveyed Slovenian consumers were discovered to possess positive attitudes towards the environmentally-friendly packaging types, while almost 60% consider its environmental impacts when shopping (European Commission, 2017a).

Globally, consumers seem to be aware of the adverse environmental effects of packaging and packaging waste on the natural environment (BillerudKorsnäs, 2017). For example, 43% of surveyed consumers from the EU-28 countries think that the governments, companies and consumers themselves are currently not doing enough to preserve the natural environment. Thus, more than 80% think that it is the government's role to make recycling widely available/accessible and the manufacturers' role to make the environmentally-friendly packaging types affordable for consumers. Only when those conditions are met, consumers feel that it is also their responsibility to purchase and act environmentally-friendly (e.g., recycle) (Young, 2008). However, recent studies reveal that consumers themselves feel to be the most responsible for achieving sustainability through packaging (BillerudKorsnäs 2017). According to another study, a majority of the globally surveyed consumers worldwide think that consumers, governments, as well as companies are all responsible, while only 1% think that nobody is responsible for achieving sustainability by using the environmentally-friendly packaging alternatives (IPSOS, 2018a). In Slovenia, 96% of the surveyed citizens think that producers should design packaging in a way to facilitate its recyclability, 95% that producers should reduce packaging amount while 86% think that Slovenian government should collect waste in a more sustainable way. Moreover, 93% think that consumers should be more educated about recycling, and 62% think that consumers should pay more when purchasing the single-use plastic products (European Commission, 2018). However, according to Jager (2011), Slovenian consumers perceive companies as the most responsible for creating the relatively more environmentally-friendly packaging designs and seem to judge brands based on their impact on the natural environment. 50% of the examined Slovenian consumers also think that companies should recycle all of their waste and 20%

believe that in case of not recycling all of their waste, companies in Slovenia should pay fines (Jager, 2011).

3.2 Consumer definition of the environmentally-friendly packaging

Consumers are often not aware of the potential environmental effects of packaging throughout its entire life cycle, but mainly focus on the end-of-life (e.g., recyclability, reusability, biodegradability and packaging volume/amount), or the beginning-of-life characteristics (e.g., type of materials) and less on the stages, with which they are not within a direct contact (e.g., transportation, energy efficiency and recoverability) (Verghese, Lewis & Fitzpatrick, 2012, p. 107–150). The majority of globally surveyed consumers seems to perceive recyclability as a crucial determinant when assessing the environmental friendliness of packaging (Packaging Consortium, 2013; Young, 2008; Herbes, Beuthner & Ramme, 2018; APP, 2019). When defining environmentally-friendly packaging types, consumers seem to focus less on the use of non-harmful materials, carbon footprint, and the energy efficiency of packaging alternatives (Herbes, Beuthner & Ramme, 2018). Along with recyclability, biodegradability and the use of renewable or compostable materials seem to be essential attributes, which define the environmental friendliness of packaging in the eyes of consumers. Hence, consumers tend to focus less on reusability and packaging amount/volume reduction when defining such packaging. Additionally, packaging which minimises waste and can be recycled easily and efficiently seems to be highly valued amongst the environmentally-conscious consumers (BillerudKorsnäs, 2017). When it comes to more innovative environmentally-friendly, bio-based packaging materials - e.g., biomethane (renewable but non-biodegradable polymer), consumers seem to be somewhat more cautious and seem to often even possess negative attitudes, mostly due to the insufficient knowledge, or due to a general mistrust or the health-related concerns perceived in connection with such packaging materials (Herbes, Beuthner & Ramme, 2018). Similarly, Cheek and Wansink (2017) discovered that consumers often identify the innovative edible packaging rather negatively, show a mistrust or even disgust in connection with such packaging types.

Globally, perception of the environmentally-friendly packaging types varies significantly. Germans seem mostly focus on biodegradability, while French and the US consumers on recyclability when assessing the environmental friendliness of packaging (Herbes, Beuthner & Ramme, 2018). Similarly, millennials from the US mostly describe such packaging types as “recycled” or “green” and less frequently as “biodegradable”, “organic” or “natural” (Smith, 2010). South African consumers seem to focus mostly on the non-harmfulness, as well as biodegradability and recyclability packaging characteristics, while less than 4% perceive a reduced packaging volume/amount or a low carbon footprint as important characteristics when assessing the environmental friendliness of a packaging (Scott & Vigar-Ellis, 2014). In Slovenia, packaging recyclability seems to be relevant to 55.41% of the surveyed women and only 5.26% of men, but only if there is no perceived trade-off between

the recyclable and the non-recyclable packaging alternatives in terms of quality and price (Šečur, 2015). A difference in attitudes of Slovenian consumers and those from the rest of the world may also be present due to different waste collecting systems and national policies, as well as cultural values. For example, German consumers seem to focus more on reusability, due to a widespread of collecting systems for glass bottles throughout Germany (Herbes, Beuthner & Ramme, 2018).

Consumers often evaluate the environmental friendliness of packaging also based on its material structure (Verghese, Lewis & Fitzpatrick, 2012, p. 107–150). Glass packaging attracts consumers because of its protective structure, transparency, as well as a relative environmental friendliness. However, on average consumers seem to perceive the plastic paper packaging types as superior in terms of their resistance to physical impacts and convenience of use (e.g., their relative lightness, durability and adaptability) (Aday & Yener, 2014). Thus, a survey on the UK consumers revealed that paper, board and glass are on average perceived as the most, while plastics as the least environmentally-friendly amongst the examined packaging materials (Topic, Mitchell & Munroe, 2018). Similarly, Steenis, van Herpen, van der Lans, Ligthart and van Trijp (2017) discovered that consumers perceive plastic and metal packaging as less environmentally-friendly than the biodegradable plastic, paper or board-based packaging types. Thus, consumers' perception of the environmental friendliness often seems to oppose the objective measures (e.g., the LCA) regarding the environmental friendliness of a specific packaging design, which reveals a lack of sufficient knowledge about the environmental friendliness of packaging materials (Steenis, van Herpen, van der Lans, Ligthart & van Trijp, 2017). Moreover, the majority of surveyed US millennials even perceive plastic packaging as relatively more environmentally-friendly than glass or metal, while roughly 75% cannot distinguish the types of plastics (Young, 2008). While paper and board packaging materials are frequently identified as "homely", "environmentally-friendly", "local" or "organic", consumers often identify plastic packaging as "bad for the environment", "affluent", "unnecessary" or "expensive". On the other hand, plastic packaging is often perceived as superior in terms of its functional properties and convenience of use. However, the perceived functional superiority is usually not strong enough to outweigh the negative attitudes towards plastic packaging, due to its adverse impacts on the natural environment (Cheek & Wansink, 2017). Thus, in context of Slovenian consumers, paper and board seem to be perceived as the most, while steel and plastics as the least environmentally-friendly packaging materials (Šečur, 2015).

3.3 Perceived importance of the environmentally-friendly packaging

In terms of a holistic image of the product and its packaging, Plumb, Downing and Parry (2013) discovered that packaging plays only a minor (supportive) function in the eyes of consumers when comparing different product alternatives, while Bech-Larsen (1996, p. 23) argues that consumers perceive the product's price and quality to be more important than its packaging. Similarly, Marzena and Maria (2015) discovered that Polish consumers mostly

do not consider the environmental friendliness of packaging when shopping. On the contrary, Rokka and Uusitalo (2008) argue that packaging can contribute up to almost 35% of the overall importance of the combined product attributes and is even perceived as a relatively more essential product attribute than its functional performance or quality. However, according to Rokka and Uusitalo (2008) price remains a slightly more important product attribute than the environmental friendliness of its packaging. Further, consumers from the UK also seem to perceive price and quality as relatively more vital product attributes, while brand and ethical factors are perceived as somewhat less important than the environmental friendliness of the product's packaging (Topic, Mitchell & Munroe, 2018).

According to IPSOS (2018b), packaging contributes up to 36%, while price, positive past experience and promotion still seem to be perceived as relatively more critical purchasing factors in the eyes of Slovenian consumers. Thus, the product's taste (in case of edible products), quality and price were identified as the most crucial purchasing criterion in the eyes of Slovenian consumers (IPSOS, 2018b). Similarly, Rus (2013) discovered that amongst the studied product characteristics, only brand seems to be perceived as relatively less important than the environmental friendliness of packaging, while Šečur (2015) discovered that price, followed by the existence of a need for a product and the convenience of use are all perceived as a relatively more essential product attributes for Slovenian consumers than the characteristics of its packaging.

Consumers need to be sure of the environmental consequences and care about the importance of specific packaging characteristics in order to prefer it (Bech-Larsen, 1996, p. 23). When discussing the relative importance of the environmental friendliness of packaging in comparison with other packaging characteristics, globally, consumers seem to show a preference for the relatively more environmentally-friendly packaging types (Rokka and Uusitalo, 2008). However, such preference is often present only in absence of additional costs, lower perceived quality or an inferior functional performance of packaging (Bech-Larsen, 1996, p. 23). According to Packaging Consortium (2013), consumers are not willing to trade-off the convenience of use, functionality, or price to obtain a relatively more environmentally-friendly packed product. Further, Young (2008) discovered that up to 75% of the surveyed US consumers favour the environmentally-friendly packaging types, but only 10% of these would be willing to accept functional trade-offs, connected with the relatively more environmentally-friendly packaging alternatives. The examined Polish and French consumers seem to be willing to accept inferior appearance, but not also functionality or a decrease in quality of the environmentally-friendly packaging alternatives (Jerzyk, 2016). In addition to functionality, the perceived hygienic sacrifices due to insufficient packaging volume/amount, a shorter product shelf life and inadequate product protection seem to be somewhat less negotiable in the eyes of consumers (Nielsen, 2008). According to Lindh, Olsson and Williams (2016), convenience of use (e.g., resealability) remains the most important, while consumers from the UK seem to mostly perceive the environmental friendliness of packaging as a relatively more critical packaging characteristic than its

functional performance or visual appearance. However, they would be willing to trade-off appearance (and not the functionality) in order to obtain the relatively more environmentally-friendly packed product (Topic, Mitchell & Munroe, 2018). Further, the protection function and convenience of use (e.g., ease of opening or resealability) are still perceived as relatively more essential packaging attributes than the environmental friendliness of the product's packaging in the eyes of the surveyed US, UK, French, Chinese and German consumers (Young, 2008). Lastly, in the eyes of Slovenian consumers, provision of adequate information about the contained product, as well as packaging seems to be the most important packaging attribute. Thus, the information function, followed by the convenience of use and the protection function are perceived as the most, while the environmental friendliness of packaging seems to be perceived as a relatively less critical packaging characteristic in the eyes of Slovenian consumers (Rus, 2013).

Consumers also often perceive trade-offs between the functionality and environmental friendliness of packaging (Danes, Hess, Singh & Metcalf, 2012). For example, a study on Finish consumers revealed that consumers, who are familiar with the environmentally-friendly packaging types tend to perceive them equally in terms of the of functionality, product protection and the information function, as well as in terms of the convenience of use and quality. On the contrary, those not familiar with such packaging types do not share such attitudes and are, on average, also not willing to recommend the relatively more environmentally-friendly packaging types to their peers (Anh, 2017). However, there is not always a need for the trade-offs. Modern technologies nowadays allow for relatively more environmentally-friendly packaging designs, which simultaneously cut down the production cost. An example of such packaging are the lightweight plastic bottles, which lower the material requirements, as well as save the transportation energy and cut the overall costs of the contained products (Young, 2008).

3.4 Environmentally-friendly packaging identification

Packaging is a communicator of the brand. It can be used to facilitate changes in consumer attitudes, purchasing, and post-purchase behaviour. Packaging plays a significant role, also when it comes to product positioning (Verghese, Lewis & Fitzpatrick, 2012, p. 107–150). In situations when consumers are facing a large amount of information, packaging often serves as the primary criteria, which affect attitudes towards the products/brands and can significantly affect their purchasing (Magnier & Crié, 2015). Packaging also plays a vital role in expressing environmental friendliness of the contained product (Topic, Mitchell & Munroe, 2018). Consumers nowadays show increasing willingness to change their purchasing patterns if they identify expressed environmental friendliness of products as credible (Jerzyk, 2016). Since consumers often possess only limited knowledge and are frequently unable to identify the relatively more environmentally-friendly packaging types (Scott & Vigar-Ellis, 2014; Nordin & Selke, 2010), packaging should include eco-labels, as well as promotional messages, which signal environmental friendliness of both – the

product, as well as the packaging (Verghese, Lewis & Fitzpatrick, 2012, p. 115). For example, according to APP (2019), more than a third of the surveyed US and Canadian consumers are willing to select a product or a brand in the presence of an adequate eco-labelling on their packaging. However, globally, consumers seem to perceive environmental friendliness differently. Firstly, when comparing it with product characteristics (e.g., the recyclability or reusability) and secondly due to the subjectivity of their opinion, as well as limited knowledge about the environmental friendliness of packaging alternatives (Steenis, van Herpen, van der Lans, Lingthart & van Trijp, 2017).

To be perceived positively, products and brands use the *intrinsic* (indirect) and the *extrinsic* (direct) environmental packaging cues (Magnier & Cri , 2015). Environmental packaging cues can be further divided into environmental structural, graphical and informational cues. *The environmental structural cues* relate to the packaging structure –e.g., the use of environmentally-friendly materials or a reduced packaging volume/amount. *The environmental graphical cues* relate to the packaging graphics and their properties – e.g., the use of dull or green colours, eco-labels and logos, as well as photographs of the natural environment. Finally, *the environmental informational cues* are present in the form of the informational messages displayed on the packaging - e.g., environmental footprint measures, licensing agreements with the environmental organisations, as well as pedagogical information and the scientific or general environmental claims (e.g., “Environmentally-friendly packaging” or “Reduced packaging”) (Magnier & Cri , 2015).

In general, form (shape), colour and material seem to be the essential criterion for formation of attitudes towards the packaging (Esmailpour & Rajabi, 2016). Similarly, Ahmed, Parmar and Ahmed Amin (2014) discovered a strong positive correlation between the packaging shape/design, a moderate positive correlation between colour, but surprisingly no correlation between the packaging material type and the purchase intention of the consumers. In terms of the packaging size, consumers seem to perceive bigger packaging units as somewhat less environmentally-friendly in comparison with the smaller ones (Cheek & Wansink, 2017). Similarly, to Magnier and Cri  (2015) and Anh (2017), Scott and Vigar-Ellis (2014) also discovered that consumers mostly connect dull packaging colours (e.g., brown, cream and green) with the relatively more environmentally-friendly packaging types. Further, Anh (2017) argues that the perception of packaging depends on the consumer’s experience with environmentally-friendly packaging. According to his analysis, the non-experienced consumers mostly identify the relatively more environmentally-friendly packaging types based on shape, colour and size, while the experienced consumers mostly based on the eco-labels, present on the packaging. However, in the context of Slovenian consumers, Rus (2013) discovered that up to 75 percent cannot distinguish between the more and less environmentally-friendly packaging types.

Eco-labels also seem to play a vital role when discussing the formation of attitudes and the purchasing decisions of consumers (Verghese, Lewis & Fitzpatrick, 2012). Consumers tend to read labels displayed on the product packaging in order to get more information about the

packaging and the contained product. However, they often do not possess adequate knowledge to understand the meaning of the labels (Aday & Yener, 2014). According to Rokka and Uusitalo (2008, p. 517–518) eco-labels are the most critical selection criteria in the eyes of the examined consumers when purchasing environmentally-friendly packaged products. Further, according to Smith (2010), the majority of surveyed consumers recognise the relatively more environmentally-friendly packaging types based on the eco-labels, while less frequently based on texts and images displayed on the product packaging. Contrary to the majority of the examined literature, Smith (2010) discovered that consumers rarely recognise the more environmentally friendly packaging types based on colours or volume/amount of used packaging materials. In the context of South African consumers, the majority (44,6%) mostly identify the environmentally-friendly packaging types based on the eco-labels, 30% based on the environmental logos or graphics, 17,6% based on the “common sense”, while only 12,4% reported their inability to distinguish between the relatively more and less environmentally-friendly packaging types (Scott & Vigar-Ellis, 2014). While the majority of surveyed UK consumers find eco-labels useful - especially for the recycling purposes –the relatively older consumer segments often identify eco-labels as confusing (Topic, Mitchell & Munroe, 2018). On the other hand, the surveyed Latvian consumers, on average, reported not being able to identify and interpret even the most common eco-labels (Muižniece-Brasava & Kirse, 2018), while Australian consumers often describe the eco-labels as hardly understandable (Buelow, Lewis & Sonneveld, 2013). Therefore, the explicit and the action-oriented eco-labels, along with the environmental promotional messages (e.g., “Recyclable steel” or “Remove cap and recycle”) are more useful to persuade consumers, who possess insufficient knowledge to identify the eco-labels (Buelow, Lewis & Sonneveld, 2013; Packaging Consortium, 2013). Moreover, consistent and straightforward promotional messages, together with the initiatives for the behavioural change (e.g., “Recycle to preserve the natural environment.”) may often be more effective in signalling the environmental friendliness of the product packaging (Packaging Consortium 2013). However, if the environmental claims are perceived as too general, their credibility in the eyes of the targeted consumer segments may decrease (Sirieix, Delanchy, Remaud, Zepeda & Gurviez, 2013). In the context of Slovenian consumers, when assessing the attitudes towards the “EU-Ecolabel”, almost 25% of the surveyed consumers seem to be aware and able to understand the meaning of the label, while 76% believe that such labels are a trustworthy indicator of the environmental friendliness of the labelled products (European Commission, 2017a).

3.5 Factors affecting the attitudes and purchasing behaviour of the environmentally-friendly packaging

Discussing the individual factors, according to the majority of recent studies (e.g., Kostadinova, 2016; Prakash & Pathak, 2017; Scott & Vigar-Ellis, 2014; Herbes, Beuthner & Ramme, 2018; Tsen, Phang, Hasan & Buncha, 2006; Khare, 2015; Schwepker & Cornwell, 1991) **attitudes** seem to be the best predictors of environmentally-friendly behaviours. Similarly, the **environmental concern**, defined as either concern, connected

with the environmental pollution, the climate change or the impact of environmentally-friendly products and packaging on the natural environment - seem to be amongst the most influential predictor of both – the attitudes and the purchasing behaviour connected with the relatively more environmentally-friendly products or packaging (Kostadinova; 2016; Peattie, 2010; Heo & Muralidharan, 2019; Schwepker & Cornwell, 1991; Lee, 2014; Khare, 2015; Orzan, Cruceru, Bălăceanu & Chivu, 2018; Barber, 2013). Thus, the more present the individual's environmental concerns are the more favourable attitudes towards the environment and the environmentally-friendly products such individuals seem to have. Thus, such consumers were also discovered to be relatively more motivated for the environmentally-friendly purchases, as well as the other environmentally-friendly activities (e.g., recycling) (Kostadinova, 2016). However, the lack of sufficient knowledge about the impact of packaging on the natural environment often leads to a misperception and a consumer behaviour, which contradicts the environmentally-friendly intentions of consumers (Lindh, Olsson & Williams, 2016).

Further, an extent to which an individual is aware of what the consequences of his/her purchasing decisions on the natural environment – often referred to as the “**Perceived consumer effectiveness**” (PCE), can significantly positively affect both - the attitudes and the purchasing behaviour in connection with the environmentally-friendly products or packaging (Sirieix, Delanchy, Remaud, Zepeda & Gurviez, 2013; Khare, 2015; Kostadinova, 2016; Schwepker & Cornwell 1991). The majority (87%) of surveyed consumers from 28 European Union countries believe that they can play a role in protecting the environment (European Commission, 2017a), while the surveyed Slovenian citizens also seem to be worried about the adverse environmental effects of packaging and show sufficient evidence of the PCE (Rus, 2013). While Kang, Liu and Kim (2013) and Sirieix, Delanchy, Remaud, Zepeda and Gurviez (2013) argue that the PCE affects purchasing behaviour directly, Heo and Muralidharan (2019) discovered that the PCE firstly positively impacts the attitudes, which then positively reinforce the individual's environmentally-friendly purchase intentions. In the context of Slovenian consumers, the majority seems to possess favourable attitudes towards the environment and seems to be relatively environmentally-conscious. However, their PCE seems to be lower in comparison with consumers from other developed countries (Golob et al., 2017).

Past studies also revealed that **culture** significantly affects attitudes, as well as the purchasing behaviour in connection with the environmentally-friendly packaging. Consumers with the relatively more present **altruistic values**, as well as those with the relatively more **collectivistic** personal characteristics were discovered to be on average more likely to possess the favourable attitudes towards the environmental friendliness. Such consumers also tend to be involved in environmentally-friendly purchasing activities than the less collectivistic or consumers with relatively less present altruistic values (Kostadinova 2016) - also in terms of the environmentally-friendly packaging (Prakash et al., 2019). Consumers also seem to be more motivated to perform purchases of the environmentally-

friendly packed products, if environmental and health-related concerns are present amongst their family members (Posri, 2014). Individuals with relatively more evident altruistic values also show more altruistic motives when purchasing environmentally-friendly packaging types. For example, the relatively highly altruistic consumers often purchase the environmentally-friendly packed products due to their environmental concerns and to maintain the well-being of others, while the more egoistic individuals usually concentrate more on the egoistic purchasing motives. For example, the relatively more egoistic consumers tend to perform such purchases due to their concerns for their own health (Prakash et al., 2019). Further, the relatively more collectivistic consumers tend to care more about their relationships with others. They are also more frequently concerned about the welfare of others and, therefore, relatively frequently prioritise the group over their personal goals (Kim & Choi, 2005). Thus, **collectivism** level seems to positively affect the attitudes towards the environmentally-friendly packaging types and is often directly connected with the purchasing of the environmentally-friendly packed products (Barbaro-Forleo, Laroche & Bergeron, 2001; Barber, 2013; Kim & Choi, 2005). The more collectivistic consumers also seem to perform the activities, aimed at helping the environment (e.g., recycling) more frequently in comparison with the more individualistic ones (Culiberg, 2014). Lastly, Slovenian consumers, on average, score low in individualism level (high collectivism) (Hofstede Insights, no date), which could result in relatively more favourable attitudes toward the environmentally-friendly packaging, as well as the more frequent purchases of the environmentally-friendly packed products.

Social norms also seem to positively influence environmentally-friendly purchasing behaviour. Social norms are defined as an extent to which a person or the individual perceives that most of the people, who are important to him/her think that he/she should perform or not perform a particular behaviour (Ham, Jeger & Ivković, 2015). They can be either descriptive (perception of what other people from the individual's social group commonly do) and injunctive (what should be done or is commonly done in terms of the individual's social group) (Trudel, 2019). Further, individuals who want to be perceived as environmentally-friendly seem to perform environmentally-friendly activities and purchases more often than those without a desire to be perceived as environmentally-friendly (Khare, 2015; Posri, 2014). According to Barber (2013), the "green" **self-identity** is the best predictor when it comes to willingness of consumers to pay more for environmentally-friendly packaging. Furthermore, according to Trudel (2019) and Lee (2014), self-identification, social status and the reputational benefits in the eyes of the consumers' peers and family can significantly affect the environmentally-friendly consumption. Thus, Posri (2014) argues that individual's reference groups - e.g., individual's role models, as well as opinion of the experts, can both play a vital role in shaping individual's environmental concerns and values.

Demographic factors also seem to play an important role when it comes to attitudes towards environmentally-friendly packaging. In terms of **gender**, women on average seem to possess

relatively stronger concerns and perceived responsibility for achieving sustainability in comparison with men (Lee, 2009; Marzena & Maria, 2015). Women also possess stronger positive environmental attitudes (Lee, 2009; Zelezny, Chua & Aldrich, 2000) and tend to support environmental movements more frequently than men (Marzena & Maria, 2015). Similarly, Tikka, Kuitunen and Tynys (2000) discovered that female students show higher levels of perceived environmental responsibility and knowledge in comparison with males. Moreover, Smith (2010) discovered that women are more likely to be affected by pro-environmental advertisements, as well as the influencers' opinion and are, on average, more willing to promote or purchase environmentally-friendly products (Lee, 2009; Smith, 2010). According to Golob et al. (2017) women in Slovenia on average also score higher in altruistic and lower in egocentric values in comparison with men and are therefore more likely to possess favourable attitudes, related with the natural environment. According to Šečur (2015), Slovenian women also seem to care significantly more when it comes to environmental friendliness of packaging, its recyclability and reusability in comparison with men. Interestingly, according to K. Dagher, Itani and Nasser Kassar (2015) women were also discovered to be more willing to buy environmentally-friendly products in comparison with men, but only when comparing individuals with the relatively low levels of environmental concern. Surprisingly, at the higher levels of concern, the difference in attitudes between genders disappeared.

Age also seems to be a critical factor, which influences attitudes towards environmentally-friendly products and related purchasing behaviour. Older consumers were discovered to recycle, reuse and value environmental friendliness of packaging more than the relatively younger consumers (Topic, Mitchell & Munroe, 2018; Scott & Vigar-Ellis, 2014; Marzena & Maria, 2015). Younger consumers, on the other hand, seem to care significantly more for packaging aesthetics (Topic, Mitchell & Munroe, 2018). Similarly, the relatively older Slovenian consumer segments were discovered to be, on average, more in favour of acting sustainably in comparison with the younger ones (Golob et al., 2017). On the contrary, results of the global consumer study by IPSOS (2019) suggest that on average, younger consumers seem to possess more favourable attitudes towards the environmentally-friendly packaging types, are more knowledgeable and care more about the preservation of the natural environment in comparison with the older consumers.

A relatively higher environmental sensitivity has also been discovered for consumers with relatively higher **income and education levels** (Levin, 1990; Shamsi & S Siddiqui, 2017). Thus, the higher the education level, the more supportive consumers seem to be towards recycling activities, the use of green taxes and implementation of pro-environmental legislation (Marzena & Maria, 2015). In contrast to findings from the majority of studies from other global settings, Slovenian consumers with relatively lower education levels were discovered to purchase more sustainably in comparison with the highly educated individuals (Golob et al., 2017). Further, according to Madushanka and Ragel (2016), consumers with higher income levels were discovered to possess relatively more favourable attitudes towards

environmentally-friendly packaging types. Similarly, according to Jerzyk (2016), examined students with higher material statuses were discovered to evaluate environmental friendliness of packaging more frequently than those with lower material statuses.

Finally, as already indicated throughout the previous chapters of this thesis, attitudes and the perception of environmentally-friendly packaging seems to vary between the **geographical regions**. While most of the Asian and the US consumers tend to perceive product packaging relatively more positively, the European and the Japanese consumers seem to be relatively more indifferent about it or often connect it with relatively more cons than the pros. European consumers also seem to, on average, possess more favourable attitudes towards environmentally-friendly packaging in comparison with the rest of the world (BillerudKorsnäs, 2017). Further, around 50% of the surveyed European, 26% of the Russian, 28% of the Canadian, 19% of the Vietnamese and only 16% of the Japanese consumers were discovered to be willing to sacrifice the legally non-mandatory information displayed on the packaging (e.g., the recipes and the nutritional information) in order to obtain the relatively more environmentally-friendly packaging. Moreover, 48% of the surveyed Vietnamese, 16% of the Austrian and 15% of the Russian consumers would be willing to sacrifice the product protection function of packaging to obtain the relatively more environmentally-friendly packaging. Lastly, only 13% of the German, 15% of the Hungarian, while almost 50% of the Vietnamese consumers would accept a relatively less hygienic packaging if it was also relatively more environmentally-friendly.

3.6 Attitudes towards the environmentally-friendly packaging purchasing

Environmental friendliness is not always perceived as positive in the eyes of consumers, due to the perceived trade-offs between the relatively more and the less environmentally-friendly purchasing alternatives (Luchs, Naylor, Irwin & Raghunathan, 2010). Although consumers often possess favourable attitudes towards environmentally-friendly packaging, their purchasing behaviour is often not aligned with favourable attitudes (Nordin & Selke, 2010; Kostadinova, 2016; Gupta & Ogden, 2009; Kollmuss & Agyeman, 2002; Pickett-Baker & Ozaki, 2008; Young, Hwang, McDonald & Oates, 2009; Chua & Aldrich, 2000; Gleim, Smith, Andrews & Cronin. Jr, 2013; Packaging Consortium, 2013), which confirms the existence of the attitude – behaviour gap. Similarly, in the terms of Slovenian consumers, Golob et al. (2017) discovered that even though the majority of surveyed consumers expressed favourable attitudes towards environmentally-friendly products, only a quarter reported also purchasing them.

Reason for the gap between favourable attitudes and the actual purchasing behaviour may be present due to situational factors, which play a role of perceived behaviour, as described in the TPB model. In other words, situational factors represent the motivational factors or barriers, perceived by the consumers in connection with environmentally-friendly purchases (Kostadinova, 2016). Reasons for the gap may exist due to the perceived trade-off in terms

of *the degree of confidence* (lack of trust in the seller and product's superiority in terms of environmental-friendliness) and *the degree of compromise* (e.g., higher price, lower quality, inferior performance or inconvenience) of the relatively more environmentally-friendly in comparison with those less environmentally-friendly product and packaging alternatives (Peattie, 1999). When purchasing, consumers are often also not willing to pay the price premium for the relatively more environmentally-friendly alternatives. Consumers may also perceive the inferior quality or functionality of environmentally-friendly packed products. Consumers also frequently remain loyal to their existing purchasing habits, face financial constraints, or lack of opportunities (e.g., non-sufficient accessibility) of the relatively more environmentally-friendly packed products or packaging, or mistrust them (Kostadinova, 2016; Posri, 2014; Grunert, 2011). The relative inconvenience of use (Barber, 2013), the loss of pleasure during consumption, the perceived aesthetic costs, while also the perceived hygiene sacrifices (in case of unpackaged or not entirely packaged products) and the perceived insufficient protection of environmentally-friendly in comparison with other packaging alternatives were identified to suppress purchases of environmentally-friendly packed products (Magnier & Crié, 2015). Environmentally-friendly packaging types are also frequently perceived as a marketing tool (perceived greenwashing) to justify higher price of the products. Therefore, consumers may mistrust promotional messages or non-familiar brands (Posri, 2014; Young, Hwang, McDonald & Oates, 2009; Grunert, 2011). Lastly, lack of the PCE and the support services (e.g., the recycling facilities) were also discovered to suppress purchasing activities, connected with environmentally-friendly packaged products (Posri, 2014). On the contrary, according to Magnier, Schoormans and Mugge (2016) consumers nowadays often perceive products, which use relatively more environmentally-friendly packaging types as even superior in terms of the perceived quality in comparison with other products, which indicates the change in attitudes.

The relatively more environmentally-friendly packaging types are usually still more expensive in comparison with the other packaging alternatives, while price is often the primary determinant of consumer's purchase decisions (Muthu, 2015, p. 184 - 185). In 2001, only 13% of the survey respondents reported willingness to pay a relatively higher price for the relatively more environmentally-friendly products (Barbaro-Forleo, Laroche & Bergeron, 2001), while recent studies mostly reveal that consumers are nowadays willing to pay the price premium for the relatively more environmentally-friendly packed products (Prakash & Pathak, 2017). Thus, according to Nielsen (2015) 75% representatives of the Generation Z and 51% of the Baby boomer generation would be willing to pay the premium, while according to BillerudKorsnäs (2017) 72% of the globally surveyed consumers would be willing to pay a 10 - 20% higher price for the relatively more environmentally-friendly packed products. The majority of surveyed consumers from the UK (Topic, Mitchell & Munroe, 2018), as well as those from the US (Barber, 2013), also reported willingness to pay such price premium – especially women and older consumer segments. Furthermore, according to APP (2019), 25% of the surveyed US and 33% of the Canadian consumers claimed to be willing to pay such premium. Moreover, the majority would be willing to pay

10 - 20% more, while almost 30% would be willing to pay 20 - 30% more. Thus, millennials were discovered to be twice as motivated to pay the premium in comparison with representatives of the Baby boomer generation.

Willingness to pay the price premium for the relatively more environmentally-friendly packed products also seems to vary globally. Moreover, 67% of the US, 48% of consumers from the UK, 50% of the German while only 23% of the surveyed Chinese consumers reported willingness to pay a relatively small price premium to purchase a relatively more environmentally-friendly packaged product (BillerudKorsnäs, 2017). On the contrary, half of the surveyed South African consumers even share the opinion that the relatively more environmentally-friendly packaged product can save them money (Scott & Vigar-Ellis, 2014). In the context of surveyed Slovenian consumers, Rus (2013) discovered that 62.91% would be willing to pay more for the same product if packed in a relatively more environmentally-friendly packaging. Thus, the majority of those reported their willingness to pay only a 5% higher price for such products. Lastly, according to the European Commission (2014), even more - 80% of the surveyed Slovenians reported willingness to pay the price premium for a relatively more environmentally-friendly packed products.

4 RESEARCH METHODOLOGY

Existing studies mostly focus on consumer behaviour and less on the motivational factors and attitudes towards the environmentally-friendly packaging types (Orzan, Cruceru, Bălăceanu & Chivu, 2018). Therefore, these attitudes and perception of environmentally-friendly packaging need to be further examined (Nordin & Selke, 2010). Moreover, attitudes towards the environmentally-friendly packaging types also seem to vary significantly between the geographical regions, in terms of the demographic, as well as the internal and external personal characteristics of consumers (Herbes, Beuthner & Ramme, 2018). Attitudes towards the environmentally-friendly packaging types also vary due to a difference in the methodological and analytical approaches, used throughout the examined literature (Topic, Mitchell & Munroe, 2018).

Finally, not much is known about the attitudes of Slovenian consumers towards the relatively more environmentally-friendly packaging types. Therefore, these attitudes, along with the related purchasing behaviour towards the relatively more environmentally-friendly packed products are examined throughout the empirical research in scope of this master's thesis. However, due to a possible difference in attitudes and purchasing behaviour between different product segments, the empirical research in scope of this thesis focuses mainly on the environmentally-friendly packed products for everyday use (e.g., food, beverage, and products for personal care).

4.1 Research objectives

The primary **purpose** of this thesis is to reveal the attitudes of Slovenian consumers towards the relatively more environmentally-friendly packaging types, while also to examine the purchasing behaviour in connection with the environmentally-friendly packed products. Thesis therefore provides a useful insight into perception of the relatively environmentally-friendly packaging alternatives, which can be useful for marketers, businesses, researchers, policymakers and other potentially interested parties.

The thesis also provides the theoretical and business implications regarding the attitudes of Slovenian consumers towards the environmentally-friendly packaging. The primary **goal** of the thesis are to identify the attitudes, perception and importance, the ways of identification, as well as purchasing behaviour and the willingness of Slovenian consumers to pay the price premium in connection with the relatively more environmentally-friendly packed product alternatives. In the scope of empirical research, the underlying factors, which influence the attitudes and purchasing behaviour, along with the perceived motivational factors and barriers of Slovenian consumers in connection with the environmentally-friendly packaging attitudes and purchasing behaviour are provided. More specific goals of the thesis are represented by the eight **research questions (RQs)** and several **hypotheses** provided below.

RQ1: Which environmentally-friendly packaging characteristics and material do Slovenian consumers perceive as the most environmentally-friendly?

H1a: Surveyed Slovenian consumers, on average, perceive all of the examined environmentally-friendly packaging characteristics (Appendix C, Question “Q2” items) as at least “5 – Somewhat important”.

H1b: Surveyed Slovenian consumers, on average, perceive the “use of non-harmful materials” environmentally-friendly packaging characteristic as at least “6 – Highly important”.

H1c: Surveyed Slovenian consumers, on average, perceive wood, paper and board, glass and biodegradable or plastics made out of renewable natural resources as relatively environmentally-friendly (mean scores > 4 – “Neither environmentally-unfriendly nor environmentally-friendly”) packaging materials.

H1d: Surveyed Slovenian consumers, on average, perceive aluminium, steel and non-biodegradable or plastics made out of non-renewable natural resources as relatively non-environmentally-friendly (mean scores < 4 – “Neither environmentally-unfriendly nor environmentally-friendly”) packaging materials.

H1e: Surveyed Slovenian consumers, on average, perceive non-biodegradable or plastics made out of non-renewable natural resources as less than 2 – “Very environmentally unfriendly” packaging material.

RQ2: How important is the environmental friendliness of packaging in comparison with other product and packaging characteristics in the eyes of Slovenian consumers?

H2a: Surveyed Slovenian consumers, on average, perceive quality, price and convenience of use as a relatively more important packaging characteristic than the environmental friendliness of its packaging.

H2b: Surveyed Slovenian consumers, on average, perceive aesthetics and brand as relatively less important packaging characteristic than the environmentally-friendly packaging.

H2c: Surveyed Slovenian consumers, on average, perceive the relatively more in comparison with the less environmentally-friendly packed products for everyday use as superior in terms of quality and trustworthiness (means > 3 – “neutral opinion”).

H2d: Surveyed Slovenian consumers, on average, perceive the relatively more in comparison with the less environmentally-friendly packed products for everyday use as more expensive, less renowned and less accessible (means < 3 – “neutral opinion”).

RQ3: How do Slovenian consumers perceive the relatively more environmentally-friendly in comparison with the less environmentally-friendly packaging alternatives?

H3a: Surveyed Slovenian consumers, on average, perceive the environmental friendliness of packaging as the most important amongst the examined packaging characteristics (Appendix C, Question “Q4” items).

H4: Surveyed Slovenian consumers, on average, perceive the relatively more in comparison with the less environmentally-friendly packaging alternatives as superior in terms of quality, aesthetics, user safety, convenience of use and protection function (mean scores > 3 – “neutral opinion”).

RQ4: Are Slovenian consumers able to distinguish between the relatively more and the less environmentally-friendly packaging types, how do they usually identify such packaging types and what are their attitudes towards eco-labels?

H4: Surveyed Slovenian consumers, on average, pay attention to eco-labels when shopping, trust in eco-labels as being a sufficient indicator of the environmental friendliness, think to possess adequate knowledge to interpret the majority of eco-labels and use packaging according to eco-labels (mean scores of the related survey question “Q8” items > 4 – “Neither agree nor disagree”).

RQ5: Do Slovenian consumers usually purchase products, which use the relatively more environmentally-friendly packaging types and what are their motivational factors and barriers connected with these purchases?

H5: The majority of Slovenian consumers usually purchase products for everyday use, packed in a relatively environmentally-friendly packaging types.

RQ6: Are Slovenian consumers willing to pay a relatively small price premium (and if yes, what percentage of the premium) for same product, if packed in a relatively more environmentally-friendly packaging type?

H6: The majority of the surveyed Slovenian consumers would be willing to pay a relatively small price premium for a product, if packed in a relatively more environmentally-friendly packaging.

RQ7: What are attitudes of Slovenian consumers towards the environmentally-friendly packaging types, purchasing behaviour of the environmentally-friendly packed products, and which factors affect such attitudes and behaviour?

H7a: Favourable attitudes towards the environmentally-friendly packaging types are significantly positively correlated with the environmental concern, collectivism level, effect of social norms, perceived consumer effectiveness, age, gender (women possess relatively more favourable attitudes than men), average disposable net monthly income level, highest achieved education level and household size of the surveyed Slovenian consumers.

H7b: Purchasing behaviour of the relatively environmentally-friendly packed products for everyday use is significantly positively correlated with the favourable attitudes towards the environmentally-friendly packaging, willingness to pay the price premium for same product if packed in a relatively more environmentally-friendly packaging, environmental concern, collectivism level, effect of social norms, perceived consumer effectiveness, age, gender (women are more willing to be involved in such purchases than men), average disposable net monthly income level, highest achieved education level and household size of the surveyed Slovenian consumers.

H7c: Willingness to pay the price premium for same product if packed in a relatively more environmentally-friendly packaging is significantly positively correlated with the favourable attitudes towards the environmentally-friendly packaging, environmental concern, collectivism level, effect of social norms, perceived consumer effectiveness, age, gender (women are more willing to pay the premium than men), average disposable net monthly income level, highest achieved education level and household size of the surveyed Slovenian consumers.

RQ8: Whom do Slovenian consumers perceive as the most responsible for reducing the adverse impacts of packaging on the natural environment?

H8: Surveyed Slovenian consumers, on average, perceive companies and the government as the most responsible for reducing the adverse effects of packaging on the natural environment.

4.2 Data collection

Information used throughout this master's thesis consists of primary and secondary data sources. To obtain a detailed insight into the research topic, secondary data sources were examined, structured and presented throughout the first three chapters of the thesis. Secondary data is data, which has already been collected by other parties and is readably available. Studying the secondary data offers an efficient and inexpensive way of conducting an empirical research, while it still provides valuable insights into the research topic (Parasuraman, Grewal & Krishnan, 2004, p. 68).

After the examination of the relevant secondary data, a quantitative research approach – survey was developed in order to execute the planned research about the attitudes of Slovenian consumers towards the environmentally-friendly packaging. Such research technique is suitable when it comes to obtaining information from relatively large samples. Surveys usually rely on descriptive statistics for the purpose of quantification and generalisation of with the questionnaire gathered results from the research sample to the population of interest (Hollensen, 2003).

Data, collected for purpose of the analysis was obtained through an online survey questionnaire. Such data collection technique provides consistent data due to a limited number of possible answers. Therefore, it can be relatively quickly and efficiently analysed. On the other hand, when collecting data, using a survey questionnaire technique, respondents may not be willing to provide personal information, may not be sure about their actual answers, or may misunderstand the questions. Moreover, a fixed number of the available responses to survey questions may result in a loss of certain types of data - e.g., the more specific attitudes, beliefs or feelings. However, due to many advantages, a survey questionnaire research technique is still the most commonly used primary data collection and analysis technique in marketing. Thus, its validation and meaningfulness can be achieved with a theoretically supported question design (Malhotra & Birks, 2003, p. 225).

The target population for the empirical research in the scope of this thesis are all Slovenian consumers. The research questionnaire was prepared via 1ka.com online questionnaire formation tool and distributed electronically, using a convenience sampling technique. Such sampling technique was chosen because it serves as relatively easy and cost-efficient collection of data (Parasuraman, Grewal & Krishnan, 2004). Questionnaire was distributed through various social media channels (e.g., Facebook, Twitter, Instagram and LinkedIn), while also directly by e-mail and other online messaging and business platforms. More details about the questionnaire in scope of this master's thesis are summarised throughout the following two chapters.

4.3 Survey presentation

Research questionnaire consists of fifteen questions (Qs) designed in a way to obtain all the required information and provide adequate answers to the research questions (RQs) of the thesis. As the examined population are all Slovenian consumers, the questionnaire was initially designed and distributed in Slovenian language (Appendix B), while the questionnaire was also translated into English, to simplify referencing to the survey questions throughout the thesis (Appendix C). Survey questions were custom designed solely for purpose of the empirical research in scope of this master's thesis. They are based on the examined literature and are not directly copied or translated from other similar studies.

The questionnaire consists of six pages and embeds a variety of different question types. Most of the questions are measured through different types of multiple-item, itemised rating scales. Such question types consist of multiple statements, whereas respondents can assess each of the statement, using a rating scale attached to the question (Parasuraman, Grewal & Krishnan, 2004, p. 287). Multiple-item questions with itemised rating scales are widely used in marketing research, mostly to capture the attitudes (Parasuraman, Grewal & Krishnan, 2004, p. 288). The multi-item itemised questions are used for most of the questions in the questionnaire, which are aimed at capturing attitudes of Slovenian consumers towards the environmentally-friendly packaging (Appendix C, Questions "Q1", "Q2", "Q3", "Q4", "Q5", "Q6", "Q8" and "Q9"). A variety of different measurement scales is used, from the seven-point multi-item scales (Appendix C, Questions "Q1", "Q2", "Q3" and "Q4"), Likert scale (Appendix C, Questions "Q8" and "Q9") and five-point semantic differential scales (Appendix C, Questions "Q5" and "Q6"). Some questions also allow for the "Do not know" answers, to increase accuracy of the obtained answers.

Questionnaire also consists of multiple single-answer polar questions with possible answers "Yes" or "No". Such question types are used to obtain information about the usual purchasing behaviour in connection with the relatively more environmentally-friendly packed products for everyday use (Appendix C, Question "Q10"), as well as the willingness of Slovenian consumers to pay the price premium for such products (Appendix C, Question "Q13").

The multi-answer questions, with any possible number of answers, are also widely used throughout the questionnaire. Firstly, to identify the perceived motivational factors (Appendix C, Question "Q11") and the barriers (Appendix C, Question "Q12"), which consumers may perceive when purchasing the relatively more environmentally-friendly packed products for everyday use. Further, multi-answer questions with any possible number of answers are also used when examining identification factors of the relatively more environmentally-friendly packaging types (Appendix C, Question "Q7") and the perceived responsibility for reducing the adverse environmental impacts of packaging (Appendix C, Question "Q15"). Thus, all these questions (Appendix C, Questions "Q7", "Q11", "Q12" and "Q15") also include an additional option to specify any other possible answer ("Other")

in order to capture specific attitudes, not framed in scope of the provided answers. Additionally, survey questions “Q11” and “Q12” are conditional questions, as their appearance depends on the respondent’s answer to survey question “Q10”. Q11 appears only to the respondents, who answered “Yes”, while Q12 only to those who answer “No” to Q10 about the usual purchasing behaviour in connection with the relatively more environmentally-friendly packed products for everyday use. Similarly, Q14 (Appendix C, Question “Q14”) appears only to survey respondents who answer “Yes” to Q13 – a polar question about the willingness of consumers to pay a relatively small price premium to obtain same product, but packed in a relatively more environmentally-friendly packaging. Finally, last page of the questionnaire consists of five questions (D1–D5) about gender, age, highest achieved education level, average disposable net monthly income level and household size of the survey respondents (Appendix C, Questions D1–D5), aimed to be used in the further correlation analyses.

4.4 Sample characteristics

In total, 879 persons clicked and entered the online questionnaire, while 475 answered to at least one of the questions. However, for purpose of the analysis in scope of this thesis, only the fully-completed questionnaires ($n = 366$) were used. On average, survey respondents spent 10 minutes and 29 seconds to complete the questionnaire. The questionnaire was most frequently accessed through Facebook or by clicking directly on the related link. Respondents mostly accessed the questionnaire through their smartphones and tablets, while less frequently through the PCs. The questionnaire was active from the 5th until the 13th of July 2019.

In terms of demographic variables, survey respondents were firstly asked to specify their gender (Appendix C, Question “D1”). Based on the obtained results, the research sample ($n = 366$) consists of 286 women (78.14%) and 80 (21.86%) men (Appendix D, Table 1). Survey respondents were also asked to specify their current age (in years) (Appendix C, Question “D2”). The obtained information were divided into several age groups to ease the comparison of the research sample with the studied population – all Slovenian consumers. 366 survey respondents entered their age - the youngest being 18 and oldest 84 years old, while the average age of the individuals within the research sample is 37.86 and the median age 36 years. The majority (36.89%) of the respondents reported being “from 26 up to 40 years old”, followed by those “from 41 up to 55 years old” (27.32%), while 24.86% reported being “from 18 up to 25 years old” and 10.93% “more than 55 years” old (Appendix D, Table 2).

In terms of the highest achieved level of education (Appendix C, Question “D3”), the majority (50.55%) of respondents ($n = 366$) claimed to have achieved the “1st or 2nd cycle of higher education or specialization”, followed by those with a self-reported “general secondary education” (32.79%). 9.02% claimed having a “3rd cycle of higher education”,

7.65% a “primary or vocational”, while there were no survey respondents with a self-reported “incomplete primary education” (Appendix D, Table 4).

When asked about the average disposable net monthly income levels (Appendix C, Question “D4”), the majority (39.07%) of respondents (n = 366) reported having “from 801 up to 1,300 EUR”, followed by those with the “up to 800 EUR” (33.33%), then those who reported having “from 1,301 up to 1,800 EUR” (18.31%) and finally those with “more than 1,800 EUR” of a disposable average net monthly income level (9.29%) (Appendix D, Table 6).

Through the last survey question, respondents (n = 366) were asked to enter the number of members in their households (Appendix C, Question “D5”). A majority of the surveyed Slovenian consumers (34.79%) claimed to be living in a four-membered, followed by those from a two-membered (30.33%), then three-membered (25.68%) and lastly a single household (9.02%) (Appendix D, Table 7).

When comparing the research sample (n = 366) with the actual population of interest - all Slovenian consumers - in terms of the demographic characteristics, significant differences can be observed. On average the obtained sample consists of: (1) significantly more women (Appendix D, Table 1), (2) younger (Appendix D, Table 2), (3) relatively more educated (Appendix D, Table 3 and 4), (4) consumers with relatively lower average disposable net monthly income levels (Appendix D, Tables 5 and 6) and (5) those who live in a relatively bigger households (Appendix D, Table 7), in comparison with the population of interest.

5 ANALYSIS AND RESULTS

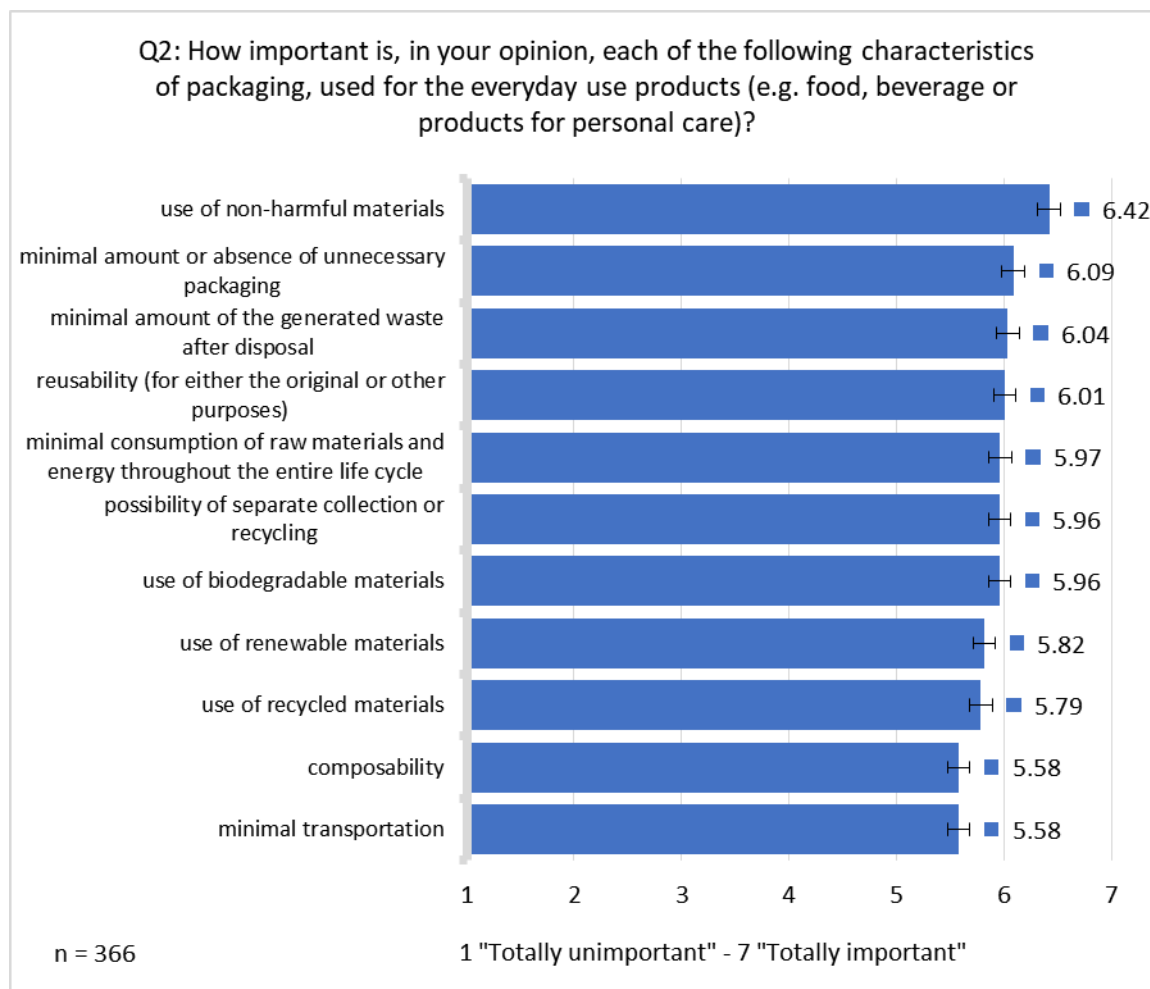
After collection, primary data obtained with the questionnaire were analysed, using the IBM SPSS Statistics 22 software. Analysis relies on the descriptive statistics, as well as a variety of other statistical methods (e.g., correlation identification techniques, independent sample t-tests and factor analysis). The methods used vary based on data types and information, required to be extracted in order to provide valid answers to the research questions and to test the research hypotheses. Throughout the following subchapters, results of the analysis in scope of this master’s thesis are described, visualised and discussed.

5.1 Definition of the environmentally-friendly packaging

Slovenian consumers were asked to express their perceived importance of different environmentally-friendly packaging characteristics of products for everyday use (e.g., food, beverages, and products for personal care) in the scope of survey question “Q2”. Q2 consists of multiple question items, measured through an itemised rating scale from 1 – “Totally unimportant” to 7 – “Totally important” (Appendix C, Question “Q2”). In total, 366 valid responses to Q2 were obtained (n = 366). The relative frequencies of answers to each of the scale points, means and 95% mean confidence interval bounds are displayed in Appendix E,

Table 8 and visualised in Figure 1 below. The 95% mean confidence intervals were calculated in order to generalise the research findings to the population of interest (all Slovenian consumers).

Figure 1: Average perceived importance of the environmentally-friendly packaging characteristics



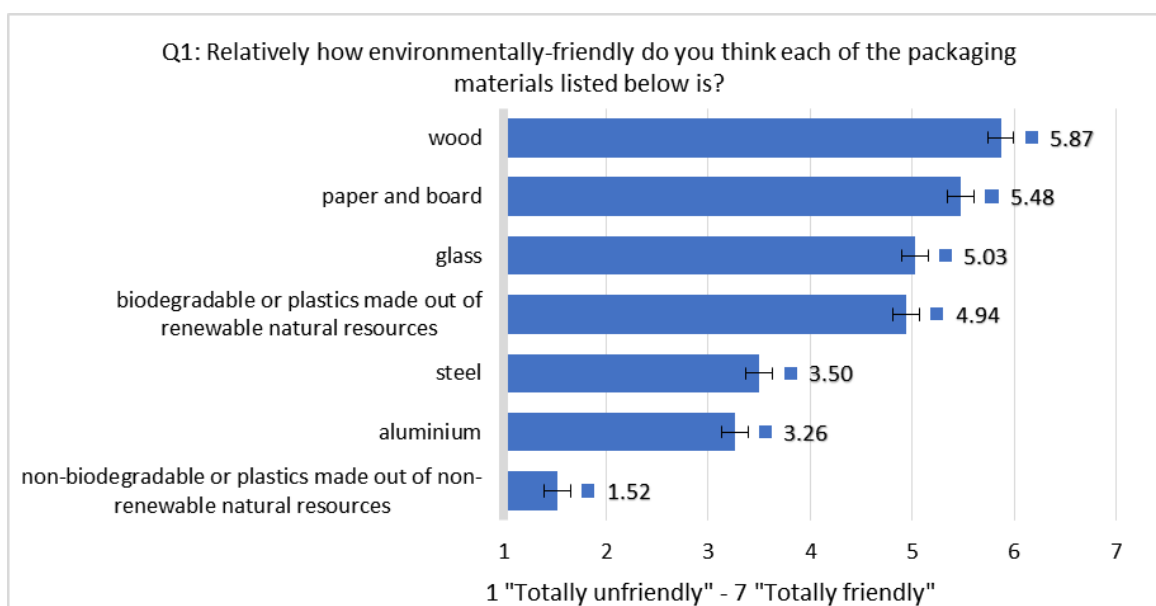
Source: own work.

Results reveal that the use of non-harmful materials is perceived as the most important amongst the listed packaging characteristics. However, other packaging characteristics, e.g., minimal amount or absence of unnecessary packaging, minimal amount of the generated waste after disposal, reusability (for either the original or other purposes), minimal amount of used materials and energy throughout the entire life cycle of packaging, a possibility of separate collection or an option to recycle, while also the use of biodegradable materials all seem to be perceived as approximately equally important in the eyes of the Slovenian consumers. The third most important group of the assessed packaging characteristics consists of the use of renewable and the recycled materials, while composability and the minimal required transportation seem to be perceived as the least important packaging characteristics.

Based on the calculated one sample t-tests, research hypothesis “H1a” can be confirmed. In other words, surveyed Slovenian consumers on average perceive all of the listed packaging characteristics (question “Q2” items) as more than “5 - Somewhat important” ($\text{mean}_{Qa-Qk} > 5$; $\text{df}_{Qa-Qk} = 365$, one-tailed sig. = 0.000) (Appendix F, Table 23), while the use of non-harmful materials ($\text{mean}_{Qe} > 6$; $\text{df} = 365$, one-tailed sig. = 0.000) is on average perceived even as more than “6 – Highly important” (Appendix F, Table 24), confirming the research hypothesis “H1b”. In summary, such results reveal strong positive attitudes of the surveyed Slovenian consumers towards all the analysed packaging characteristics.

Survey respondents were also asked about the perceived environmental friendliness of different packaging materials (Appendix C, Question “Q1”). Q1 is measured through a multi-item, itemised rating scale from 1 – “Totally environmentally unfriendly” to 7 – “Totally environmentally-friendly”, with an additional option “Do not know” regarding each of the question items. Thus, the “Do not know” survey responses were excluded from further analysis. Valid responses to each of the question “Q1” items, along with the relative frequencies, means and 95% mean confidence intervals are displayed in Appendix E, Table 9 and visualised in Figure 2 below.

Figure 2: Average perceived environmental friendliness of packaging materials



Source: own work.

Based on conducted one sample t-tests, it can be statistically confirmed, that the surveyed Slovenian consumers perceive wood ($\text{mean}_{Qb} > 4$, $\text{df} = 361$, one-tailed sig. = 0.000), paper and board ($\text{mean}_{Qa} > 4$, $\text{df} = 363$, one-tailed sig. = 0.000), glass ($\text{mean}_{Qc} > 4$, $\text{df} = 355$, one-tailed sig. = 0.000) and biodegradable or plastics made out of the renewable natural resources ($\text{mean}_{Qf} > 4$; $\text{df} = 357$, one-tailed sig. = 0.000), as environmentally-friendly (means > 4 - “Neither environmentally-unfriendly nor environmentally-friendly”), which confirms research hypothesis “H1c”. On the other hand, aluminium ($\text{mean}_{Qd} < 4$; $\text{df} = 314$, one-tailed

sig. = 0.000), steel ($\text{mean}_{Qe} < 4$; $df = 287$, one-tailed sig. = 0.000) and the non-biodegradable or plastics made out of the non-renewable natural resources ($\text{mean}_{Qg} < 4$; $df = 359$, one-tailed sig. = 0.000) are on average perceived as relatively non-environmentally-friendly packaging materials (means < 4 - “Neither environmentally-unfriendly nor environmentally-friendly”) (Appendix F, Table 25), confirming the research hypothesis “H1d”. Lastly, results of the analysis indicate strong negative attitudes of the surveyed Slovenian consumers towards the non-biodegradable or plastics made out of non-renewable natural resources ($\text{mean}_{Qg} < 2$; $df = 359$, one-tailed sig. = 0.000). On average, such packaging is perceived as less than 2 – “Very environmentally unfriendly” (Appendix F, Table 26), which confirms the research hypothesis “H1e”.

5.2 Perceived importance of the environmental friendliness of packaging

Perceived importance of the environmental friendliness of packaging in comparison with other **product characteristics** in terms of products for everyday use is examined through the survey question “Q3”. Q3 is measured through a seven-point multi-item, itemised rating scale from 1 – “Totally unimportant” to 7 – “Totally important” (Appendix C, Question “Q3”). Results reveal that the surveyed respondents ($n = 366$), on average, perceive product quality as the most important, while convenience of use, price, and the relative environmental friendliness of product’s packaging seem to be approximately equal in terms of the perceived importance in the eyes of Slovenian consumers. Finally, aesthetics and brand are, on average, perceived as the least important among the examined product characteristics as visualised in Figure 3 below and described in Appendix E, Table 10.

To compare the significance of mean difference between perception of the “environmentally-friendly packaging” (question item “Q3b”) in comparison with other product characteristics (Q3q, Q3c, Q3d, Q3e and Q3f) and test the research hypotheses “H2a” and “H2b”, a Wilcoxon signed ranks test was executed. Results of the test reveal that quality is on average perceived as the most important product characteristic (one-tailed sig. = 0.000), while aesthetics (one-tailed sig. = 0.000) and brand (one-tailed sig. = 0.000) are, on average, perceived as significantly less important product characteristics, than the environmental friendliness of product’s packaging. Lastly, in terms of price (one-tailed sig. = 0.169 $> \alpha = 0.05$) and the convenience of use (one-tailed sig. = 0.103 $> \alpha = 0.05$), it cannot be significantly concluded (at $\alpha = 0.05$), that on average the surveyed Slovenian consumers perceive these two product characteristics as relatively more important than the environmental friendliness of its packaging (Appendix F, Table 27). These results confirm the research hypothesis “H2b”, while “H2a” can only be partially confirmed.

Figure 3: Average perceived importance of the product characteristics

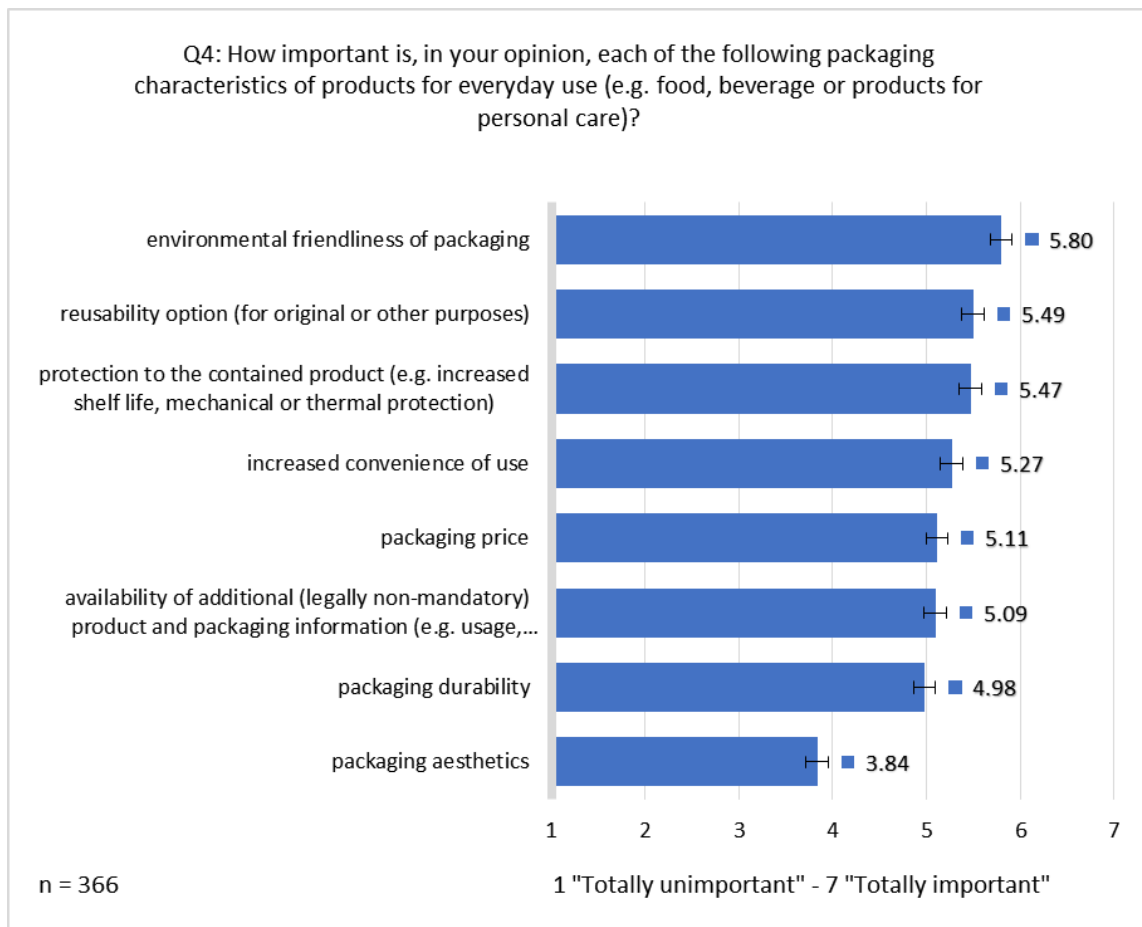


Source: own work.

To analyse the perceived relative importance of different **packaging characteristics** and functions in comparison with the environmental friendliness of packaging, a multi-item question, measured through a seven-point scale, from 1 “Totally unimportant” to 7 “Totally important” was included into the questionnaire (Appendix C, Question “Q4”). Mean scores of responses to each of the Q4 items, together with the calculated 95% mean confidence intervals and relative frequencies of answers to each of the question items are available in Appendix E, Table 11 and visualised in Figure 4 below.

Based on results of the calculated Wilcoxon signed-rank test (Appendix F, Table 28), the surveyed Slovenian consumers, on average, perceive environmental friendliness of packaging as the most important among the listed packaging characteristics (one-tailed sig. for all pairs = 0.000), which confirms the research hypothesis “H3a”. Based on the calculated 95% mean confidence intervals (Appendix E, Table 11), these results could also be generalised to the studied population, if assuming the normality of distribution and the use of a non-probability sampling technique.

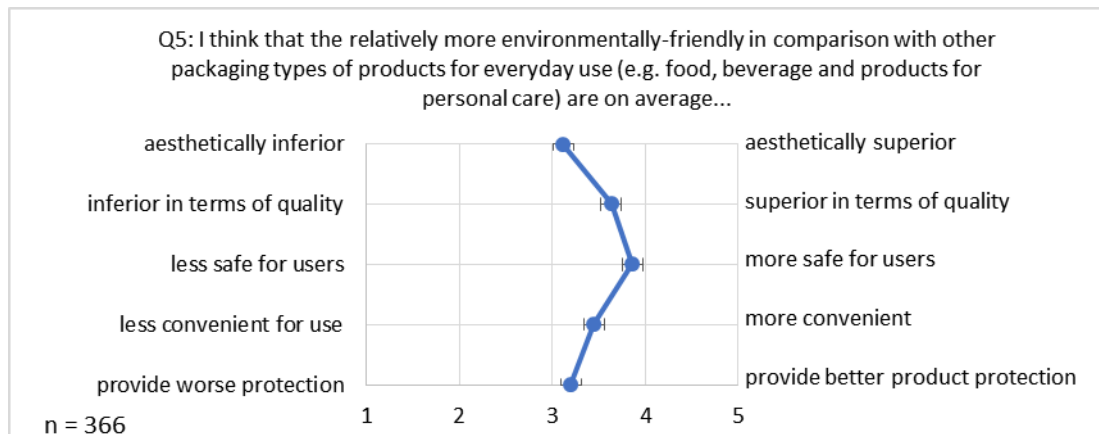
Figure 4: Average relative perceived importance of packaging characteristics



Source: own work.

Further, a comparison in perception of the relatively more with the less environmentally-friendly packaging alternatives is examined through the survey question “Q5” (Appendix C, question “Q5”) Q5 uses a five-point semantic differential scale. With a high probability, it can be assumed that, on average, the surveyed Slovenian consumers perceive the relatively more environmentally-friendly packaging types as superior in terms of all of the examined characteristics (one-tailed sig. = 0.000), which confirms the research hypothesis “H4”. These are the aesthetics, quality, user safety, the convenience of use and the provided product protection, as means of all the question “Q3” item scores are > 3 (3 represents the neutral opinion) (Appendix F, Table 29). Relative frequencies of answers to the Q5 items, along with means and the 95% mean confidence intervals are available in Appendix E, Table 12, and displayed in Figure 5 below.

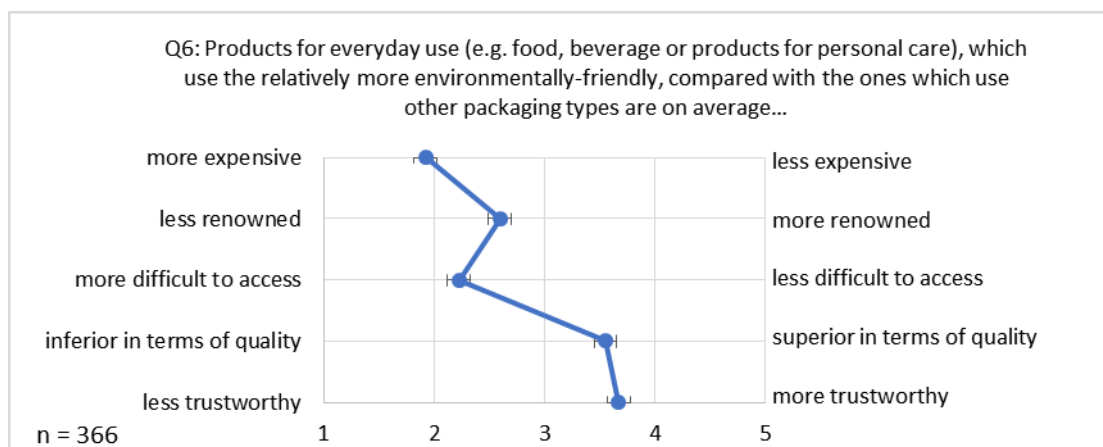
Figure 5: Perception of the environmentally-friendly in comparison with other packaging alternatives



Source: own work.

In the scope of survey question “Q6”, respondents were asked to compare the relatively more with those less environmentally-friendly packed products for everyday use (Appendix C, Question “Q6”). Q6 uses a five-point semantic differential scale. In total 366 respondents fully-answered the question (n = 366). Mean scores, together with the 95% mean confidence intervals and relative frequencies of the obtained answers are summarised in Appendix E, Table 13 and visualised in Figure 6 below.

Figure 6: Average relative perception of the more in comparison with the relatively less-environmentally-friendly packed products



Source: own work.

On average, surveyed Slovenian consumers perceive the relatively more environmentally-friendly packaging in comparison with the relatively less environmentally-friendly packed products for everyday use as more expensive (mean difference_{Q6a} = -1.007; one-tailed sig. = 0.000), less renowned (mean difference_{Q6b} = -0.402; one-tailed sig. = 0.000) and more difficult to access (mean difference_{Q6c} = -0.773; one-tailed sig. = 0.000), which confirms the

research hypothesis “H2d”. On the other hand, they also seem to perceive the relatively more environmentally-friendly packed products as superior in terms of quality (mean difference_{Q6d} = 0.552; one-tailed sig. = 0.000) and the trustworthiness (mean difference_{Q6e} = 0.669; one-tailed sig. = 0.000) (Appendix F, Table 30), confirming the research hypothesis “H2c”.

5.3 Environmentally-friendly packaging identification

In order to explore how Slovenian consumers usually identify and distinguish between the relatively more environmentally-friendly the less environmentally-friendly packed products, survey question “Q7” was developed (Appendix C, Question “Q7”). Q7 is a multiple-choice question, where the surveyed Slovenian consumers were able to select any possible number of answers, with an additional option to specify their own, unique answers. Results reveal, that the survey respondents (n = 366) most often recognise the relatively more environmentally-friendly packaging alternatives based on packaging materials (65.57% of respondents), eco-labels (55.46%), environmental claims and texts displayed on packaging (51.91%), packaging colours (39.34%) and based on packaging amount/volume, which they find necessary for a particular product. Further, 27.87% judge the environmental friendliness of packaging based on the product brand and its reputation for the pro-environmental efforts, 24.04% based recommendations from their friends, relatives or family members, while 21.04% based on the recycling or disposal information, displayed on the packaging. Lastly, 16.39% of the surveyed Slovenian consumers identify the environmental friendliness of packaging according to the packaging graphics and 13.93% based on information from advertisements. Surprisingly, only 3.28% of the survey respondents reported their inability to distinguish between the relatively more and less environmentally-friendly packaging alternatives (Appendix E, Table 14).

In the scope of survey question “Q8”, Slovenian consumers (n = 366) were also asked about their attitudes towards eco-labels, which were measured through a seven-point Likert scale (Appendix C, Question “Q8”). Based on the calculated means and 95% mean confidence intervals, on average, surveyed Slovenian consumers use packaging according to the instructions provided by eco-labels (question item “Q8e”, mean = 5.16) and trust in the credibility of eco-labels as being a sufficient indicators of the environmental friendliness (question item “Q8b”; mean = 4.72). On average, they seem to possess enough knowledge to understand the majority of eco-labels (question item “Q8d”; mean = 4.37) and mostly pay attention to them when shopping (question item “Q8d”; mean = 4.43). Such results confirm the research hypothesis “H4” (Appendix F, Table 31). On the contrary, it seems that the surveyed consumers are somewhat more undecided when it comes to purchasing products for everyday use because of the eco-labels, present on packaging (question item “Q8c”; mean = 3.98) (Appendix E, Table 15).

5.4 Perceived responsibility for reducing the adverse impacts of packaging on the natural environment

In the scope of the last contextual survey question, Slovenian consumers were asked to express their perceived responsibility for reducing the adverse effects of packaging on the natural environment. The perceived responsibility is measured through a multiple-choice survey question (Q15) with any possible number of answers and an additional option to specify custom answer (Appendix C, Question “Q15”). Respondents (n = 366) identified companies as the most responsible (80.87% of the survey respondent selected such answer), followed by the government (65.03%), while more than half (50.55%) of the surveyed Slovenian consumers, also seem to perceive consumers to be responsible when it comes to reducing the adverse effects of packaging on the natural environment. Further, 34.97% also shift the responsibility on the media and 17.76% onto the NGOs, while 16.67% think that everybody is responsible. Thus, only one respondent (0.27% of the sample) thinks that nobody is responsible (Appendix E, Table 22). Based on the obtained results hypothesis “H8” can be confirmed.

5.5 Factors influencing attitudes towards environmentally-friendly packaging

In the scope of survey question “Q9”, respondents (n = 366) were asked to rate their agreement with the several question items, measured through a seven-point Likert scale. On average, the surveyed Slovenian consumers favour the environmentally-friendly packaging types (question item “Q9i”; mean = 6.09), and perceive the environmental friendliness as an important product characteristic (Q9j; mean = 6.03). They also seem to be relatively highly concerned about the adverse effects of mass consumption and packaging waste on the natural environment (Q9h; mean = 5.96), as well as the pollution and environmental changes (Q9g; mean = 5.81). On the other hand, the perceived consumer effectiveness in terms of reducing the harmful effects of packaging on the natural environment seems to be somewhat less present (Q9e; mean = 4.55 and Q9f; mean = 5.27) (Appendix C, question “Q9”). Relative frequencies of answers to the items of the question “Q9”, along with means and the 95% mean confidence intervals are summarised in Appendix E, Table 16.

Based on the reviewed literature and existing studies from other global settings, different individual characteristics of consumers were also analysed in scope of the research questionnaire. The variables of interest, which may influence attitudes and purchasing behaviour of the relatively more environmentally-friendly packed products are age, gender, highest achieved level of education, and average disposable monthly net income level. In addition to these variables, an exploratory factor analysis was executed in order to calculate other required variables. A predetermined (fixed) number of five factors was extracted, which matches the expected number of the latent variables, required for the further correlation analyses. The extracted variables are (1) Attitudes towards environmentally-friendly packaging (ATT), (2) Collectivism level (COLL), (3) Perceived consumer

effectiveness (PCE), (4) Environmental concern (EC) and (5) Social norms (SN). Question items (variables), which loaded to each of the five extracted latent variables, along with the factor loadings are summarised in Appendix F, Table 34, while the related descriptive statistics are available in Appendix F, Table 32. The analysis was executed using the Principal axes factoring extraction method and Promax rotation with Kaiser Normalization. Results of the KMO and Bartlett's test are presented in Appendix F, Table 33. The final, rotated solution converged after six iterations. With the analysis obtained factor scores were stored as variables using the Bartlett method, allowing factors to remain correlated, which was expected based on information from the existing literature. The newly calculated variables are introduced in Appendix F, Table 35. Additionally, descriptive statistics of the extracted latent and other variables, required for the further correlation analyses are summarised in Appendix F, Table 36.

Further, multiple correlation analyses were done in order to examine the correlations between the attitudes towards the relatively more environmentally-friendly packaging types (ATT) and with the exploratory factor analysis extracted variables (EC, COLL, PCE and SN), as well as other variables of interest - gender, age, the highest achieved education level, the average disposable net income level, household size, the usual purchasing behaviour of the environmentally-friendly packed products and the willingness of consumers to pay more for environmentally-friendly packed products (survey questions "D1", "D2", "D3", "D4", "D5", "Q10" and "Q13" respectively). Due to a use of different measurement scales and data types of the examined variables, different statistical approaches were used to calculate the correlation. According to the calculated Pearson's correlation statistics, a significant positive correlations between the ATT and the: (1) EC (sig. = 0.000; $r = 0.524$ – a moderately strong positive correlation); (2) COLL (sig. = 0.000; $r = 0.451$ – a moderately strong positive correlation); (3) Gender (sig. = 0.000; $r = 0.363$ – a weak correlation); (4) SN (sig. = 0.000; $r = 0.257$ – a weak positive correlation); (5) PCE (sig. = 0.000; $r = 0.254$ – a weak positive correlation) and (6) Age (sig. = 0.011; $r = 0.120$ – a very weak positive correlation) of the surveyed Slovenian citizens were discovered (Appendix I, Table 37). Further, according to a one way ANOVA, no significant difference in the ATT between the: (1) differently educated (sig. = 0.805 > $\alpha = 0.05$) (Appendix F, Table 38, 39), (2) consumers with the different average disposable net monthly income levels (sig. = 0.705 > $\alpha = 0.05$) (Appendix F, Table 40, 41) and (3) those from a differently sized households (sig. = 0.107 > $\alpha = 0.05$) (Appendix F, Table 42, 43). As the household size, education level and average disposable net monthly income level seem not to be positively correlated with the favourable attitudes towards environmentally-friendly packaging, H7a can only be partially confirmed.

5.6 Attitudes towards environmentally-friendly packaging purchasing

To identify attitudes towards the purchasing behaviour of environmentally-friendly packed products for everyday use, Slovenian consumers ($n = 366$) were asked to respond to a simple binominal polar ("Yes" or "No") survey question "Q10" (Appendix C, Question "Q10").

Results reveal that 59.84% of the surveyed Slovenian consumers (n = 366) usually performs such purchases (Appendix E, Table 17), which confirms the research hypothesis “H5”.

Further, respondents (n = 219), who answered “Yes” to the survey question “Q10” were also asked to express their motivational factors, connected with such purchases (Appendix C, Question “Q11”). Results reveal that majority of the surveyed Slovenian consumers performs such purchases due to a desire to preserve the natural environment for future generation (85, 39% of the respondents selected this answer) and because they perceive the relatively more environmentally-friendly packaging types as less harmful for their own and other people’s health (74.89%). 58.45% also reported to being involved in such purchases, due to a perceived superior convenience of use of the environmentally-friendly packed products and 33.33% in order to set a positive example to their peers. 29.22% of the surveyed Slovenian consumers also reported to being involved in such purchases due to a feeling of self-realisation, obtained through purchasing the relatively more environmentally-friendly packed products and 17.35%, due to perceived superior quality of such products. Finally, only 7.76% of the survey respondents seem to perform such purchases because other people, relevant to them are also involved in such purchases, 7.31% due to lower prices and 6.39% due to a perceived superior aesthetics of the relatively more in comparison with the less environmentally-friendly packed products for everyday use (Appendix E, Table 18).

On the other hand, respondents (n = 147), who answered with “No” to the question “Q10”, were approached with question “Q12” about the perceived barriers for performing purchases of the environmentally-friendly packed products for everyday use (Appendix C, Question “Q12”). Results reveal that consumers most frequently do not pay attention to packaging when purchasing products for everyday use (55.10% of the respondents selected this answer). 37.41% also reported perceived inaccessibility of the environmentally-friendly packed products, while 36.05% are usually not involved in such purchases due to the perceived expensiveness of the relatively more in comparison with the less environmentally-friendly packed products. Further, 21.77% reported the indifference about packaging types when shopping, while 17.01% seem to not possess adequate knowledge to distinguish between the relatively more and those less environmentally-friendly packaging types. Moreover, 10.88% perceive the environmentally-friendly packed products as inconvenient, 8.16% do not purchase such products due to a perceived lesser product protection and 6.12% due to a perceived lesser quality of the relatively more in comparison with those less environmentally-friendly packed products for everyday use (Appendix E, Table 19).

Further, factors which influence the purchasing behaviour of Slovenian consumers in terms of products for everyday use which use relatively more environmentally-friendly packaging types were analysed. According to the results of ANOVA: (1) older (sig. = 0.026); (2) consumers with relatively higher PCE (sig. = 0.018); (3) those more affected by social norms (sig. = 0.000), (4) the relatively more environmentally concerned (sig. = 0.000), more collectivistic (sig. = 0.000) and (6) those with more favourable attitudes towards the environmentally-friendly packaging types (sig. = 0.000) are, on average, also more likely to

purchase products for everyday use, packed in a relatively more environmentally-friendly packaging type (answered “Yes” to “Q10”) (Appendix F, Table 44, 45 and 46). Female consumers were also identified to be more frequently involved in such purchases (sig = 0.000; a relatively weak correlation - $|r_{\text{Phi}}| = 0.214$) (Appendix F, Table 47). Moreover, respondents who reported to be willing to pay at least a minimal price premium to obtain the relatively more environmentally-friendly packed products (answered “Yes” to survey question Q13), were also identified to be more likely to purchase the relatively more environmentally-friendly packed products, than those not willing to pay the price premium (sig. = 0.000; a moderately weak correlation - $r_{\text{Phi}} = 0.312$) (Appendix F, Table 48). Finally, no significant difference between the self-reported usual purchasing behaviour and average disposable net monthly income level (sig. = $0.666 > \alpha = 0.05$), education level (sig. = $0.455 > \alpha = 0.05$) or household size (sig. = $0.615 > \alpha = 0.05$) of the respondents was discovered (Appendix F, Table 48). Due to the latter three non-significant correlations, “H7b” can only be partially confirmed.

Survey respondents were also approached with a simple polar (“Yes” or “No”) question about whether they would be willing to pay at least a minimal price premium for a product if packed in a relatively more environmentally-friendly packaging type (Appendix C, Question “Q13”). The vast majority (81.97%) of the surveyed Slovenian consumers ($n = 366$) would be willing to pay the price premium (Appendix E, Table 20), which confirms the research hypothesis “H6”. Further, consumers, who claimed to be willing to pay the price premium ($n = 300$), were also asked about the percentage of the premium willing to be paid in the scope of survey question “Q14” (Appendix C, Question “Q14”). Results reveal, that out of 300, 169 respondents (56.33%) would be willing to pay “for up to 5%”, 33.33% “for up to 15%”, 7.33% “for up to 30%”, 2.00% “for up to 50%”, while only 1.00% of the surveyed Slovenian consumers would accept “for more than 50%” higher price for same product, if packed in a relatively more environmentally-friendly packaging (Appendix E, Table 21).

When analysing the factors which may influence the willingness of Slovenian consumers to pay more a product if packed in a relatively more environmentally-friendly packaging, the survey respondents with relatively more favourable attitudes towards environmentally-friendly packaging (sig. = $0.000 < \alpha = 0.01$), (2) those with higher levels of the environmental concern - EC (sig. = $0.000 < \alpha = 0.01$), (3) the ones with a relatively higher PCE (sig. = $0.006 < \alpha = 0.01$), (4) the relatively more collectivistic (sig. = $0.000 < \alpha = 0.09$) (Appendix F, Table 51) and (5) females (sig = $0.000 < \alpha = 0.01$) seem to be more willing to pay the price premium (Appendix F, Table 52). On the other hand, no significant difference in the willingness to pay the premium and age (sig = $0.077 > \alpha = 0.05$) and the influence of social norms (sig = $0.112 > \alpha = 0.05$) (Appendix F, Table 50), average disposable net monthly income level (sig. = $0.211 > \alpha = 0.05$), education level (sig. = $0.523 > \alpha = 0.05$) and the household size (sig. = $0.522 > \alpha = 0.05$) of the surveyed Slovenian consumers was discovered

(Appendix F, Table 53). Due to the above summarised, non-significant correlation, research hypothesis “H7c” can only be partially confirmed.

5.7 Discussion of the research findings

Throughout this chapter, results of the empirical analysis regarding the attitudes of Slovenian consumers towards the environmentally-friendly packaging types are presented in a way to provide answers to the eight research questions (RQs) of the thesis. Results, obtained through the empirical research in the scope of this thesis are also compared with findings of the existing studies and other global settings. Lastly, the theoretical and practical implications are provided.

Slovenian consumers, on average, perceive the use of non-harmful materials as the most crucial **environmentally-friendly packaging characteristic**. Such research findings contrast the ones, obtained by Herbes, Beuthner and Ramme (2018), BillerudKorsnäs (2017) and Young (2008), who discovered that consumers, on average, tend to primarily focus on recyclability and biodegradability of the environmentally-friendly packaging types. On the other hand, the obtained results reflect similar attitudes, as Scott and Vigar-Ellis (2014) discovered in context of South African consumers. Along with the non-harmfulness of packaging materials, Slovenian consumers also seem to highly value the minimal amount or absence of unnecessary packaging, as well as the minimal amount of the generated packaging waste and reusability. Thus, Herbes, Beuthner and Ramme (2018) also discovered that reusability is a relatively highly valued packaging characteristic in the eyes of the US, French and German consumers. Results of the analysis in scope of this thesis also reveal that the surveyed Slovenian perceive renewability, recyclability, compostability, and the minimal transportation of packaging as relatively less important in comparison with other examined characteristics of the environmentally-friendly packaging types. However, they still perceive all these packaging characteristic as more than “Somewhat important”. Therefore, it can be concluded that, on average, the surveyed Slovenian consumers value all of the examined environmentally-friendly packaging characteristics in terms of the everyday use products (e.g., food, beverage, products for personal care).

Further, the surveyed Slovenian consumers perceive wood, paper and board and glass as the most environmentally-friendly among the assessed **packaging materials**, respectively. This which is similar to what Topic, Mitchell and Munroe (2018) discovered in context of the UK consumers. Moreover, Šečur (2015) also discovered that paper and board products seem to be perceived as the most and plastics as the least environmentally-friendly in scope of another study on Slovenian consumers. Surprisingly, Slovenian consumers seem to accept the relatively environmentally-friendly plastic types (biodegradable and plastics made out of renewable natural resources) as relatively more environmentally-friendly than aluminium or steel packaging. Such results partially contrast findings from Herbes, Beuthner and Ramme (2018), who discovered that consumers are often sceptical about the environmental-

friendliness and non-harmfulness of the relatively environmentally-friendly plastic materials. Finally, in accordance with majority of the existing literature, Slovenian consumers also possess strong negative attitudes towards non-biodegradable or plastics made out of non-renewable natural resources.

When comparing the environmental friendliness of packaging with other **product characteristics** in terms of the everyday use products, Slovenian consumers value quality more than any other product characteristic. On the other hand, price and convenience of use both seem to be perceived as only slightly more important than the environmental friendliness of packaging. The identified relative perceived importance of the environmental friendliness of packaging in terms of the surveyed Slovenian consumers is similar to what Marzena and Maria, (2015) and Jerzyk (2016) discovered in context of Polish, Bech-Larsen, (1996) in terms of Danish and Jerzyk (2016) when examining attitudes of French consumers. Similarly to findings, obtained by Topic, Mitchell and Munroe (2018), Rokka and Uusitalo (2008) and Young (2008), product aesthetics seem to be perceived as a relatively less relevant product characteristic in comparison with the environmental friendliness also in the eyes of Slovenian consumers. Lastly, Slovenian consumers seem to perceive brand as a relatively less important product characteristic in comparison with the environmental friendliness of its packaging, which is similar to what Topic, Mitchell and Munroe (2018) discovered in context of consumers from the UK.

When comparing the environmental friendliness of packaging with other **packaging characteristics** and functions, Slovenian consumers ranked the environmental friendliness as the most important relative to other assessed packaging characteristic. Along with the environmental friendliness of packaging, Slovenian consumers also seem to highly value its reusability, protective component and convenience of use. Surprisingly, price was ranked as a relatively less critical packaging characteristic in comparison with the environmental friendliness, reusability, protection, and its convenience of use. Such results contrast the ones obtained by Rus (2013) and Šečur (2015), who identified price to be perceived as one of the most crucial packaging characteristics in the eyes of Slovenian consumers. Such results may indicate that the environmental friendliness of packaging is becoming increasingly important to Slovenian consumers. On the other hand, similarly to findings obtained by Rus (2013), the analysis in scope of this thesis revealed, that Slovenian consumers, on average, perceive aesthetics as one of the least essential packaging characteristics. But there is not always a need for trade-offs in terms of functionality between the relatively less and the more environmentally-friendly packaging types (Young, 2008). Furthermore, results of the reveal that the surveyed Slovenian consumers, on average, perceive the relatively more environmentally-friendly packaging types as superior in all of the analysed packaging characteristics (aesthetics, quality, user safety and convenience of use), as well as by packaging provided protection. Thus, even though that Slovenian consumers, on average, seem to perceive quality and convenience of use as relatively more essential packaging characteristics in comparison with the environmental friendliness, on average, they also

connect the relatively more environmentally-friendly packaging types with both - superior quality and convenience of use. Therefore, a trade-off between the superior functional performance and the environmental friendliness of packaging seems not to be perceived in the eyes of Slovenian consumers.

Further, the surveyed Slovenian consumers on average perceive the relatively more **environmentally-friendly packed products** as more expensive, less renowned and more difficult to access when shopping, while also better in terms of the perceived quality and trustworthiness in comparison with the less environmentally-friendly packed products for everyday use. Thus, Magnier and Crié, (2015) and Grunert (2011) also discovered the perceived expensiveness, lesser accessibility, and unfamiliarity with the relatively more environmentally-friendly brands. According to the analysis in scope of this thesis, Slovenian consumers also seem to perceive the relatively more environmentally-friendly packed products as expensive. They also prioritise price of the products for everyday use in over the environmental-friendliness of their packaging. Therefore, marketers should try to either lower the prices or contrast the importance of the environmental friendliness of packaging in order to efficiently sell the environmentally-friendly packed products for everyday use to Slovenian consumers.

Discussing the identification ways of the environmentally-friendly packaging types, results of the analysis reveal that Slovenian consumers mostly recognise such packaging types based on materials. Furthermore, eco-labels and certificates also seem to play an essential role in terms of the environmentally-friendly packaging identification, which is similar to the obtained findings from Thøgersen (2000) and Rokka and Uusitalo (2008, p. 517–518). Moreover, promotional texts included on packaging (e.g., “Reduced packaging.” or “Environmentally-friendly packaging”) and packaging colours also seem to play a vital role, as Slovenian consumers seem to often connect dull, green and brown colours with the relative environmental friendliness of packaging. Further, the packaging volume/amount - similar to what Smith (2010) discovered, as well as reputation of the brand owners for the environmental efforts also seem to play a relatively important role in the eyes of Slovenian consumers, when identifying the relatively more environmentally-friendly packed products for everyday use. Slovenian consumers, on average, mostly do not tend to judge the environmental friendliness of packaging based on information from the advertisements. Surprisingly, only 3.28% of the surveyed Slovenian consumers think that they cannot distinguish between the relatively more and those less environmentally-friendly packaging alternatives, indicating a relatively high perceived self-confidence connected with the knowledge of Slovenian consumers regarding the environmentally-friendly packaging.

Further, Slovenian consumers seem to mostly pay attention to eco-labels, displayed on packaging when shopping and think to possess sufficient level of knowledge to understand the majority of eco-labels. Such findings contrast the attitudes of Latvian (Muižniece-Brasava & Kirse, 2018), Australian (Buelow, Lewis & Sonneveld, 2013), as well as the ones based on another study in context of Slovenian consumers (Rus, 2013), which mainly

discover the relative lack of the consumers' knowledge in connection with eco-labels. However, the obtained information in scope of this analysis rely on the self-reported consumer knowledge. Thus, results may vary if measured, using a relatively more objective methods (e.g., by asking consumers about the meaning of specific eco-labels). Furthermore, on average, the surveyed Slovenian consumers believe that eco-labels are a trustworthy indicator of the environmental-friendliness and use packaging (e.g., recycle) according to the instructions provided by eco-labels. Thus, eco-labels seem to be the second most essential criteria when it comes to the identification ways of the environmentally-friendly packaging in the eyes of Slovenian consumers. Due to a positive attitudes, marketers who sell their products to Slovenian consumers are suggested to include eco-labels on packaging of products for everyday use to contrast their relative environmental friendliness.

In general, Slovenian consumers seem to favour the environmentally-friendly packaging types, while it is important to them that packaging of the products for everyday use consists of the minimal required packaging amount. They also seem to be relatively highly concerned about the adverse effects of mass consumption and packaging waste on the natural environment. On the other hand, the perceived consumer effectiveness (PCE) of Slovenian consumers, when it comes to preservation of the natural environment is somewhat less evident. Similar findings were obtained by Golob et al. (2017), who discovered favourable attitudes, while also a relatively low PCE levels amongst the examined Slovenian consumers in comparison with consumers from other developed countries (in connection with sustainable consumption). On top of the favourable attitudes, nearly 60% of the surveyed Slovenian consumers also reported to being often purchasing the environmentally-friendly packed products for everyday use. However, these findings are also based on the subjectively measured (self-reported) purchasing behaviour. Moreover, consumers may also think that they are purchasing the relatively environmentally-friendly packed products, when in fact; they are not, due to insufficient knowledge about the effects of their purchasing activities on the natural environment (Lindh, Olsson & Williams, 2016).

Slovenian consumers also indicated their wish to preserve the natural environment for future generations, which seems to be the most important motivational factor when it comes to purchasing the environmental-friendly packed products for everyday use. Additionally, the use of less harmful packaging materials and the perceived superior convenience of such product also seem to be perceived as one of the major factors for performing such purchases, along with a wish of Slovenian consumers to set a positive example to their peers or a perceived feeling of self-realisation, obtained with such purchases. On the other hand, the most commonly perceived barriers when it comes to purchasing the relatively more environmentally-friendly packed products for everyday use in the eyes of Slovenian consumers is that consumers do not pay the attention to packaging when purchasing. Results of the analysis also revealed that the preferred products for everyday use, packed in relatively more environmentally-friendly packaging types or are often not accessible to Slovenian consumers on their usual shopping locations, therefore, they tend not to purchase them. The

relatively more environmentally-friendly packed products for everyday use are also often perceived as too expensive. Thus, 17% of the surveyed Slovenian consumers seem not to be able to distinguish between the more and less environmentally-friendly packaging alternatives or find them inconvenient; therefore, they tend not to purchase them.

The majority (81.97%) of surveyed Slovenian consumers would be willing to pay a relatively small price premium for the same product if packed in a relatively more environmentally-friendly packaging. Thus, 56.33% of those willing to pay the premium would accept only a 5% higher price, 33.33% for 6 to 15%, while only roughly 10% would be willing to pay a 15% or higher price premium for such products, which is very similar to the results, obtained by the European Commission (2014) in scope of the Eurobarometer study and less as identified by Rus (2013). Thus, the obtained results indicate, that Slovenian consumers seem to be significantly more willing to pay such price premium, as BillerudKorsnäs (2017) discovered in context of the US, the UK, German and Chinese consumers.

The relatively more environmentally concerned Slovenian consumers were also discovered to be more likely to possess favourable attitudes towards the environmentally-friendly packaging types and purchase products, which use such packaging types. Thus, such findings were expected and are similar as discovered by majority of the existing literature. Furthermore, the relatively more collectivistic and consumers with relatively higher PCE levels were discovered to be also more likely to possess favourable attitudes and tend to more frequently purchase the relatively more environmentally-friendly packed products. The influence of social norms on individuals also seems to play a significant role when it comes to attitudes and purchasing behaviour in connection with the environmentally-friendly packaging. Thus, Slovenian consumers, who think that it is expected from them to purchase environmentally-friendly, also reported actual realisation of such purchases.

Further, women in Slovenia were discovered to possess relatively more positive attitudes towards the environmentally-friendly packaging types in comparison with men. Women were also discovered being relatively more likely to purchase and pay the price premium for the environmentally-friendly packed products. Similar findings were also identified throughout majority of the examined literature - e.g., by Lee (2009), Zelezny, Chua and Aldrich (2000), Smith (2010) and Šečur (2015). Secondly, attitudes of Slovenian consumers towards environmentally-friendly packaging were discovered to be positively affected by age. The relatively older consumers seem to be more likely to possess favourable attitudes towards the environmentally-friendly packaging types - results that are also similar to the ones, revealed by the majority of examined literature- e.g., by Topic, Mitchell and Munroe (2018), Scott and Vigar-Ellis (2014) and Marzena and Maria (2015). Further, based on the analysis in the scope of this thesis, average disposable net monthly income level, education level and household size of the surveyed Slovenian consumers were not discovered to influence any of the examined variables - attitudes towards the environmentally-friendly packaging, purchasing behaviour of products, which use a relatively more environmentally-friendly packaging types, and willingness of Slovenian consumers to pay the price premium

for same product if packed in a relatively more environmentally-friendly packaging type. Lastly, as discovered throughout the majority of the examined literature, Slovenian consumers with relatively more favourable attitudes, as well as those willing to pay at least a small price premium for the relatively more environmentally-friendly packed products were also discovered to be also more likely to purchase the environmentally-friendly packed products for everyday use.

Finally, majority of the surveyed Slovenian consumers perceive companies as the most responsible when it comes to reducing the adverse effects of packaging on the natural environment. The government and consumers were identified as the second and the third most responsible parties, while the NGOs seem to be relatively less frequently identified as responsible. Thus, almost one-fifth of the surveyed Slovenian consumers think that everybody is responsible, while only one respondent claimed that nobody is responsible for reducing the harmful effects of packaging on the natural environment. The obtained results are very similar to what Young (2008) discovered in context of the US consumers, who think that it is, firstly, role of the government to make the environmentally-friendly practices available, the role of manufacturers to make such packaging types affordable, and finally the role of consumers to purchase and correctly use the environmentally-friendly packed products in a sustainable way.

5.8 Implication of the research findings

The analysis in scope of this thesis uncovers that, on average, Slovenian consumers value all of the examined environmentally-friendly packaging characteristics (e.g., use of non-harmful materials, absence of unnecessary packaging and its reusability). To be perceived as relatively more environmentally-friendly, packaging sold to Slovenian consumers should consists of paper, board, wood, glass or the relatively environmentally-friendly plastic packaging materials. On the contrary, packaging made out of aluminium, steel or the relatively less environmentally-friendly (e.g., non-biodegradable) plastic materials were discovered to be perceived as relatively environmentally-unfriendly and are, therefore, suggested to be avoided. Moreover, type of material was identified as the most important characteristic, based on which Slovenian consumers seem to identify the relatively more environmentally-friendly packaging types. Therefore, packaging materials should be carefully considered when designing the environmentally-friendly packaging types of the everyday use products, intended to be presented to Slovenian consumers. Further, the environmental friendliness of packaging was identified as the most important packaging characteristics, while the environmentally-friendly packaging types seem to be perceived as superior in terms of all of the examined packaging characteristics if compared with the relatively less environmentally-friendly packaging alternatives. Such findings indicate a superiority and acceptance of the environmentally-friendly packaging types amongst Slovenian consumers. Combining these findings with the willingness to pay the price premium and the usual purchasing behaviour in connection with the relatively more

environmentally-friendly packed products, marketers are encouraged to use the environmentally-friendly packaging types when offering their products to Slovenian consumers.

Along with packaging materials, Slovenian consumers most often identify the relatively more environmentally-friendly packaging types based on eco-labels. They also tend to trust in eco-labels and think to possess adequate knowledge to understand their meaning. Therefore, brands, present on Slovenian marketplace are suggested to obtain the relevant packaging certification and use eco-labels on their packaging designs, to signal the environmental friendliness to Slovenian consumers. Thus, in order to increase the trust of Slovenian consumers in eco-labels and raise their awareness, businesses, as well as government should raise the awareness of Slovenian consumers in order to facilitate sales and the fair use (e.g., disposal or separate collection) of the eco-labelled products. Further, packaging should use dull, green or brown colours and adequate pro-environmental promotional messages to signal the environmental friendliness to Slovenian consumers - especially to those with an insufficient understanding of the meaning behind the eco-labels. Marketers should also carefully consider the packaging volume/amount since Slovenian consumers seem to often perceive the overpacked products as relatively environmentally-unfriendly.

In terms of Slovenian consumers, brands are suggested to primarily focus on the environmental friendliness, quality, convenience of use and maintaining the relative inexpensiveness of packaging since these were identified to be the most important packaging characteristics in the eyes of Slovenian consumers. On the contrary, aesthetics was identified as somewhat less important than the above-mentioned packaging characteristics. Therefore, when facing trade-offs, packaging aesthetics may be the most applicable packaging attribute which can be sacrificed, while quality, the environmental friendliness, convenience of use and price all seem to be relatively highly important in the eyes of Slovenian consumers. Further, it may be beneficial for brands to advertise the relatively more environmentally-friendly packed products as premium, due to a general perception of their superiority in terms of all the examined characteristics (aesthetics, quality, user safety, convenience of use and product protection). Lastly, as brand was identified to be the least essential product attribute, newly established brands or new entrants to Slovenian market are encouraged to offer their environmentally-friendly packed products without high risks of being unaccepted by Slovenian consumers.

Marketers are also suggested to raise the perceived level of importance of their environmentally-friendly packaging types, advertise their functional, as well as the environmental superiority and make their packaging designs more interesting for consumers since the majority of Slovenian consumers seems not to be paying much attention to packaging when shopping. The environmentally-friendly packed products should also be more widely accessible on the Slovenian market, as Slovenian consumers frequently identify them as insufficiently accessible on their preferred purchasing locations. Additionally,

lowering price of the environmentally-friendly packed products may also be crucial when it comes to attracting the relatively more price-sensitive Slovenian consumers. Similarly, contrasting that a specific company or brand is part of global efforts to preserve the natural environment, or use packaging types, less harmful to health of its users may be the most suitable options to encourage purchasing behaviour of Slovenian consumers in connection with the environmentally-friendly packed products for everyday use. Lastly, a large proportion of the surveyed Slovenian consumers also reported being indifferent about the packaging type or do not perceive it as necessary when shopping. Almost one fifth also seem not to be able to distinguish between the relatively more and those less environmentally-friendly packaging types. Such findings indicate a concerning lack of the knowledge, as well as awareness of Slovenian consumers in connection with the environmentally-friendly packaging types and their impacts on the natural environment.

Slovenian consumers seem to be, on average, highly environmentally concerned and show evidence of relatively highly collectivistic personal characteristics. Throughout the analysis, both of these characteristics (environmental concern and collectivism level) were discovered to be significantly positively correlated with the favourable attitudes, purchasing behaviour and the willingness of consumers to pay more for the environmentally-friendly packed products. Therefore, brand owners, who sell their products to Slovenian consumers should contrast the environmental benefits and connect their products with the pro-environmental endeavours to attract the environmentally-concerned Slovenian consumers. Further, marketers should bear in mind that in general women and older Slovenian consumers are, on average, more often involved with the environmentally-friendly purchases. Due to a discovered positive influence of social norms on attitudes and purchasing behaviour of Slovenian consumers towards the relatively more environmentally-friendly packed products for everyday use, marketers are suggested to raise the general awareness and contrast importance of the environmental friendliness of packaging. Such marketing activities could grant them with an access to new consumer segments - consumers, who are more eligible to be influenced by descriptive, as well as injunctive social norms. Lastly, Slovenian consumers should be educated more about what their contributions are when it comes to reducing the adverse effects of packaging on the natural environment, as the PCE was discovered to influence attitudes, as well as the willingness of Slovenian consumers to pay more and purchase the environmentally-friendly packed products for everyday use.

When it comes to perceived responsibility for reducing the adverse effects of packaging on the natural environment, Slovenian consumers, on average, perceive companies as the most responsible. Companies, which sell their products to Slovenian consumers, can use such information as an opportunity to develop a profoundly sustainable vision and strategies. Furthermore, raising the general awareness, knowledge, as well as trust in the environmentally-friendly products and packaging could be beneficial for companies, due to the favourable attitudes and demand for the relatively more environmentally-friendly packaged products for everyday use. Therefore, using the relatively more environmentally-

friendly packaging types could increase both - the economic profits, as well as help with preservation of the natural environment.

5.9 Limitations and recommendations for further research

Throughout this chapter, firstly limitation of the thesis are presented, while towards the end, recommendation for future research in connection with attitudes of Slovenian consumers towards the relatively more environmentally-friendly packaging types, as well as the related purchasing behaviour are provided.

Firstly, the analysis was conducted with limited resources and knowledge about the environmentally-friendly packaging materials, designs and effects of different packaging types on the natural environment. Therefore, survey and consequently, with the analysis obtained results may be biased or misleading. It is also worth mentioning that the survey respondents were instructed to concentrate on products for everyday use (e.g., food, beverages and products for personal care). Therefore, implication of the obtained findings in the scope of empirical research is limited to these product categories. Thus, generalisation of the research findings to other product segments should be proceeded with caution.

Due to the non-probability - convenience sampling technique and an online questionnaire form, research sample ($n = 366$) is also limited to individuals, with and access to internet and those, willing to freely participate in the research. Therefore, the research sample could be biased and may consist of the relatively more collectivistic (individuals more willing to help others - in this case with my research), as well as the environmentally-concerned individuals, due to possible shared interests in connection with the research topic. Due to an online form of the questionnaire, respondents also had unlimited time, as well as access to any information, which could bias their responses.

Even though the size of the obtained research sample is relatively big ($n = 366$), the research sample is non-representative if compared with the population of interest– all Slovenian consumers. Thus, in comparison with the population, the sample consists of a relatively higher proportion of women (Appendix D, Table 1), relatively older (Appendix D, Table 2), consumers with relatively lower average disposable net monthly income levels (Appendix D, Table 3, 4), more educated (Appendix D, Table 5, 6) and relatively less consumers who live in a single household (Appendix D, Table 7). Due to use of a non-probability sampling technique and relative non-representativeness of the research sample, the obtained results also cannot be confidently generalised to the studied population – all Slovenian consumers.

Further, due to a variety of different measurement scales, used on the questionnaire, results of the analysis may be biased, due to subjectivity of each individual's opinions and his/her relative perception of the measurement scales. Moreover, as mostly ordinal variables were used as inputs for the exploratory factor analysis (which treats variables as interval), the

obtained results may be biased, due to a possibility of unequally spaced intervals between the individual points within the measurement scales, used within the survey.

Finally, the thesis covers a broad, as well as quickly evolving research area of the environmentally-friendly packaging. Therefore, a non-holistic point of view - especially when it comes to predicting the actual behaviour and willingness of consumers to pay more for the environmentally-friendly packed products is possible. Thus, the empirical research is mostly focused on the attitudes, while less on the actual purchasing behaviour, motivational factors and barriers connected with the environmentally-friendly packaging. Lastly, correlations and dependencies of the individual characteristics, which may influence the attitudes and purchasing behaviour of the environmentally-friendly packed products are suggested to be further researched, to obtain more specific findings and provide more reliable theoretical and business implications.

CONCLUSION

With a rapid increase in mass consumption and growing population, while also the increasing use of natural resources and pressure on the natural environment are becoming increasingly important. The natural environment is fundamental for all human activities and is fundamental for the social and economic development. Therefore, its preservation is nowadays perceived as one of the most critical global topics. In order to prevent or at least minimise the adverse environmental changes, the worldwide governments and NGOs are motivated to design sustainable strategies. Modern corporations also frequently pursue the pro-environmental strategies and act in a way to minimise their environmental footprints, due to their own environmental concerns, to support the global green movement, comply either with regulations or to stay competitive in terms of their business activities. Thus, as consumers often demand for sustainable practices, even companies, which would otherwise not be willing to act sustainably, often face pressure and, therefore, adapt such strategies to satisfy their customers.

Packaging has always been important in the eyes of consumers, as it offers them a contact with the contained product. Therefore, consumers often form their attitudes towards products or brands products based on packaging. Throughout its life cycle, packaging can consist of different materials and perform a variety of functions. It contains, protects, as well as provides information about the contained product(s) and enhances its convenience of use. However, due to the generally adverse environmental impacts, connected with the life cycle of packaging, the environmentally-friendly packaging types are nowadays an essential purchasing criteria in the eyes of the environmentally-conscious consumers. Consequently, such increasing demand for the environmentally-friendly packed products serves as an opportunity for brands to achieve a long-term competitive advantage. Consumer attitudes and purchasing behaviour towards the relatively more environmentally-friendly packaging types is nowadays also a widely studied area of research, but there is still a lack of detailed

information about such attitudes of Slovenian. Therefore, these attitudes, along with the purchasing behaviour towards the relatively more environmentally-friendly packed products, were analysed throughout this master's thesis.

Results of the empirical research of this master's thesis reveal positive attitudes of Slovenian consumers towards the relatively more environmentally-friendly packaging types. Slovenian consumers also seem to perceive companies, the government, and consumers themselves, respectively, as the most responsible when it comes to decreasing the adverse impacts of packaging on the natural environments. Thus, they perceive all of the examined environmentally-friendly packaging characteristics as important. Slovenian consumers also show a sufficient level of knowledge about the relative environmental friendliness of different packaging materials. They mostly recognise the environmentally-friendly packaging types based on materials, eco-labels, as well as promotional messages and packaging colours. The majority of Slovenian consumers is willing to purchase products, which use relatively more environmentally-friendly packaging types and also seem to be willing to pay a relatively small price premium for such products. Slovenian consumers primarily purchase the environmentally-friendly packed products intending to preserve the natural environment, because they perceive such products as less harmful for their own and the health of others and due to the perceived increased convenience of the environmentally-friendly packed products. On the other hand, Slovenian consumers, who usually do not purchase environmentally-friendly seem to be either not pay attention to packaging when shopping, perceive such products as inaccessible or want to remain loyalty to their existing purchasing habits. Thus, they also seem to often find the relatively environmentally-friendly packed products as too expensive and, therefore, do not decide to purchase them.

Finally, the attitudes, purchasing behaviour and willingness of Slovenian consumers to pay more for the relatively more environmentally-friendly packed products for everyday use were examined. They all were discovered to be positively correlated with the consumer's environmental concerns, collectivistic characteristics, effect of the social norms, and the perceived consumer effectiveness. Moreover, on average, women and older consumer segments seem to be also more eligible to possess favourable attitudes towards the environmentally-friendly packaging types in comparison with men and younger consumers. Thus, gender also seem to affects purchasing of the environmentally-friendly packed products, as women were discovered to be, on average, significantly more frequently involved in such purchases. Finally, results of the empirical research confirm an existence of the attitude-behaviour gap between the positive attitudes and actual purchasing behaviour in connection with the environmentally-friendly packaging types. Thus, the attitude-behaviour gap is also widely confirmed phenomenon throughout the examined literature.

Even though limitations exist, results of the empirical research in scope of this master's thesis still provide a useful insight into the attitudes and purchasing behaviour of Slovenian consumers towards the environmentally-friendly packaging types. In majority, Slovenian consumers seem to possess favourable attitudes towards the environmentally-friendly

packaging types, often purchase the environmentally-friendly packed products and are also willing to pay a relatively small price premium for such products. Due to a widespread of the environmentally-friendly packed products and accessibility of the recycling facilities, consumers in Slovenia can adequately use and recycle packaging, while its presence on market is suggested to be increased.

Nowadays, preservation of the natural environment is becoming a global priority. Hopefully, demand for the environmentally-friendly products, services and business practices will encourage the governments, corporations, as well as all other concerned parties to form profoundly sustainable strategies. Thus, global sustainability can only be achieved with persistence, and the worldwide willingness to shift from words to actions, required for ensuring a profoundly clean and healthy future for the upcoming generations.

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APPENDICES

Appendix A: Summary in Slovenian

Naravno okolje je temelj vseh človekovih dejavnosti, saj so tako družbene, kot tudi gospodarske dejavnosti odvisne od naravnih virov, ki izvirajo prav iz naravnega okolja, ter so osnova za ekonomske in družbene procese (Kotler & Armstrong, 2016, str. 107). Danes je naše naravno okolje pod vse večjim pritiskom zaradi hitro rastoče populacije, onesnaženja naravnega okolja, podnebnih sprememb, ter številnih negativnih učinkov povezanih z množično proizvodnjo in potrošnjo. Tovrstne spremembe v naravnem okolju ogrožajo naše zdravje in dolgoročni obstoj. Današnji gospodarski sistemi temeljijo na ustvarjanju kapitala, ob tem pa se pogosto pozablja na pomen naravnega okolja, ki je med drugim tudi osnova za nastanek kapitala. Zemljina biosfera tvori soodvisen naravni sistem - podnebne spremembe tako vplivajo na spremembe ekosistemov, kar nato lahko vpliva na izgubo rodovitnih obdelovalnih površin, življenjske raznolikosti, vse pogostejši nastanek naravnih katastrofe ipd. Te spremembe v naravnem okolju nato vplivajo na delovanje svetovnih gospodarskih in družbenih sistemov (Brady, Ebbage, Lunn, Ebbage & Lunn, 2013, str. 12–26).

K zagotavljanju trajnostnega razvoja in preprečevanju sprememb v naravnem okolju vpliva tudi embalaža izdelkov. Okolju prijazna embalaža je dandanes pomembno raziskovalno področje. Vse večja okoljska ozaveščenost posameznikov pa je tudi glavni razlog za povečano povpraševanje po "zeleni", "okolju prijazni" ali "trajnostni" embalaži (Herbes, Beuthner & Ramme, 2018; Jerzyk, 2016). Poznamo različne vrste in funkcije embalaže - od zaščite izdelkov, do priročnosti uporabe in prikaza informacij o izdelku. Vsak embalažni material pa ima lahko drugačne vplive na naravno okolje (Jerzyk, 2016). Embalaža služi tudi kot eden izmed najpomembnejših trženjskih instrumentov komuniciranja med izdelki ali blagovnimi znamkami in potrošniki, saj zlahka pritegne njihovo pozornost in je pogosto tudi pri stik potrošnika z izdelkom (Draskovic, Temperley & Pavicic, 2009). Ravno zato je za tržnike pomembno, da razumejo stališča, ki jih imajo njihovi ciljni segmenti potrošnikov do okolju prijaznih vrst embalaže, ter ali so ti potrošniki dejansko pripravljeni kupiti izdelke in plačati morebitno višjo ceno za izdelke, ki uporabljajo okolju prijaznejše vrste embalaže.

Odnos potrošnikov in nakupno vedenje do okolju prijaznejših vrst embalaže je glede na količino obstoječe strokovne literature danes široko raziskano področje. Kljub temu pa primanjkuje podrobnih informacij o stališčih in nakupnem vedenju slovenskih potrošnikov do tovrstnih oblik embalaže. Ravno zato je glavni **namen** te magistrske naloge raziskati stališča, nakupno vedenje in odnos slovenskih potrošnikov do okolju prijaznejših vrst embalaže, ter izdelkov za vsakdanjo rabo (npr. hrana, pijača in izdelki za osebno nego), ki uporabljajo tovrstno embalažo. Glavni **cilji** naloge so raziskati: (1) Katere lastnosti in materiale embalaže slovenski potrošniki definirajo kot relativno okolju prijaznejše; (2) Kako pomembna je slovenskim potrošnikom okolju prijazna embalaža v primerjavi z ostalimi lastnostmi izdelkov in embalaže; (3) Kako slovenski potrošniki običajno prepoznajo okolju prijaznejše vrste embalaže in kakšna so njihova stališča do okoljskih simbolnih oznak na embalaži; (4) Kakšna so stališča slovenskih potrošnikov do okolju prijaznejših vrst embalaže

in nakupa izdelkov, ki uporabljajo tovrstno embalažo in kateri dejavniki, ter osebne lastnosti potrošnikov vplivajo na njihova stališča in potrošnjo v povezavi z okolju prijazno embalažo; (5) Ali slovenski potrošniki običajno kupujejo izdelke, ki uporabljajo okolju prijaznejše vrste embalaže in kaj so glavni motivacijski dejavniki, ter prepreke v povezavi s tovrstno potrošnjo; (6) Ali so slovenski potrošniki pripravljeni plačati vsaj minimalni cenovni pribitek za enak izdelek, če le ta uporablja okolju prijazno vrsto embalaže in (7) Kdo je po mnenju slovenskih potrošnikov najbolj odgovoren zmanjšanje negativnih vplivov embalaže na naravno okolje. **Dodana vrednost** te magistrske naloge je pridobitev in predstavitev informacije o stališčih slovenskih potrošnikov do okolju prijazne embalaže podjetjem, tržnikom, vladi in širši javnosti. Ti lahko s pomočjo tovrstnih informacij prispevajo k dolgoročnemu trajnostnemu razvoju Slovenije, ali uporabijo pridobljene podatke za izboljšanje obstoječih poslovnih praks, kot tudi za razvoj poslovnih, ter tržanskih strategij in politik. Širši družbeni namen te magistrske naloge je torej posredno prispevati k zmanjšanju negativnih učinkov množične potrošnje in pripomoči k ohranitvi naravnega okolja za prihodnje generacije.

Raziskava v sklopu te magistrske naloge je sestavljena iz dveh delov. V sklopu prvega dela so bili preučeni sekundarni viri podatkov s področja okolju prijazne embalaže, nakupnega vedenja potrošnikov in odnosu potrošnikov do tovrstne embalaže. V drugem delu naloge so bili s pomočjo strukturiranega spletnega anketnega vprašalnika zbrani primarni podatki za namen empirične analize. Anketni vprašalnik vsebuje petnajst vsebinskih vprašanj različnih tipov, ter pet dodatnih vprašanj o osebnih podatkih respondentov. Vsebinska vprašanja so razvita na podlagi obstoječe literature, ter glede na potrebe analize. Za namen lažjega razumevanja anketnih vprašanj, je bilo respondentom anketnega vprašalnika v navodilih večkrat naročeno, naj imajo med odgovarjanjem na vprašanja v mislih embalažo izdelkov za vsakdanjo rabo (npr. hrana, pijača, izdelki za osebno nego). Anketni vprašalnik je v celoti izpolnilo 366 slovenskih potrošnikov, kar predstavlja vzorec za namen analize. V primerjavi s preučevano populacijo (vsi slovenski potrošniki) pridobljen vzorec ni reprezentativen, kar predstavlja tudi glavno omejitev te magistrske naloge. V primerjavi s preučevano populacijo je v vzorcu namreč večji delež žensk, ter mlajših in bolj izobraženih, potrošnikov z nižjim povprečnim neto mesečnimi dohodkom, ter manj tistih, ki živijo v enočlanskem gospodinjstvu. Po pridobitvi rezultatov anketnega vprašalnika, je bila s pomočjo programa IBM SPSS Statistics 22 opravljena statistična analiza. Za namen analize so bile uporabljene različne statistične metode – od opisnih statistik, do metod preučevanja korelacij med spremenljivkami, analize faktorjev in ostalih metod, potrebnih za pridobitev jasnih in veljavnih informacij za odgovor na raziskovalna vprašanja v sklopu naloge.

Rezultati empirične raziskave v sklopu te magistrske naloge razkrivajo, da imajo anketirani slovenski potrošniki v povprečju pozitivna stališča do okolju prijaznejših vrst embalaže. V povprečju menijo tudi, da so v prvi vrsti podjetja, nato vlada in šele nato potrošniki najbolj odgovorni za zmanjšanje negativnih učinkov embalaže na naravno okolje. V povprečju slovenski potrošniki tudi opredeljujejo vse z analizo preučevane lastnosti okolju prijaznejših

vrst embalaže kot pomembne - tako v primerjavi z ostalimi lastnostmi in funkcijami embalaže (npr. zaščita izdelka ali prikaz dodatnih informacij), kot tudi ostalimi lastnostmi izdelkov. Slovenski potrošniki izkazujejo tudi dobro znanje o okoljski prijaznosti posameznih materialov embalaže. Les, papir, karton, steklo in okolju prijaznejše vrste plastike (biorazgradljiva in plastika iz obnovljivih naravnih virov) v povprečju opredeljujejo kot okolju prijazne. Nasprotno pa so aluminij, jeklo, in okolju relativno bolj škodljive oblike plastike med slovenskimi potrošniki, v povprečju, zaznani kot okolju manj prijazni materiali embalaže izdelkov za vsakdanjo rabo. V primerjavi z ostalimi vrstami embalaže, slovenski potrošniki, v povprečju, menijo tudi, da so izdelki, pakirani v okolju prijaznejše vrste embalaže boljši v vseh z analizo preučevanih lastnostih (izgled, kakovost, varnost in priročnost uporabe, ter raven zaščite izdelkov). V povprečju menijo tudi, da so tovrstno pakirani izdelki dražji, manj prepoznavni in težje dostopni, a hkrati kvalitetnejši in bolj vredni zaupanja, v primerjavi z izdelki, ki uporabljajo okolju manj prijazne vrste embalaže.

Anketirani slovenski potrošniki okolju prijaznejše vrste embalaže najpogosteje prepoznajo (in ločijo od ostalih vrst embalaže) glede na materiale, ekološke simbolne oznake, druga ekološko usmerjena besedilna sporočila na embalaži, glede na uporabo zelenih, rjavih in bledih barv na embalaži, ter glede na količino uporabljene embalaže. Ob preučevanju stališč slovenskih potrošnikov do okoljskih simbolnih oznak je bilo ugotovljeno, da slovenski potrošniki v povprečju zaznavajo tovrstne oznake kot zaupanja vreden vir informacij o okoljskem vplivu embalaže na naravno okolje. Večina potrošnikov tudi uporablja embalažo glede na navodila podana s tovrstnimi oznakami. V povprečju slovenski potrošniki menijo, da imajo zadostno znanje za prepoznavanje večine ekoloških simbolnih oznak embalaže in v povprečju posvečajo pozornost takšnim oznakam med nakupovanjem izdelkov za vsakdanjo rabo.

Ob preučevanju običajnega nakupnega vedenja slovenskih potrošnikov v povezavi z okolju prijaznejšimi vrstami embalaže je bilo ugotovljeno, da večina slovenskih potrošnikov (skoraj 60%) trdi, da običajno kupujejo izdelke, ki uporabljajo okolju relativno prijaznejše vrste embalaže. Presenetljivo je skoraj 82% anketiranih slovenskih potrošnikov odgovorilo tudi, da so v primeru enakih izdelkov za vsakdanjo rabo pripravljeni plačati relativno majhen cenovni pribitek za enak izdelek, če le ta uporablja okolju prijaznejšo vrsto embalaže. Ob raziskavi motivacijskih dejavnikov za tovrstne nakupe, je bilo ugotovljeno, da večina anketiranih slovenskih potrošnikov običajno kupuje izdelke, ki uporabljajo okolju prijaznejše vrste embalaže z namenom ohranitve naravnega okolja za prihodnje generacije. Velik delež anketiranih potrošnikov tovrstne nakupe opravlja tudi zaradi skrbi za lastno in zdravje drugih ljudi, ali preprosto, mnenje da so izdelki, ki uporabljajo tovrstno embalažo, v primerjavi z ostalimi izdelki, bolj kakovostni. Po drugi strani, anketirani slovenski potrošniki, ki običajno ne opravljajo tovrstnih nakupov menijo, da jim embalaža (ali vrsta embalaže) med nakupovanjem nista pomembni. Skoraj 38% anketirancev je tudi mnenja, da izdelki in blagovne znamke, ki uporabljajo okolju prijaznejše vrste embalaže, niso dovolj dostopni, oziroma so predragi, zato se za njihov nakup običajno ne odločajo.

Glede na rezultate analize v sklopu te magistrske naloge, je bilo ugotovljeno, da so pozitivna stališča slovenskih potrošnikov do okolju prijaznejših vrst embalaže so pozitivno povezana s skrbjo posameznikov za naravno okolje, zaznano učinkovitostjo potrošnikov (v primeru vpliva na zmanjšanje onesnaženosti naravnega okolja), stopnjo podvrženosti družbenim normam, ter prisotnostjo kolektivističnih lastnosti posameznikov. Podobni dejavniki so bilo odkriti tudi ob preučevanju vplivov na običajno nakupno vedenje slovenskih potrošnikov v primeru izdelkov, ki uporabljajo okolju prijaznejše vrste embalaže. Rezultati analize razkrivajo tudi, da imajo, v povprečju, ženske in starejši segmenti slovenskih potrošnikov bolj pozitivna stališča do okolju prijazne embalaže v primerjavi z moškimi in mlajšimi potrošniki. Ženske pa se v primerjavi z moškimi tudi pogosteje odločajo za nakup izdelkov, ki uporabljajo okolju prijaznejšo embalažo in so v primerjavi z moškimi v povprečju tudi bolj naklonjene k plačilu cenovnega pribitka za tovrstne izdelke. Povezave med različnimi dejavniki, nakupnim vedenjem in stališči slovenskih potrošnikov do okolju prijaznejših vrst embalaže se v povprečju ne razlikujejo od tistih, ki so bili že odkriti v sklopu obstoječih raziskav.

Slovenski potrošniki, v povprečju, izkazujejo relativno dobro znanje o okoljski prijaznosti posameznih vrst embalaže, zaznavajo tvorstvo embalažo kot pomembno, imajo pozitivna stališča in se pogosto odločajo za nakup okolju bolj prijazno pakiranih izdelkov. Kljub prisotnosti določenih omejitev, raziskava o odnosu slovenskih potrošnikov do okolju prijaznejših vrst embalaže v sklopu te magistrske naloge ponuja koristen vpogled v odnos in nakupno vedenje slovenskih potrošnikov. Vse bolj jasna stališča potrošnikov o zaskrbljenosti v povezavi z onesnaženjem naravnega okolja so dan danes pomemben vir informacij in vplivajo na oblikovanju korporativnih strategij, državnih in globalnih politik, ter zakonov. Globalni trajnostni razvoj je mogoče doseči le z deljenjem znanja, vztrajnostjo in prehodom od besed k dejanskim ukrepom, ki so nujni za zagotovitev čistejše in varnejše prihodnosti prihodnjih generacij.

Appendix B: Survey in Slovenian language

Pozdravljeni, moje ime je Samo Virant in sem študent Ekonomske fakultete Univerze v Ljubljani. Prosil bi vas, da rešite spodnjo anketo in mi s tem pomagata pri raziskavi o stališčih slovenskih potrošnikov do okolju prijazne embalaže v sklopu magistrske naloge.

Anketa je v celoti anonimna. Vse informacije bodo uporabljene zgolj v študijske namene. Reševanje ankete vam bo vzelo približno 5 - 7 minut. Pri odgovarjanju imejte v mislih embalažo izdelkov za vsakdanjo rabo (tj. hrana, pijača, izdelki za osebno nego, čistila...)

Že vnaprej se vam zahvaljujem za sodelovanje!

Q3 - Kako pomembna Vam je vsaka od navedenih **lastnosti izdelkov** za vsakdanjo rabo (tj. hrana, pijača, izdelki za osebno nego, čistila...)?

Svoje odgovore označite s klikom na izbrano polje za vsako trditvijo.

	Povsem NEPOMEM BNA	Zelo NEPOM EMBNA	Delno NEPOMEM BNA	Niti niti	Delno POMEM BNA	Zelo POMEM BNA	Povsem POMEM BNA
Q3a: cena	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Q3b: okolju prijazna embalaža	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Q3c: kakovost	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Q3d: estetska podoba	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Q3e: blagovna znamka	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Q3f: priročnost uporabe	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Q10 - Ali običajno kupujete izdelke za vsakdanjo rabo, ki uporabljajo **okolju prijaznejše** vrste embalaže? S klikom na polje pred izbranim odgovorom označite 1 odgovor.

☐ Da

☐ Ne

IF (1) Q10 = [Da]

Q11 - Kaj so Vaši glavni razlogi za nakup izdelkov za vsakdanjo rabo, ki uporabljajo okolju prijaznejše vrste embalaže?

Izberete lahko poljubno število odgovorov.

☐ Q11a: Želja po ohranitvi naravnega okolja za prihodnje generacije.

☐ Q11b: Manjša škodljivost za moje in zdravje drugih ljudi.

☐ Q11c: Občutek samo-realizacije oz. osebnega zadovoljstva ob tovrstnih nakupih.

☐ Q11d: Večja praktičnost zaradi manjše količine odpadkov v gospodinjstvu.

☐ Q11e: Podpora oz. odobravanje tovrstnih nakupov s strani oseb, ki so mi pomembne (npr. prijatelji, znanci in družinski člani).

☐ Q11f: Boljša kakovost tovrstnih izdelkov.

☐ Q11g: Nižja cena tovrstnih izdelkov.

☐ Q11h: Takšne vrste embalaže uporabljajo izdelki, ki so mi všeč in jih običajno kupujem.

☐ Q11i: Pozitiven zgled prijateljem, znancem in družini.

☐ Q11j: Boljša estetska podoba tovrstnih izdelkov.

☐ Q11k: Drugo:

IF (2) Q10 = [Ne]

Q12 - Kaj so glavni razlogi, zaradi katerih se **ne odločate** za nakup izdelkov za vsakdanjo rabo, ki uporabljajo okolju prijaznejše vrste embalaže?

Izberete lahko poljubno število odgovorov.

☐ Q10a: Na vrsto embalaže med nakupovanjem nisem pozoren/-na.

☐ Q10b: Previsoka cena tovrstnih izdelkov.

☐ Q10c: Slabša vzdržljivost oz. pričakovana življenjska doba izdelkov zaradi tovrstne embalaže.

- ☐ Q10d: Slabša zaščita izdelkov s strani tovrstne embalaže.
- ☐ Q10e: Zmanjšana praktičnost izdelkov zaradi tovrstne embalaže.
- ☐ Q10f: Slabša vizualna podoba.
- ☐ Q10g: Nedostopnost zelenih izdelkov v trgovinah.
- ☐ Q10h: Nezmožnost ločitve okolju prijaznejših od ostalih oblik embalaže.
- ☐ Q10i: Slabša higieničnost izdelkov zaradi okolju prijaznejših vrst embalaže.
- ☐ Q10j: Nezaupanje v izdelke, ki uporabljajo tovrstne oblike embalaže.
- ☐ Q10k: Slabša kakovost tovrstnih izdelkov.
- ☐ Q10l: Embalaža izdelkov mi med nakupovanjem ni pomembna.
- ☐ Q10m: Drugo:

Q13 - Ali ste v primeru enakih izdelkov, za izdelek ki uporablja okolju prijaznejšo embalažo pripravljeni plačati vsaj minimalno višjo ceno?

S klikom na polje pred izbranim odgovorom označite 1 odgovor.

- ☐ Da
- ☐ Ne

IF (3) Q13 = [Da]

Q14 - Kako višjo ceno ste v primeru več izdelkov z enakimi lastnostmi pripravljeni plačati za izdelek, ki uporablja okolju prijaznejšo vrsto embalaže?

S klikom na polje pred ustreznim odgovorom označite 1 odgovor.

- ☐ za do 5% višjo ceno
- ☐ za 6 - 15% višjo ceno
- ☐ za 16 - 30% višjo ceno
- ☐ za 31 - 50% višjo ceno
- ☐ za več kot 50% višjo ceno

Q1 - Kako okolju prijazen je po Vašem mnenju vsak od spodaj naštetih materialov embalaže?

Svoj odgovor označite s klikom na ustrezno polje za vsako trditvijo.

	Povsem NEPRIJAZEN okolju	Zelo NEPRIJAZEN okolju	Delno NEPRIJAZEN okolju	Niti niti	Delno PRIJAZEN okolju	Zelo PRIJAZEN okolju	Povsem PRIJAZEN okolju	Ne vem
Q1a: papir in karton	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Q1b: les	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Q1c: steklo	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Q1d: aluminij	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Q1e: jeklo	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Q1f: biološko razgradljiva in plastika iz obnovljivih naravnih virov	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Q1g: biološko nerazgradljiva in plastika iz neobnovljivih naravnih virov	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Q2 - Kako pomembna je po Vašem mnenju vsaka od spodaj naštetih lastnosti embalaže izdelkov za vsakdanjo rabo (tj. hrana, pijača, izdelki za osebno nego, čistila...)?

Svoj odgovor označite s klikom na ustrezno polje za vsako trditvijo.

	Popolnoma NEPOMEMBNA BNA	Zelo NEPOMEMBNA EMBNA	Dokaj NEPOMEMBNA MBNA	Niti niti	Dokaj POMEMBNA POMEM BNA	Zelo POMEMBNA POMEM BNA	Popolnoma POMEMBNA POMEMBNA
Q2a: uporaba v naravi obnovljivih materialov	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Q2b: uporaba recikliranih materialov	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Q2c: uporaba biološko razgradljivih materialov	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Q2d: minimalna poraba surovin in energije skozi celoten življenjski cikel	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Q2e: uporaba zdravju neškodljivih materialov	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Q2f: minimalen transport	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Q2g: minimalna količina ali odsotnost nepotrebne embalaže	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Q2h: možnost ponovne uporabe (za enak ali drug namen)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Q2i: možnost ločenega zbiranja oz. reciklaže	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Q2j: možnost kompostiranja embalaže	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Q2k: minimalna količina nastalih odpadkov z odlaganjem embalaže	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Q4 - Kako pomembna Vam je vsaka od spodaj navedenih **lastnosti embalaže** izdelkov za vsakdanjo rabo (tj. hrana, pijača, izdelki za osebno nego, čistila...)?
Svoje odgovore označite s klikom na izbrano polje za vsako trditvijo.

	Povsem NEPOME MBNA	Zelo NEPOME MBNA	Delno NEPOM EMBNA	Niti niti	Delno POMEM BNA	Zelo POMEM BNA	Povsem POME MBNA
Q4a: prikaz dodatnih (zakonsko neobveznih) informacij o izdelku in embalaži (npr. priporočila za uporabo, način odpiranja, shranjevanja...)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Q4b: okoljska prijaznost embalaže	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Q4c: estetska podoba embalaže	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Q4d: cena embalaže	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Q4e: praktičnost uporabe izdelka zaradi embalaže (npr. lažje odpiranje, shranjevanje, prenašanje...)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Q4f: zaščita izdelka s strani embalaže (npr. rok trajanja, zaščita pred udarci, svetlobo, temperaturo...)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Q4g: vzdržljivost in življenjska doba embalaže	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Q4h: možnost ponovne uporabe embalaže (za enak ali drug namen)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Q5 - Menim, da so okolju prijaznejše, v primerjavi z ostalimi vrstami embalaže izdelkov za vsakdanjo rabo (tj. hrana, pijača, izdelki za osebno nego, čistila...) v povprečju...
Svoje odgovore na vsak par trditev označite s klikom na ustrezno polje, relativno bližje trditvi, s katero se bolj strinjate.

Q5a: estetsko inferiorne	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	estetsko superiorne
Q5b: manj kakovostne	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	bolj kakovostne
Q5c: uporabnikom manj varne	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	uporabnikom bolj varne
Q5d: manj praktične za uporabo	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	bolj praktične za uporabo
Q5e: slabše zaščitijo izdelke	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	bolje zaščitijo izdelke

Q6 - Menim, da so izdelki, ki uporabljajo okolju prijaznejše vrste embalaže, v primerjavi z ostalimi izdelki za vsakdanjo rabo (tj. hrana, pijača, izdelki za osebno nego, čistila...) v povprečju...
Svoje odgovore na vsak par trditev označite s klikom na ustrezno polje, relativno bližje trditvi, s katero se bolj strinjate.

Q6a: dražji	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	cenejši
Q6b: manj prepoznavni	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	bolj prepoznavni
Q6c: težje dostopni za nakup	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	lažje dostopni za nakup
Q6d: manj kakovostni	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	bolj kakovostni
Q6e: manj zaupanja vredni	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	bolj zaupanja vredni

Q7 - Kako najpogosteje prepoznate okolju prijaznejše vrste embalaže izdelkov za vsakdanjo rabo (tj.

hrana, pijača, izdelki za osebno nego, čistila...)?

Izberete lahko poljubno število odgovorov.

- ☐ Q7a: Glede na uporabo bledih barv (npr. bež, rjava, zelena) na embalaži.
- ☐ Q7b: Glede na vrste materialov embalaže.
- ☐ Q7c: Glede na napise (npr. "Zmanjšana količina embalaže", "Okolju prijazno.") na embalaži.
- ☐ Q7d: Glede na ekološke simbolne oznake embalaže ali uradne certifikate.
- ☐ Q7e: Glede na grafične podobe (npr. slike narave, preprostost grafičnih vsebin) na embalaži.
- ☐ Q7f: Glede na blagovno znamko izdelka in njen sloves o odnosu do naravnega okolja.
- ☐ Q7g: Glede na količino embalaže, ki menim da je potrebna za določen izdelek.
- ☐ Q7h: Glede na informacije o odlaganju oz. ločevanju na embalaži.
- ☐ Q7i: Glede na informacije iz oglasov.
- ☐ Q7j: Glede na priporočila prijateljev, znancev, družine.
- ☐ Q7k: Ne znam ločiti okolju prijaznejših od ostalih vrst embalaže.
- ☐ Q7l: Drugo:

Q8 - V kolikšni meri se strinjate z vsako od spodnjih trditev o ekoloških simbolnih oznakah?

*To so oznake, ki označujejo relativno manjše negativne vplive označenih izdelkov na naravno okolje, npr. spodnje oznake.



Svoje odgovore označite s klikom na izbrano polje za vsako trditvijo.

	Sploh se ne strinjam	Se ne strinjam	Delno se ne strinjam	Niti niti	Delno se strinjam	Se strinjam	Povsem se strinjam
Q8a: Pri nakupovanju sem pozoren/-na ekološke simbolne oznake embalaže.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Q8b: Ekološke simbolne oznake so verodostojen vir informacij o okoljski prijaznosti embalaže.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Q8c: Pogosto se odločam za nakup izdelkov ravno zaradi prisotnosti ekoloških oznak na embalaži.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Q8d: Imam dovolj znanja, da razumem pomen večine ekoloških simbolnih oznak embalaže.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Q8e: Z embalažo ravnam (npr. ločujem, odlagam) glede na navodila podane preko ekoloških simbolnih oznak embalaže.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Q9 - V kolikšni meri se strinjate z vsako od spodnjih trditev?

Svoje odgovore označite s klikom na izbrano polje za vsako trditvijo.

	Sploh se ne strinjam	Se ne strinjam	Delno se ne strinjam	Niti niti	Delno se strinjam	Se strinjam	Povsem se strinjam
Q9a: Osebe, ki so v mojem življenju najpomembnejše menijo, da bi moral kupovati izdelke, ki uporabljajo okolju prijaznejšo embalažo.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Q9b: Ljudi, ki jih poznam večinoma skrbi za naravno okolje in si z okolju prijaznejšo potrošnjo prizadevajo za njegovo ohranitev.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Q9c: Pomembno mi je, da s svojim vedenjem vplivam na dobrobit ostalih ljudi, družbe in okolja.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Q9d: Trudim se za dosego skupinskih ciljev, tudi če mi le ti pogosto ne prinašajo osebnih koristi.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Q9e: Kot posameznik le težka pripomorem k zmanjševanju negativnih okoljskih učinkov embalaže.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Q9f: S pravilnim odlaganjem in ločevanjem odpadne embalaže posameznik nima nikakršnega vpliva na onesnaženje Zemlje.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Q9g: Onesnaževanje naravnega okolja in podnebne spremembe mi povzročata skrb.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Q9h: Skrbi me zaradi negativnih vplivov množične potrošnje in velikih količin proizvedenih odpadkov na stanje naravnega okolja.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Q9i: Imam pozitiven odnos, oziroma sem v splošnem naklonjen/-a okolju prijazni embalaži.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Q9j: Pomembno mi je, da je embalaža izdelkov okolju prijazna, oz. da izdelki ne vsebujejo odvečne embalaže.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Q15 - Kdo je po Vašem mnenju najbolj odgovoren za zmanjšanje negativnih vplivov embalaže na naravno okolje?

Izberete lahko poljubno število odgovorov.

- ☐ podjetja
- ☐ potrošniki
- ☐ država
- ☐ mediji
- ☐ nevladne organizacije
- ☐ nihče
- ☐ Drugo:

Zaključek - Za konec Vas prosim le še za nekaj anonimnih podatkov, ki bodo uporabljeni zgolj v raziskovalne namene.

D1 - Izberite Vaš spol.

- ☐ moški
- ☐ ženski

D2 - Vpišite Vašo starost v letih.

_____ let.

D3 - Katera je Vaša najvišja dosežena stopnja izobrazbe?

S klikom na polje pred izbranim odgovorom označite 1 odgovor.

- ☐ nepopolna osnovnošolska izobrazba
- ☐ osnovnošolska, nižja ali srednja poklicna
- ☐ srednja strokovna, višješolska ali gimnazijska
- ☐ visokošolska, 1. oziroma 2. bolonjska stopnja ali specializacija
- ☐ magisterij znanosti ali doktorat

D4 - Koliko v povprečju znaša Vaš razpoložljivi neto mesečni dohodek?

S klikom na polje pred izbranim odgovorom označite 1 odgovor.

- ☐ do 800 EUR mesečno
- ☐ od 801 EUR do 1,300 EUR mesečno
- ☐ od 1,301 EUR do 1,800 EUR mesečno
- ☐ 1,801 EUR do 2,500 EUR mesečno
- ☐ več kot 2,500 EUR mesečno

D5 - Vpišite število članov v Vašem gospodinjstvu.

_____ članov.

Appendix C: Survey in English language

Hello, my name is Samo Virant and I am a student at the Faculty of Economics, University of Ljubljana. I would kindly ask you to complete this survey and help me with my research on attitudes of Slovenian consumers towards the environmentally-friendly packaging in scope of my master's thesis.

This survey is entirely anonymous. All the gathered information will be used solely for educational purposes. Completing the survey will take you approximately 5 - 7 minutes. When responding to the survey questions, consider packaging of the everyday use products (e.g., the food, beverage or products for personal care).

Thank you for your cooperation!

Q3 - How important to you is each of the listed **properties of the products for everyday use** (e.g., food, beverage or products for personal care)?

Mark your answers by clicking on the box after each statement.

	Totally UNIMPORT ANT	Very UNIMPORT ANT	Somewhat UNIMPORT ANT	Neutral	Somewhat IMPORT ANT	Very IMPOR TANT	Totally IMPOR TANT
Q3a: price	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Q3b: environmentally-friendly packaging	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Q3c: quality	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Q3d: aesthetics	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Q3e: brand	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Q3f: convenience of use	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Q10 - Do you usually buy products for everyday use, which use the **relatively more environmentally-friendly** packaging types?

Click on the box next to the selected answer to indicate one answer.

- ☐ Yes
☐ No

IF (1) Q10 = [Yes]

Q11 - What are your main reasons for purchasing products for everyday use, which use the relatively more environmentally-friendly packaging types?

You can choose any number of answers.

- ☐ Q11a: A desire to preserve the natural environment for future generations.
☐ Q11b: Use of materials, which are less harmful to my own and health of other people.
☐ Q11c: Feeling of self-realisation or personal satisfaction, achieved with such purchases.
☐ Q11d: Increased convenience due to a lesser amount of the generated household waste.
☐ Q11e: Support or approval of such purchases by people who are important to me (e.g., friends, relatives and family members).
☐ Q11f: Better quality of such products.
☐ Q11g: Lower price of such products.
☐ Q11h: Because products, which I usually purchase already use the environmentally-friendly packaging types.
☐ Q11i: To set a positive example to my friends, relatives and family members.
☐ Q11j: Due to the superior aesthetics of such products.
☐ Q11k: Other:

IF (2) Q10 = [No]

Q12 - What are your main reasons for not purchasing the everyday use products, which use the relatively more environmentally-friendly packaging types?

You can choose any number of answers.

- ☐ Q12a: I do not pay attention to packaging types when shopping.

- ☐ Q12b: Such products are too expensive.
- ☐ Q12c: Poor durability of such products due to the environmentally-friendly packaging types.
- ☐ Q12d: Worse protection of the contained products by such packaging types.
- ☐ Q12e: Lesser convenience of use due to the environmentally-friendly packaging types.
- ☐ Q12f: Inferior aesthetics of such packaging types.
- ☐ Q12g: Insufficient accessibility of my preferred products in such packaging types.
- ☐ Q12h: Inability to separate the more environmentally-friendly from other packaging types.
- ☐ Q12i: Poor hygiene of products due to the environmentally-friendly packaging types.
- ☐ Q12j: Distrust in products, which use such packaging types.
- ☐ Q12k: Poor quality of the environmentally-friendly packed products.
- ☐ Q12l: Packaging is not relevant to me when shopping.
- ☐ Q12m: Other:

Q13 - In case of same products - would you be willing to pay at least a **small price premium** for the product, packed in the most more environmentally-friendly packaging?

Click on the box next to the selected answer to indicate 1 answer.

- ☐ Yes
- ☐ No

IF (3) Q13 = [Yes]

Q14 - In case of several products with same characteristics – what percentage of a price premium would you be willing to pay for the relatively most environmentally-friendly packed product?

Click on the box next to the selected answer to indicate 1 answer.

- ☐ for up to 5% higher price
- ☐ for 6 - 15% higher price
- ☐ for 16 - 30% higher price
- ☐ for 31 - 50% higher price
- ☐ for more than 50% higher price

Q1 - Relatively, how environmentally-friendly do you think each of the packaging materials listed below is?

Mark your answers by clicking on the box after each statement.

	Totally UNFRIEN DLY	Very UNFRIEN DLY	Somewhat UNFRIEN DLY	Neutral	Somewhat FRIENDLY	Very FRIEN DLY	Totally FRIEN DLY	Do not know
Q1a: paper and board	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Q1b: wood	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Q1c: glass	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Q1d: aluminium	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Q1e: steel	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Q1f: biodegradable or plastics made out of renewable natural resources	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Q1g: non-biodegradable or plastics made out of non-renewable natural resources	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Q2 - How important is, in your opinion, each of the following **packaging characteristics**, used for the everyday use products (e.g., food, beverage or products for personal care)?

Mark your answers by clicking on the box after each statement.

	Totally UNIMPO RTANT	Very UNIMPO RTANT	Somewhat UNIMPO RTANT	Neutral	Somewhat IMPORT ANT	Very IMPOR TANT	Totally IMPOR TANT
Q2a: use of renewable materials	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Q2b: use of recycled materials	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Q2c: use of biodegradable materials	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Q2d: minimal consumption of raw materials and energy throughout the entire life cycle	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Q2e: use of the non-harmful materials	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Q2f: minimal transportation	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Q2g: minimal amount or absence of unnecessary packaging	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Q2h: reusability (for original or other purposes)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Q2i: possibility of separate collection or recycling	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Q2j: composability	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Q2k: minimal amount of the generated waste after disposal	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Q4 - How important is, in your opinion, each of the following **packaging characteristics** of products for everyday use (e.g., food, beverage or products for personal care)?
Mark your answers by clicking on the box after each statement.

	Totally UNIMPOR TANT	Very UNIMPOR TANT	Somewhat UNIMPOR TANT	Neutral	Somewhat IMPORTA NT	Very IMPORT ANT	Totally IMPORT ANT
Q4a: availability of additional (legally non-mandatory) product and packaging information (e.g., usage, handling and storing instructions)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Q4b: environmental friendliness of packaging	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Q4c: packaging aesthetics	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Q4d: packaging price	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Q4e: increased convenience of use due to the packaging characteristics	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Q4f: product protection (e.g., increased shelf life or mechanical and thermal protection)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Q4g: packaging durability	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Q4h: reusability option (for original or other purposes)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Q5 - I think that the relatively more environmentally-friendly in comparison with other packaging types of products for everyday use (e.g., food, beverage and products for personal care) are on average...
Mark your answers to each pair of claims by clicking on an adequate field, relatively closer to the statement you agree with more.

Q5a: aesthetically inferior	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	aesthetically superior
Q5b: inferior in terms of quality	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	superior in terms of quality
Q5c: less safe for users	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	more safe for users
Q5d: less convenient for use	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	more convenient for use
Q5e: provide worse protection	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	provide better protection

Q6 - Products for everyday use (e.g., food, beverage or products for personal care), **which use the relatively more environmentally-friendly**, compared with the ones which use other **packaging** types are on average...

Mark your answers to each pair of claims by clicking on an adequate field, relatively closer to the statement you agree with more.

Q6a: more expensive	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	less expensive
Q6b: less renowned	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	more renowned
Q6c: more difficult to access	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	less difficult to access

Q6d: inferior in terms of quality ☐ ☐ ☐ ☐ ☐ superior in terms of quality

Q6e: less trustworthy ☐ ☐ ☐ ☐ ☐ more trustworthy

Q7 - How do you usually identify the relatively more environmentally-friendly packaging types of the everyday use products (e.g., the food, beverage or products for personal care)?

You can choose any number of answers.

- ☐ Q7a: By the use of pale (e.g., beige, cream or brown) and green packaging colours.
- ☐ Q7b: By the packaging material type.
- ☐ Q7c: According to different texts, (e.g., "A reduced packaging volume/amount." or "Environmentally-friendly packaging.") displayed on packaging.
- ☐ Q7d: According to eco-labels or certificates displayed on packaging.
- ☐ Q7e: According to graphics (e.g., photos of nature) portrayed on packaging.
- ☐ Q7f: According to brand and its reputation for environmental efforts.
- ☐ Q7g: By the packaging volume/amount, which I consider necessary for a particular product.
- ☐ Q7h: According to information on disposal or separate collection on packaging.
- ☐ Q7i: According to information provided by the advertisements.
- ☐ Q7j: According to recommendations of friends, relatives and family.
- ☐ Q7k: I cannot distinguish between the relatively more and less environmentally-friendly packaging types.
- ☐ Q7l: Other:

Q8 - To what extent do you agree with each of the following claims connected with the eco-labels*?

*eco-labels are symbols, which in general indicate the relative environmental friendliness of a product - e.g., symbols provided below.



Mark your answers by clicking on the box after each statement.

	Totally disagree	Strongly disagree	Somewhat disagree	Neutral	Somewhat agree	Strongly agree	Totally agree
Q8a: When shopping, I pay attention to eco-labels included on packaging.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Q8b: Eco-labels are a credible source of information about the environmental friendliness of the labelled packaging.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Q8c: I often decide to buy products precisely because of the eco-labels, present on its packaging.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Q8d: I possess adequate knowledge to understand the majority of eco-labels displayed on packaging.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Q8e: I use packaging (e.g., recycle) according to the instructions, provided by eco-labels, present on packaging.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Q9 - To what extent do you agree with each of the following statements?

Mark your answers by clicking on the box after each statement.

	Totally disagree	Strongly disagree	Somewhat disagree	Neutral	Somewhat agree	Strongly agree	Totally agree
Q9a: People who are most important to me think that I should buy products which use the relatively more environmentally-friendly packaging types.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Q9b: People I know are mostly concerned about the state of the natural environment and tend to contribute to its preservation through environmentally-friendly consumption.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Q9c: It is important to me to positively influence the welfare of other people, society and the natural environment through my behaviour.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Q9d: I try to achieve group goals, even if they may not provide me with personal benefits.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Q9e: As an individual, I can hardly contribute to reducing the negative environmental effects of the packaging.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Q9f: With a proper disposal and separation of packaging waste, individuals have no impact on the Earth's pollution.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Q9g: Pollution of the natural environment and climate change cause me concerns.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Q9h: I am concerned about the negative impacts of mass consumption and the increasing levels of waste on the natural environment.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Q9i: I have a positive attitude and in general favour the environmentally-friendly packaging types.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Q9j: It is important to me that packaging is environmentally-friendly, or that products do not contain unnecessary packaging.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Q15 - Who, in your opinion, is the most responsible for reducing the negative impacts of packaging on the natural environment?

You can choose any number of answers.

- ☐ Companies
- ☐ Consumers
- ☐ Government
- ☐ Media
- ☐ NGOs
- ☐ Nobody
- ☐ Other:

Outro - Finally, I kindly ask to answer a few anonymous questions. The obtained answers will be used solely for educational purposes.

D1 - Select your gender.

- ☐ male
- ☐ female

D2 - Enter your age in years.

_____ years.

D3 - What is your highest achieved level of education?

Click on the box next to the selected answer to indicate 1 answer.

- ☐ incomplete primary education
- ☐ primary or secondary vocational education
- ☐ technical or general secondary education
- ☐ first or second cycle of higher education or specialisation
- ☐ third cycle of higher education

D4 - How much, on average, is your disposable net monthly income level?

Click on the box next to the selected answer to indicate 1 answer.

- ☐ up to 800 EUR per month
- ☐ from 801 EUR up to 1,300 EUR per month
- ☐ from 1,301 EUR up to 1,800 EUR per month
- ☐ from 1,801 EUR up to 2,500 EUR per month
- ☐ more than 2,500 EUR per month

D5 - Enter the number of members in your household.

_____ members.

Appendix D: Sample and population characteristics

Table 1: Population approximation (Slovenian citizens on the 1st of January 2019) and the research sample (n = 366) by gender

Gender	Population approximation		Research sample (n = 366)	
	Frequency	Percentage	Frequency	Percentage
male	947,826	48.79	80	21.86
female	994,889	51.21	286	78.14
Total	1,942,715	100.00	366	100.00

Adapted from: Statistical Office of the Republic of Slovenia, Citizens of the Republic of Slovenia by sex, 1 January 2019.

Table 2: Population approximation (Slovenian citizens on the 1st of January 2019) and the research sample (n = 366) by age

Age	Population approximation		Research sample (n = 366)	
	Frequency	Percentage	Frequency	Percentage
18 up to 25 years old	147,251	9.23	91	24.86
26 up to 40 years old	370,545	23.24	135	36.89
41 up to 55 years old	418,345	26.23	100	27.32
more than 55 years old	658,624	41.30	40	10.93
Total	1,594,765	100.00	366	100.00

Adapted from: Statistical Office of the Republic of Slovenia, Citizens of the Republic of Slovenia by age, 1 January 2019.

Table 3: Slovenian citizens on the 1st of January 2018 by education level

Education level	Frequency	Percentage	
no education	3,960	0.23	3.16
incomplete basic	49,691	2.92	
completed basic	310,046	18.23	41.28
short-term vocational upper secondary	27,271	1.60	
vocational upper secondary	364,575	21.44	
technical, general upper secondary	528,547	31.08	31.08
1st cycle of higher etc.	194,753	11.45	22.38
2nd cycle of higher etc.	185,719	10.92	
3rd cycle of higher etc.	35,792	2.10	2.10
Total	1,700,354	100.00	100.00

Adapted from: Statistical Office of the Republic of Slovenia, Population aged 18 years or more by education, Slovenia, 1 January 2018.

Table 4: Structure of the research sample (n = 366) by the self-reported highest achieved education level

Education level	Frequency	Percentage
incomplete primary education	0	0.00
primary or secondary vocational education	28	7.65
technical or general secondary education	120	32.79
the first or second cycle of the higher education or specialisation	185	50.55
the third cycle of higher education	33	9.02
Total	366	100.00

Source: own work.

Table 5: Slovenian employees by the net monthly income class (2017 annual data)

Net monthly income class	Frequency	Percentage	
01 (up to 790 EUR)	27,950	4.97	9.99
02 (791 - 825 EUR)	28,221	5.02	
03 (826 - 873 EUR)	27,677	4.92	34.93
04 (874 - 928 EUR)	27,960	4.97	
05 (992 - 1,056 EUR)	28,342	5.04	
06 (1,057 - 1,125 EUR)	28,493	5.07	
07 (1,126 - 1,197 EUR)	27,585	4.91	
08 (1,198 - 1,273 EUR)	28,234	5.02	
09 (1,198 - 1,273 EUR)	28,064	4.99	
10 (1,274 - 1,352 EUR)	28,199	5.02	25.05
11 (1,353 - 1,435 EUR)	28,381	5.05	
12 (1,436 - 1,528 EUR)	27,742	4.93	
13 (1,529 - 1,637 EUR)	28,410	5.05	
14 (1,638 - 1,765 EUR)	28,099	5.00	
15 (1,766 - 1,918 EUR)	28,175	5.01	30.03
16 (1,919 - 2,104 EUR)	27,956	4.97	
17 (2,105 - 2,318 EUR)	28,327	5.04	
18 (2,319 - 2,659 EUR)	28,106	5.00	
19 (2,660 - 3,375 EUR)	28,115	5.00	
20 (3,376 EUR or more)	28,118	5.00	
Total	562,154	100.00	100.00

Source: Statistical Office of the Republic of Slovenia, Persons in paid employment by the amount of net earnings, Slovenia, 2017, annual data.

Table 6: Structure of the research sample (n = 366) by the self-reported average disposable net monthly income

Average disposable net monthly income	Frequency	Percentage
up to 800 EUR	122	33.33
from 801 to 1,300 EUR	143	39.07
from 1,301 up to 1,800 EUR	67	18.31
more than 1,800 EUR	34	9.29
Total	366	100.00

Source: own work.

Table 7: Population approximation (Slovenian citizens on the 1st of January 2018) and the research sample (n = 366) by household size

Household size	Population approximation		Research sample (n = 366)	
	Frequency	Percentage	Frequency	Percentage
1 member	269,898	32.73	33	9.02
2 members	209,573	25.41	111	30.33
3 members	152,959	18.55	94	25.68
4 or more members	192,188	23.31	128	34.97
Total	824,618	100.00	366	100.00

Adapted from: Statistical Office of the Republic of Slovenia, Households by number of members and type of household, Slovenia, 1 January 2018, multiannual.

Appendix E: Representation of the survey results

Table 8: Relative frequency distribution, means and the 95% mean confidence intervals of answers to the “Q2” survey question items

Q2	How important is, in your opinion, each of the following characteristics of packaging, used for the everyday use products (e.g., food, beverage or products for personal care)?											
	Statement	n	Relative frequency							Mean	Bounds	
			1	2	3	4	5	6	7		Lower	Upper
Q2a	use of renewable materials	366	0.55	0.82	3.55	4.64	19.40	43.99	27.05	5.82	5.70	5.93
Q2b	use of recycled materials	366	0.55	0.82	3.01	3.01	23.50	45.90	23.22	5.79	5.68	5.90
Q2c	use of biodegradable materials	366	0.82	1.09	0.82	4.37	17.49	42.08	33.33	5.96	5.85	6.07
Q2d	minimal consumption of raw materials and energy throughout the entire life cycle	366	0.55	0.82	0.27	4.64	19.95	40.98	32.79	5.97	5.86	6.07
Q2e	use of non-harmful materials	366	0.00	0.55	0.27	2.19	6.83	33.61	56.56	6.42	6.34	6.51
Q2f	minimal transportation	366	0.55	0.82	4.64	10.93	24.04	34.97	24.04	5.58	5.46	5.71
Q2g	minimal amount or absence of unnecessary packaging	366	0.55	0.55	1.09	4.37	16.94	33.61	42.90	6.09	5.98	6.20
Q2h	reusability (for either the original or other purposes)	366	0.27	0.55	1.64	4.10	17.76	40.44	35.25	6.01	5.90	6.11
Q2i	possibility of separate collection or recycling	366	0.27	1.37	2.19	4.10	16.67	40.98	34.43	5.96	5.85	6.07
Q2j	composability	366	2.46	1.37	3.28	10.11	22.68	31.42	28.69	5.58	5.44	5.73
Q2k	minimal amount of the generated waste after disposal	366	0.82	0.55	1.91	3.55	15.85	38.52	38.80	6.04	5.93	6.15
1 = Totally UNIMPORTANT, 2 = Very UNIMPORTANT, 3 = Somewhat UNIMPORTANT, 4 = Neutral, 5 = Somewhat IMPORTANT, 6 = Very IMPORTANT, 7 = Totally IMPORTANT												

Source: own work.

Table 9: Relative frequency distribution, means and the 95% mean confidence intervals of answers to the “Q1” survey question items

Q1	Relatively, how environmentally-friendly do you think each of packaging materials listed below is?													
Question item		Responses		Relative frequency								Mean	Bounds	
		Total	n*	1	2	3	4	5	6	7	?		Lower	Upper
Q1a	paper and board	366	364	0.27	1.91	6.28	3.55	36.89	30.60	19.95	0.55	5.48	5.36	5.60
Q1b	wood	366	362	0.27	1.09	3.28	3.55	24.32	32.24	34.15	1.09	5.87	5.75	5.99
Q1c	glass	366	356	2.19	5.19	10.38	10.66	27.60	24.32	16.94	2.73	5.03	4.87	5.18
Q1d	aluminium	366	315	13.11	17.21	19.67	16.12	12.84	4.37	2.73	13.93	3.26	3.09	3.44
Q1e	steel	366	288	7.65	16.67	16.94	14.75	14.48	4.92	3.28	21.31	3.50	3.32	3.69
Q1f	biodegradable or plastics made out of renewable natural resources	366	358	2.46	3.83	13.66	8.47	33.88	19.67	15.85	2.19	4.94	4.79	5.10
Q1g	non-biodegradable or plastics made out of non-renewable natural resources	366	360	75.14	13.11	2.19	2.46	2.73	0.82	1.91	1.64	1.52	1.39	1.65
* Total number of responses reduced for the number of the "Do not know" answers (Total - ?)														
1 - Totally UNFRIENDLY, 2 - Very UNFRIENDLY, 3 - Somewhat UNFRIENDLY, 4 - Neutral, 5 - Somewhat FRIENDLY, 6 - Very FRIENDLY, 7 - Totally FRIENDLY, ? - Do not know														

Source: own work.

Table 10: Relative frequency distribution, means and the 95% mean confidence intervals of answers to the “Q3” survey question items

Q3	How important to you is each of the below listed properties of the everyday use products (e.g., food, beverage or products for personal care)?											
Question item		n	Relative frequency							Mean	Bounds	
			1	2	3	4	5	6	7		Lower	Upper
Q3a	price	366	0.55	1.91	5.46	2.73	36.89	42.90	9.56	5.40	5.29	5.52
Q3b	environmentally-friendly packaging	366	2.19	3.83	4.64	8.20	29.78	36.07	15.30	5.29	5.15	5.43
Q3c	quality	366	0.82	0.00	0.27	0.55	10.93	59.84	27.60	6.11	6.04	6.19
Q3d	aesthetics	366	10.38	9.02	13.93	23.77	34.97	7.38	0.55	3.88	3.73	4.03
Q3e	brand	366	18.58	10.38	11.75	22.68	30.33	6.01	0.27	3.55	3.38	3.72
Q3f	convenience of use	366	0.55	1.37	3.55	7.65	31.97	44.81	10.11	5.44	5.33	5.55
1 = Totally UNIMPORTANT, 2 = Very UNIMPORTANT, 3 = Somewhat UNIMPORTANT, 4 = Neutral, 5 = Somewhat IMPORTANT, 6 = Very IMPORTANT, 7 = Totally IMPORTANT												

Source: own work.

Table 11: Relative frequency distribution, means and the 95% mean confidence intervals of answers to the “Q4” survey question items

Q4		How important is, in your opinion, each of the following packaging characteristics of the everyday use products (e.g., food, beverage or products for personal care)?										
Question item		n	Relative frequency							Mean	Bounds	
			1	2	3	4	5	6	7		Lower	Upper
Q4a	availability of additional (legally non-mandatory) product and packaging information (e.g., usage, handling and storing instructions)	366	1.09	2.46	7.38	10.11	39.62	32.79	6.56	5.09	4.97	5.22
Q4b	environmental friendliness of packaging	366	0.27	1.91	1.37	4.64	18.58	52.73	20.49	5.80	5.69	5.90
Q4c	packaging aesthetics	366	9.56	9.84	17.49	21.86	33.61	7.10	0.55	3.84	3.69	3.99
Q4d	packaging price	366	1.09	1.09	4.64	10.66	50.82	24.86	6.83	5.11	5.00	5.22
Q4e	increased convenience of use	366	0.55	1.09	4.92	7.92	40.71	39.62	5.19	5.27	5.16	5.37
Q4f	protection to the contained product (e.g., increased shelf life, mechanical or thermal protection)	366	0.27	0.82	2.19	6.28	38.25	43.17	9.02	5.47	5.37	5.57
Q4g	packaging durability	366	1.91	1.37	7.65	15.85	37.98	29.78	5.46	4.98	4.85	5.10
Q4h	reusability option (for original or other purposes)	366	0.55	1.09	4.92	7.92	28.69	40.98	15.85	5.49	5.38	5.61
1 = Totally UNIMPORTANT, 2 = Very UNIMPORTANT, 3 = Somewhat UNIMPORTANT, 4 = Neutral, 5 = Somewhat IMPORTANT, 6 = Very IMPORTANT, 7 = Totally IMPORTANT												

Source: own work.

Table 12: Relative frequency distribution, means and the 95% mean confidence intervals of answers to the “Q5” survey question items

Q5	I think that the relatively more environmentally-friendly in comparison with other packaging types of products for everyday use (e.g., food, beverage and products for personal care) are on average...										
	Question item		n	Relative frequency					Mean	Bounds	
	Negative pole (1)	Positive pole (5)		1	2	3	4	5		Lower	Upper
Q5a	aesthetically inferior	aesthetically superior	366	6.83	12.02	51.91	21.04	8.20	3.12	3.02	3.22
Q5b	inferior in terms of quality	superior in terms of quality	366	3.28	7.92	37.16	25.41	26.23	3.63	3.52	3.74
Q5c	less safe for users	more safe for users	366	2.73	4.64	32.24	24.59	35.79	3.86	3.75	3.97
Q5d	less convenient for use	more convenient for use	366	2.46	12.57	40.98	25.68	18.31	3.45	3.34	3.55
Q5e	provide worse protection	provide better protection	366	3.55	14.75	51.64	18.31	11.75	3.20	3.10	3.30

Source: own work.

Table 13: Relative frequency distribution, means and the 95% mean confidence intervals of answers to the “Q6” survey question items

Q6	Products for everyday use (e.g., food, beverage or products for personal care), which use the relatively more environmentally-friendly, compared with the ones which use other packaging types are on average...										
	Question item		n	Relative frequency					Mean	Bounds	
	Negative pole (1)	Positive pole (5)		1	2	3	4	5		Lower	Upper
Q6a	more expensive	less expensive	366	35.25	43.72	15.57	4.37	1.09	1.92	1.83	2.02
Q6b	less renowned	more renowned	366	16.94	33.88	29.23	12.30	7.65	2.60	2.48	2.72
Q6c	more difficult to access	less difficult to access	366	25.14	39.07	26.78	6.01	3.01	2.23	2.12	2.33
Q6d	inferior in terms of quality	superior in terms of quality	366	2.73	6.83	41.26	30.87	18.31	3.55	3.45	3.65
Q6e	less trustworthy	more trustworthy	366	2.73	4.37	38.25	32.51	22.13	3.67	3.57	3.77

Source: own work.

Table 14: Frequency distribution of answers to question items related to the survey question “Q7”

Q7	How do you usually identify the relatively more environmentally-friendly packaging types of the everyday use products (e.g., the food, beverage or products for personal care)?	Frequency			Percentage	
		total	selected	not selected	selected	not selected
Q7a	By the use of pale (e.g., beige, cream or brown) and green packaging colours.	366	144	222	39.34	60.66
Q7b	By the packaging material type.	366	240	126	65.57	34.43
Q7c	According to different texts, (e.g., "A reduced packaging volume/amount." or "Environmentally-friendly packaging.") displayed on packaging.	366	190	176	51.91	48.09
Q7d	According to eco-labels or certificates displayed on packaging.	366	203	163	55.46	44.54
Q7e	According to graphics (e.g., photos of nature) portrayed on packaging.	366	60	306	16.39	83.61
Q7f	According to brand and its reputation for environmental efforts.	366	102	264	27.87	72.13
Q7g	By the packaging volume/amount, which I consider necessary for a particular product.	366	115	251	31.42	68.58
Q7h	According to information on disposal or separate collection on packaging.	366	77	289	21.04	78.96
Q7i	According to information provided by the advertisements.	366	51	315	13.93	86.07
Q7j	According to recommendations of friends, relatives and family.	366	88	278	24.04	75.96
Q7k	I cannot distinguish between the relatively more and less environmentally-friendly packaging types.	366	12	354	3.28	96.72
Q7l*	Other.	366	2	364	0.55	99.45
* Other (text): "Common sense" (1 respondent); "Touch" (1 respondent).						

Source: own work.

Table 15: Frequency distribution of answers to question items related to the survey question “Q8”

Q8	To what extent do you agree with each of the following claims connected with the eco-labels?											
Question item		n	Relative frequency							Mean	Bounds	
			1	2	3	4	5	6	7		Lower	Upper
Q8a	When shopping, I pay attention to eco-labels included on packaging.	366	5.74	10.66	9.56	15.03	31.97	21.58	5.46	4.43	4.27	4.60
Q8b	Eco-labels are a credible source of information about the environmental friendliness of the labelled packaging.	366	1.64	5.19	10.11	16.12	39.62	24.04	3.28	4.72	4.59	4.85
Q8c	I often decide to buy products precisely because of the eco-labels, present on its packaging.	366	8.74	16.39	7.92	23.22	26.23	14.21	3.28	3.98	3.81	4.15
Q8d	I possess adequate knowledge to understand the majority of eco-labels displayed on packaging.	366	4.92	11.75	11.48	16.39	28.42	22.40	4.64	4.37	4.21	4.54
Q8e	I use packaging (e.g., recycle) according to the instructions, provided by eco-labels, present on packaging.	366	3.01	4.10	7.38	10.38	24.59	36.07	14.48	5.16	5.00	5.31
1 = Totally disagree, 2 = Strongly disagree, 3 = Somewhat disagree, 4 = Neutral, 5 = Somewhat agree, 6 = Strongly agree, 7 = Totally agree												

Source: own work.

Table 16: Relative frequency distributions, means and the 95% mean confidence intervals of answers to the “Q9” survey question items

Q9	To what extent do you agree with each of the following statements?											
	Question item	n	Relative frequency							Mean	Bound	
			1	2	3	4	5	6	7		Lower	Upper
Q9a	People who are most important to me think that I should buy products which use the relatively more environmentally-friendly packaging types.	366	5,19	13,93	6,56	22,95	21,31	21,31	8,74	4,40	4,23	4,58

Q9b	People I know are mostly concerned about the state of the natural environment and tend to contribute to its preservation through environmentally-friendly consumption.	366	2,46	11,48	10,66	19,13	30,05	21,86	4,37	4,46	4,31	4,61
Q9c	It is important to me to positively influence the welfare of other people, society and the natural environment through my behaviour.	366	0,82	0,55	1,37	3,01	22,68	43,99	27,60	5,89	5,78	5,99
Q9d	I try to achieve group goals, even if they may not provide me with personal benefits.	366	0,55	1,37	1,37	10,11	26,23	40,71	19,67	5,61	5,50	5,72
Q9e*	As an individual, I can hardly contribute to reducing the negative environmental effects of the packaging.	366	3,01	6,83	21,58	14,21	19,95	24,32	10,11	4,55	4,38	4,71
Q9f*	With a proper disposal and separation of packaging waste, individuals have no impact on the Earth's pollution.	366	1,09	3,28	12,02	13,93	13,66	33,06	22,95	5,27	5,11	5,43
Q9g	Pollution of the natural environment and climate change cause me concerns.	366	0,82	1,37	1,91	6,28	22,95	34,97	31,69	5,81	5,69	5,93
Q9h	I am concerned about the negative impacts of mass consumption and the increasing levels of waste on the natural environment.	366	0,82	1,64	1,37	4,37	17,21	37,43	37,16	5,96	5,84	6,08
Q9i	I have a positive attitude and in general favour the environmentally-friendly packaging types.	366	1,09	0,27	0,55	5,19	15,30	34,97	42,62	6,09	5,98	6,20
Q9j	It is important to me that packaging is environmentally-friendly, or that products do not contain unnecessary packaging.	366	1,09	0,27	1,09	5,46	15,85	36,89	39,34	6,03	5,91	6,14
1 = Totally disagree, 2 = Strongly disagree, 3 = Somewhat disagree, 4 = Neutral, 5 = Somewhat agree, 6 = Strongly agree, 7 = Totally agree												

Source: own work.

Table 17: Frequency distribution of answers to question items related to the survey question “Q10”

Q10: Do you usually buy products for everyday use, which use the relatively more environmentally-friendly packaging types?	Frequency	Percentage
Yes	219	59.84
No	147	40.16
Total	366	100.00

Source: own work.

Table 18: Frequency distribution of answers to question items related to the survey question “Q11”

Q11	What are your main reasons for purchasing products for everyday use, which use the relatively more environmentally-friendly packaging types?	Frequency			Percentage	
Question item		total	selected	not selected	selected	not selected
Q11a	A desire to preserve the natural environment for future generations.	219	187	32	85.39	14.61
Q11b	Use of materials, which are less harmful to my own and health of other people.	219	164	55	74.89	25.11
Q11c	Feeling of self-realisation or personal satisfaction, achieved with such purchases.	219	64	155	29.22	70.78
Q11d	Increased convenience due to a lesser amount of the generated household waste.	219	128	91	58.45	41.55
Q11e	Support or approval of such purchases by people who are important to me (e.g., friends, relatives and family members).	219	17	202	7.76	92.24
Q11f	Better quality of such products.	219	38	181	17.35	82.65
Q11g	Lower price of such products.	219	16	203	7.31	92.69
Q11h	Because products, which I usually purchase already use the environmentally-friendly packaging types.	219	25	194	11.42	88.58
Q11i	To set a positive example to my friends, relatives and family members.	219	73	146	33.33	66.67
Q11j	Due to the superior aesthetics of such products.	219	14	205	6.39	93.61
Q11k*	Other.	219	1	218	0.46	99.54
* Other (text): Because they are from vegan or cruelty-free materials (1 respondent).						

Source: own work.

Table 19: Frequency distribution of answers to question items related to the survey question “Q12”

Q12	What are your main reasons for not purchasing the everyday use products, which use the relatively more environmentally-friendly packaging types?	Frequency			Percentage	
		total	selected	not selected	selected	not selected
Q12a	I do not pay attention to the packaging types when shopping.	147	81	66	55.10	44.90
Q12b	Such products are too expensive.	147	53	94	36.05	63.95
Q12c	Poor durability of such products due to the environmentally-friendly packaging types.	147	16	131	10.88	89.12
Q12d	Worse protection of the contained products by such packaging types.	147	12	135	8.16	91.84
Q12e	Lesser convenience of use due to the environmentally-friendly packaging types.	147	15	132	10.20	89.80
Q12f	Inferior aesthetics of such packaging types.	147	3	144	2.04	97.96
Q12g	Insufficient accessibility of my preferred products in such packaging types.	147	55	92	37.41	62.59
Q12h	Inability to separate the more environmentally-friendly from other packaging types.	147	25	122	17.01	82.99
Q12i	Poor hygiene of products due to the environmentally-friendly packaging types.	147	1	146	0.68	99.32
Q12j	Distrust in products, which use such packaging types.	147	1	146	0.68	99.32
Q12k	Poor quality of such products.	147	9	138	6.12	93.88
Q12l	Packaging is not relevant to me when shopping.	147	32	115	21.77	78.23
Q12m*	Other.	147	1	144	0.69	99.31
* Other (text): "I buy in accordance with my needs" (1 respondent)						

Source: own work.

Table 20: Frequency distribution of answers to question items related to the survey question “Q13”

Q13 - In case of same products - would you be willing to pay at least a small price premium for the product, packed in a relatively more environmentally-friendly packaging?	Frequency	Percentage
Yes	300	81.97
No	66	18.03
Total	366	100.00

Source: own work.

Table 21: Frequency distribution of answers to the survey question “Q14”

Q14: In case of several products with same characteristics – what percentage of a price premium would you be willing to pay for the relatively most environmentally-friendly packed product?	Frequency	Percentage
for up to 5% higher price	169	56.33
for 6 - 15% higher price	100	33.33
for 16 - 30% higher price	22	7.33
for 31 - 50% higher price	6	2.00
for more than 50% higher price	3	1.00
Total	300	100.00

Source: own work.

Table 22: Frequency distribution of answers to question items related to the survey question “Q15”

Q15	Who, in your opinion, is the most responsible for reducing the negative impacts of packaging on the natural environment?	Frequency			Percentage	
Question item		total	selected	not selected	selected	not selected
Q15a	Companies	366	296	70	80.87	19.13
Q15b	Consumers	366	181	185	49.45	50.55
Q15c	Government	366	254	112	69.40	30.60
Q15d	Media	366	128	238	34.97	65.03
Q15e	NGOs	366	65	301	17.76	82.24
Q15f	Nobody	366	1	365	0.27	99.73
Q15g	Other.	366	5	361	1.37	98.63
Q15all	Everybody	366	61	305	16.67	83.33
* Other (text): Educational institutions (2 respondents), Waste processing companies (1 respondent), Legislative bodies (1 respondent), Firstly governments, then the media and consumers, while NGOs share a rather small responsibility (1 respondent).						

Source: own work.

Appendix F: The modified SPSS output tables

Table 23: One sample t-test regarding the perceived importance of packaging characteristics in the scope of survey question “Q2”

Q2: How important is, in your opinion, each of the following characteristics of packaging, used for the everyday use products (e.g., food, beverage or products for personal care)?	Test Value = 5*			
	t	df	Sig. (2-tailed)	Mean Difference
Q2a: use of renewable materials	14.223	365	0.000	0.817
Q2b: use of the recycled materials	14.464	365	0.000	0.787
Q2c: use of the biodegradable materials	17.246	365	0.000	0.962
Q2d: minimal consumption of raw materials and energy throughout the entire life cycle	18.438	365	0.000	0.967
Q2e: use of non-harmful materials	33.629	365	0.000	1.423
Q2f: minimal transportation	9.301	365	0.000	0.582
Q2g: minimal amount or absence of unnecessary packaging	19.972	365	0.000	1.090
Q2h: reusability (for original or other purposes)	19.289	365	0.000	1.008
Q2i: possibility of separate collection or recycling	17.082	365	0.000	0.962
Q2j: composability	8.127	365	0.000	0.582
Q2k: minimal amount of the generated waste after disposal	18.485	365	0.000	1.038

The related descriptive statistics are available in Appendix E, Table 8.

* 5 = “Somewhat important”

Table 24: One sample t-test regarding the perceived importance of packaging characteristics in the scope of survey question “Q2”

Q2: How important is, in your opinion, each of the following characteristics of packaging, used for the everyday use products (e.g., food, beverage or products for personal care)?	Test Value = 6*			
	t	df	Sig. (2-tailed)	Mean Difference
Q2a: use of renewable materials	14.223	365	0.002	0.817
Q2b: use of the recycled materials	14.464	365	0.000	0.787
Q2c: use of the biodegradable materials	17.246	365	0.493	0.962
Q2d: minimal consumption of raw materials and energy throughout the entire life cycle	18.438	365	0.532	0.967
Q2e: use of non-harmful materials	33.629	365	0.000	1.423
Q2f: minimal transportation	9.301	365	0.000	0.582
Q2g: minimal amount or absence of unnecessary packaging	19.972	365	0.099	1.09
Q2h: reusability (for original or other purposes)	19.289	365	0.875	1.008
Q2i: possibility of separate collection or recycling	17.082	365	0.497	0.962
Q2j: composability	8.127	365	0.000	0.582
Q2k: minimal amount of the generated waste after disposal	18.485	365	0.496	1.038

The related descriptive statistics are available in Appendix E, Table 8.

* 6 = “Highly important”

Table 25: One sample t-test regarding the survey question “Q1” items about the perceived environmental friendliness of packaging materials - 1

Q1 - Relatively, how environmentally-friendly do you think each of the packaging materials listed below is?	Test Value = 4*			
	t	df	Sig. (2-tailed)	Mean Difference
Q1a: paper and board	23.912	363	0.000	1.478
Q1b: wood	31.628	361	0.000	1.87
Q1c: glass	12.676	355	0.000	1.025
Q1d: aluminium	-8.305	314	0.000	-0.74
Q1e: steel	-5.32	287	0.000	-0.497
Q1f: biodegradable or plastics made out of renewable natural resources	11.87	357	0.000	0.941
Q1g: non-biodegradable or plastics made out of non-renewable natural resources	-37.988	359	0.000	-2.478

The descriptive statistics are available in Appendix E, Table 9.

** 4 = “Neutral” in terms of the effects on the natural environment*

Table 26: One sample t-test regarding the survey question “Q1” items about the perceived environmental friendliness of packaging materials - 2

Q1 - Relatively, how environmentally-friendly do you think each of the packaging materials listed below is?	Test Value = 2*			
	t	df	Sig. (2-tailed)	Mean Difference
Q1g: non-biodegradable or plastics made out of non-renewable natural resources	-7.325	359	0.000	-0.478

The related descriptive statistics are available in Appendix E, Table 9

** 2 = “Very unfriendly” in terms of effects on the natural environment*

Table 27: Wilcoxon signed ranks test regarding the survey question “Q3”

Question items	Ranks	N	Mean Rank	Sum of Ranks	Z	Asymp. Sig. (2-tailed)
Q3a : price - Q3b : environmentally-friendly packaging	Negative Ranks	121	125.77	15218.50	-,960b	0.337
	Positive Ranks	134	130.01	17421.50		
	Ties	111				
	Total	366				
Q3c: quality - Q3b : environmentally-friendly packaging	Negative Ranks	33	85.18	2811.00	10.156b	0.000
	Positive Ranks	187	114.97	21499.00		
	Ties	146				
	Total	366				
	Negative Ranks	260	160.63	41764.00		0.000
	Positive Ranks	48	121.29	5822.00		

Q3d : aesthetics - Q3b : environmentally-friendly packaging	Ties	58 ⁱ			-	11.62 1c	
	Total	366					
Q3e : brand - Q3b : environmentally-friendly packaging	Negative Ranks	266	162.28	43165.50	-	12.14 7c	0.000
	Positive Ranks	44	114.53	5039.50			
	Ties	56					
	Total	366					
Q3f : convenience of use - Q3b : environmentally-friendly packaging	Negative Ranks	122	118.95	14512.50	-	1.266 b	0.205
	Positive Ranks	130	133.58	17365.50			
	Ties	114					
	Total	366					
a. Wilcoxon Signed Ranks Test							
b. Based on negative ranks.							
c. Based on positive ranks.							

The related descriptive statistics are available in Appendix E, Table 10.

Table 28: Wilcoxon signed ranks test regarding the survey question “Q4”

Question items	Ranks	N	Mean Rank	Sum of Ranks	Z	Sig. (2-tailed)
Q4c: packaging aesthetics - Q4b: environmental friendliness of packaging	Negative Ranks	297	160.55	47684.50	-14.716 b	0.000
	Positive Ranks	15	76.23	1143.50		
	Ties	54				
	Total	366				
Q4a: availability of additional (legally non-mandatory) information (e.g., usage, handling and storing instructions) - Q4b: environmental friendliness of packaging	Negative Ranks	195	121.38	23670.00	-9.596b	0.000
	Positive Ranks	41	104.78	4296.00		
	Ties	130				
	Total	366				
Q4d: packaging price - Q4b: environmental friendliness of packaging	Negative Ranks	218	137.32	29935.50	-9.062b	0.000
	Positive Ranks	54	133.19	7192.50		
	Ties	94				
	Total	366				
Q4e: increased convenience of use - Q4b: environmental friendliness of packaging	Negative Ranks	173	122.10	21123.50	-7.015b	0.000
	Positive Ranks	63	108.61	6842.50		
	Ties	130				
	Total	366				
Q4f: product protection (e.g., increased shelf life, mechanical or thermal protection) - Q4b:	Negative Ranks	166	124.61	20684.50	-5.008b	0.000
	Positive Ranks	81	122.76	9943.50		
	Ties	119				

environmental friendliness of packaging	Total	366				
Q4g: packaging durability - Q4b: environmental friendliness of packaging	Negative Ranks	223	141.31	31512.00	-9.451b	0.000
	Positive Ranks	54	129.46	6991.00		
	Ties	89				
	Total	366				
Q4h : reusability - Q4b: environmental friendliness of packaging	Negative Ranks	135	104.37	14089.50	-4.640b	0.000
	Positive Ranks	68	97.30	6616.50		
	Ties	163				
	Total	366				
a. Wilcoxon Signed Ranks Test						
b. Based on positive ranks.						

The related descriptive statistics are available in Appendix E, Table 11.

Table 29: One sample t-test regarding the survey question “Q5”

Question items	Test value = 3*			
	t	df	Sig. (2-tailed)	Mean Difference
Q5a: aesthetics	2.343	365	,020	,117
Q5b: quality	11.485	365	,000	,634
Q5c: safety	15.731	365	,000	,861
Q5d: convenience	8.508	365	,000	,448
Q5e: protection	4.010	365	,000	,199

The related descriptive statistics are available in Appendix E, Table 12.

*3 =neutral opinion

Table 30: One sample t-test regarding the survey question “Q6”

Question items	Test value = 3*			
	t	df	Sig. (2-tailed)	Mean Difference
Q6a: price	-23.353	365	,000	-1.077
Q6b: familiarity	-6.772	365	,000	-,402
Q6c: accessibility	-14.933	365	,000	-,773
Q6d: quality	11.029	365	,000	,552
Q6e: trust	13.368	365	,000	,669

The related descriptive statistics are available in Appendix E, Table 13.

*3 =neutral opinion

Table 31: One sample t-test regarding the survey question “Q8”

Q8: To what extent do you agree with each of the following claims connected with the eco-labels?	Test value = 4*			
	t	df	Sig. (2-tailed)	Mean Difference
Q8a: When shopping, I pay attention to eco-labels included on packaging.	5.224	365	,000	,434
Q8b: Eco-labels are a credible source of information about the environmental friendliness.	10.932	365	,000	,721
Q8c: I often decide to buy products precisely because of the eco-labels, present on its packaging.	-,289	365	,773	-,025
Q8d: I possess adequate knowledge to understand the majority of eco-labels displayed on packaging.	4.536	365	,000	,374
Q8e: I use the packaging (e.g., recycle) according to the instructions provided by eco-labels, present on packaging.	14.338	365	,000	1.123

The related descriptive statistics are available in Appendix E, Table 15.

* 4 = “Neither agree nor disagree”

Table 32 Exploratory factor analysis: descriptive statistics of the initial variables

Question items	Mean	Std. Deviation	Analysis N
Q9i	6.09	1.072	366
Q9j	6.03	1.090	366
Q3b	5.29	1.362	366
Q4b	5.80	1.017	366
Q9a	4.40	1.670	366
Q9b	4.46	1.466	366
Q9g	5.81	1.166	366
Q9h	5.96	1.145	366
Q9e_reverse coded	5.27	1.508	366
Q9f_reverse coded	4.55	1.597	366
Q9d	5.61	1.092	366
Q9c	5.89	1.014	366

Table 33: Exploratory factor analysis: KMO and Bartlett's test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		,855
Bartlett's Test of Sphericity	Approx. Chi-Square	1905.313
	df	66
	Sig.	,000

Table 34: Exploratory factor analysis: Pattern matrix table

Question items	Factor					Factor name
	1	2	3	4	5	
Q9j: It is important to me that packaging is environmentally-friendly, or that products do not contain unnecessary packaging.	,824					ATT - Attitude towards environmentally-friendly packaging
Q3b: environmentally-friendly packaging	,704					
Q4b: environmental friendliness of packaging	,583					
Q9i: I have positive attitude and in general favour the environmentally-friendly packaging types.	,495					
Q9e (reverse coded): As an individual, I can hardly contribute to reducing the negative environmental effects of the packaging.		,867				PCE - Perceived consumer effectiveness
Q9f (reverse coded): With proper disposal and separation of packaging waste, individuals have no impact on the Earth's pollution.		,805				
Q9h: I am concerned about the negative impacts of mass consumption and increasing levels of waste on the natural environment.			,807			EC - Environmental concern
Q9g: Pollution of the natural environment and climate change cause me concerns.			,715			
Q9b: People I know are mostly concerned about the state of the natural environment and tend to contribute to its preservation through the environmentally-friendly consumption.				,788		SN - Social norm
Q9a: People who are the most important to me think that I should buy products that use environmentally-friendly packaging types.				,712		
Q9c: It is important to me to positively influence the welfare of other people, society and the natural environment through my behaviour.					,736	COLL - Collectivism level
Q9d: I try to achieve group goals, even if they may not provide me with the personal benefits.					,490	
Extraction Method: Principal Axis Factoring; Rotation Method: Promax with Kaiser Normalization. ^a a.Converged in 6 iterations.						
*Coefficients with absolute value below 0.4 are not displayed in the Pattern matrix						

Table 35: Description of variables, used in the correlation analysis

Variable	Definition	Units definition
GENDER	respondent's gender	1 = male, 2 = female
AGE	respondent's age	number of years
EDUCATION	respondent's highest achieved level of education	1 = general or technical secondary, vocational, primary or no education", 2 = "first, second, third cycle of higher education or specialisation
INCOME	respondent's average disposable net monthly income level	1 = "up to 800 EUR", 2 = "from 801 up to 1,300 EUR", 3 = from 1,301 up to 1,800 EUR", 4 = more than 1,800 EUR"
HOUSEHOLD	respondent's household size	1 = "1 member", 2 = "2 members", 3 = "3 members", 4 = "4 or more members"
ATT	respondent's attitudes towards environmentally-friendly packaging	higher values indicate relatively more favourable attitudes of the respondent towards the environmentally-friendly packaging types
EC	respondent's environmental concern	higher values represent relatively higher environmental concerns of the respondent
PCE	respondent's perceived consumer effectiveness	higher values represent relatively higher perceived consumer effectiveness of the respondent
SN	respondent's level of compliance with the social norms	higher values represent relatively higher effect of social norms on the respondent
COLL	respondent's collectivism level	higher values represent relatively more collectivistic characteristics of the respondent

Table 36: Descriptive statistics of variables, used in the correlation analysis

Variable	N	Range	Min	Max	Mean	Std. Deviation	Variable type
Gender	366	1.000	1.000	2.000	1.781	0.414	nominal
Age	366	66.000	18.000	84.000	37.855	13.109	scale
Highest achieved education level	366	1.000	1.000	2.000	1.596	0.491	ordinal
Average disposable monthly net income level	366	3.000	1.000	4.000	2.036	0.943	ordinal
Household size	366	3.000	1.000	4.000	2.866	0.999	interval
ATT	366	7.038	-5.483	1.555	0.000	1.107	interval
EC	366	6.447	-4.923	1.524	0.000	1.106	interval
PCE	366	4.314	-2.613	1.702	0.000	1.094	interval
SN	366	5.328	-3.002	2.326	0.000	1.172	interval
COLL	366	8.191	-6.223	1.968	0.000	1.198	interval
Q10	366	1.000	1.000	2.000	1.402	0.491	nominal
Q13	366	1.000	1.000	2.000	1.180	0.385	nominal

Table 37: Pearson's correlations between the ATT and the interval variables of interest

		Age	Gender	PCE	EC	SN	COLL
ATT	Pearson Correlation	,120	,363	,254	,524	,257	,451
	Sig. (1-tailed)	,011	,000	,000	,000	,000	,000
	N	366	366	366	366	366	366

Table 38: ANOVA between the highest achieved level of education and the ATT variable: descriptive statistics

The highest achieved level of education (groups)	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Min	Max
					Lower Bound	Upper Bound		
primary, lower or secondary vocational education	28	,1179	1.1206	,2118	-,3166	,5525	-3.6440	1.3525
general secondary education	120	-,0349	1.0257	,0936	-,2203	,1505	-4.0373	1.5547
1st and 2nd cycle of higher education or specialization	185	,0275	1.1479	,0844	-,1390	,1941	-5.4833	1.5233
3rd cycle of higher	33	-,1276	1.1755	,2046	-,5444	,2892	-3.0577	1.4967
Total	366	,0000	1.1066	,0578	-,1138	,1138	-5.4833	1.5547

Table 39: ANOVA between the highest achieved level of education and the ATT variable

Highest achieved level of education (groups)	Levene Statistic		Sum of Squares	df	Mean Square	F	Sig.
	df	Sig.					
Between Groups	3	,709	1.213	3	,404	,328	,805
Within Groups	362		445.792	362	1.231		
Total			447.005	365			

Table 40: ANOVA between the average disposable net monthly income level and ATT variable: descriptive statistics

Average disposable net monthly income level (groups)	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Min	Max
					Lower Bound	Upper Bound		
up to 800 EUR	122	,0650	,9710	,0879	-,1091	,2390	-4.0373	1.5547
from 801 up to 1,300 EUR	143	,0200	1.0767	,0900	-,1580	,1980	-5.1954	1.3936
from 1,301 up to 1,800 EUR	67	-,1033	1.4114	,1724	-,4476	,2409	-5.4833	1.5233
more than 1,800 EUR	34	-,1137	1.0314	,1769	-,4736	,2462	-2.2997	1.3061
Total	366	,0000	1.1066	,0578	-,1138	,1138	-5.4833	1.5547

Table 41: ANOVA between the average disposable net monthly income level and the ATT

Average disposable net monthly income level (groups)	Levene Statistic		Sum of Squares	df	Mean Square	F	Sig.
	df	Sig.					
Between Groups	3	0.106	1.727065	3	0.575688	0.46802	0.704767
Within Groups	362		445.2781	362	1.23005		
Total			447.0052	365			

Table 42: ANOVA between the respondent's household size and the ATT variable: descriptive statistics

Household size (groups)	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Min	Max
					Lower Bound	Upper Bound		
1 member	33	,2438	1.3063	,2274	-,2194	,7070	-5.4769	1.3525
2 members	111	,1396	1.0222	,0970	-,0527	,3319	-4.0373	1.4967
3 members	94	-,1777	1.1820	,1219	-,4198	,0644	-5.1954	1.5547
4 or more members	128	-,0534	1.0502	,0928	-,2371	,1302	-5.4833	1.5233
Total	366	,0000	1.1066	,0578	-,1138	,1138	-5.4833	1.5547

Table 43: ANOVA between the respondent's household size and the ATT variable

	Levene Statistic		Sum of Squares	df	Mean Square	F	Sig.
	df	Sig.					
Between Groups	3	,582	7.456383	3	2.485461	2.046956	0.10695
Within Groups	362		439.5488	362	1.214223		
Total			447.0052	365			

Table 44: ANOVA - factors influencing usual purchasing behaviour of the environmentally-friendly packaged products (Q10): descriptive statistics

Q10 - Do you usually buy products for everyday use, which use the relatively more environmentally-friendly packaging types?		N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Min	Max
						Lower Bound	Upper Bound		
Age	Yes	219	39.10	13.176	,890	37.35	40.86	18	72
	No	147	36.00	12.830	1.058	33.91	38.09	18	84
	Total	366	37.86	13.109	,685	36.51	39.20	18	84
ATT	Yes	219	0.458	0.687	0.046	0.366	0.549	-2.297	1.555
	No	147	-0.682	1.255	0.103	-0.886	-0.477	-5.483	1.311
	Total	366	0.000	1.107	0.058	-0.114	0.114	-5.483	1.555
PCE	Yes	219	0.111	1.069	0.072	-0.031	0.253	-2.420	1.691

	No	147	-0.165	1.113	0.092	-0.347	0.016	-2.613	1.702
	Total	366	0.000	1.094	0.057	-0.112	0.112	-2.613	1.702
EC	Yes	219	0.265	0.807	0.055	0.158	0.373	-3.159	1.391
	No	147	-0.395	1.350	0.111	-0.616	-0.175	-4.923	1.524
	Total	366	0.000	1.106	0.058	-0.114	0.114	-4.923	1.524
SN	Yes	219	0.217	1.181	0.080	0.060	0.375	-3.002	2.326
	No	147	-0.324	1.083	0.089	-0.500	-0.147	-2.944	2.045
	Total	366	0.000	1.172	0.061	-0.120	0.120	-3.002	2.326
COLL	Yes	219	0.325	0.963	0.065	0.196	0.453	-4.856	1.770
	No	147	-0.484	1.346	0.111	-0.703	-0.264	-6.223	1.968
	Total	366	0.000	1.198	0.063	-0.123	0.123	-6.223	1.968

Table 45: ANOVA - factors influencing usual purchasing behaviour of the environmentally-friendly packaged products (Q10): equality of variance assumed

Q10 - Do you usually buy products for everyday use, which use the relatively more environmentally-friendly packaging types?		Levene Statistic		Sum of Squares	df	Mean Square	F	Sig.
		df	Sig.					
Age	Between Groups	1	0.457	845.535	1	845.535	4.974	,026
	Within Groups	364		61877.790	364	169.994		
	Total	1		62723.325	365			
PCE	Between Groups	364	0.418	6.728	1	6.728	5.695	,018
	Within Groups	1		429.985	364	1.181		
	Total	364		436.713	365			
SN	Between Groups	1	0.236	25.761	1	25.761	19.727	,000
	Within Groups	364		475.338	364	1.306		
	Total			501.099	365			

Table 46: ANOVA - factors influencing usual purchasing behaviour of the environmentally-friendly packaged products (Q10): equality of variances not assumed

Q10 - Do you usually buy products for everyday use, which use the relatively more environmentally-friendly packaging types?		Levene Statistic	Statistic ^a	df1	df2	Sig.
		Sig.				
ATT	Welch	0.000	100.907	1	205.128	,000
EC	Welch	0.000	28.411	1	216.035	,000
COLL	Welch	0.004	39.482	1	244.269	,000
a. Asymptotically F distributed.						

Table 47: Chi-square test between the purchasing behaviour of the environmentally-friendly packaged products (Q10), gender and willingness to pay more for the environmentally-friendly packaged products (Q13)

Gender * Q10 - Do you usually buy products for everyday use, which use the relatively more environmentally-friendly packaging types?								
			Q10**					
			Yes	No	Total	Pearson Chi-Square		
						Value	df	Asymp. Sig. (2-sided)
Gender	male	Count	32	48	80	16.762**	1	0.000
		Expected Count	47,9	32,1	80,0			
	female	Count	187	99	286			
		Expected Count	171,1	114,9	286,0			
Q13*	Yes	Count	201	99	300	35.527***	1	0.000
		Expected Count	179,5	120,5	300,0			
	No	Count	18	48	66			
		Expected Count	39,5	26,5	66,0			
*Q13: "In case of same products - would you be willing to pay at least a small price premium for the product, packed in a relatively more environmentally-friendly packaging?"								
**0 cells (0.0%) have expected count less than 5. The minimum expected count is 32.13.								
***0 cells (0.0%) have expected count less than 5. The minimum expected count is 26.51.								

Phi coefficient (Gender by Q10) = - 0.214, Sig. = 0.000 (number of valid cases = 366)

Phi coefficient (Gender by Q13), = 0.312, Sig. = 0.000 (number of valid cases = 366)

Table 48: Mann-Whitney U test between the purchasing behaviour of the environmentally-friendly packaged products (Q10) and (1) average disposable net monthly income level, (2) highest achieved education level and (3) household size of the survey respondents

Q10 - Do you usually buy products for everyday use, which use the relatively more environmentally-friendly packaging types?		N	Mean Rank	Sum of Ranks	Mann-Whitney U	Wilcoxon W	Z	Asymp. Sig. (2-tailed)
Income group	Yes	219	181.65	39781.00	15691,0	39781,0	-0.4316	0.6660
	No	147	186.26	27380.00				
	Total	366						
Education group	Yes	219	180.62	39556.50	15466,5	39556,5	-0.747	0.4551
	No	147	187.79	27604.50				
	Total	366						
Household group	Yes	219	181.32	39709.50	15619,5	39709,5	-0.5035	0.6146
	No	147	186.74	27451.50				
	Total	366						

Table 49: ANOVA – factors influencing the willingness to pay more for environmentally-friendly packed products (Q13): descriptive statistics

Q13: In case of same products - would you be willing to pay at least a small price premium for the product, packed in a relatively more environmentally-friendly packaging?		N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Min	Max
						Lower Bound	Upper Bound		
Age	Yes	300	38.42	13.242	,765	36.92	39.93	18	84
	No	66	35.27	12.251	1.508	32.26	38.28	18	75
	Total	366	37.86	13.109	,685	36.51	39.20	18	84
ATT	Yes	300	0.196	0.863	0.050	0.098	0.294	-3.058	1.555
	No	66	-0.893	1.569	0.193	-1.278	-0.507	-5.483	1.263
	Total	366	0.000	1.107	0.058	-0.114	0.114	-5.483	1.555
PCE	Yes	300	0.083	1.042	0.060	-0.035	0.201	-2.420	1.691
	No	66	-0.378	1.246	0.153	-0.684	-0.072	-2.613	1.702
	Total	366	0.000	1.094	0.057	-0.112	0.112	-2.613	1.702
EC	Yes	300	0.142	0.920	0.053	0.038	0.247	-4.437	1.438
	No	66	-0.648	1.566	0.193	-1.033	-0.263	-4.923	1.524
	Total	366	0.000	1.106	0.058	-0.114	0.114	-4.923	1.524
SN	Yes	300	0.046	1.172	0.068	-0.087	0.179	-2.895	2.326
	No	66	-0.208	1.156	0.142	-0.492	0.076	-3.002	2.147
	Total	366	0.000	1.172	0.061	-0.120	0.120	-3.002	2.326
COLL	Yes	300	0.100	1.072	0.062	-0.022	0.221	-6.223	1.770
	No	66	-0.452	1.587	0.195	-0.843	-0.062	-5.443	1.968
	Total	366	0.000	1.198	0.063	-0.123	0.123	-6.223	1.968

Table 50: ANOVA – factors influencing the willingness to pay more for environmentally-friendly packed products (Q13): equality of variances assumed

Q13: In case of same products - would you be willing to pay at least a small price premium for the product, packed in a relatively more environmentally-friendly packaging?		Levene Statistic		Sum of Squares	df	Mean Square	F	Sig.
		df	Sig.					
Age	Between Groups	1	0.667	536.998	1	536.998	3.143	,077
	Within Groups	364		62186.328	364	170.842		
	Total			62723.325	365			
SN	Between Groups	364	0.553	3.475	1	3.475	2.542	,112
	Within Groups	1		497.624	364	1.367		
	Total			501.099	365			

Table 51: ANOVA – factors influencing the willingness to pay more for environmentally-friendly packed products (Q13): equality of variances not assumed

Q13: In case of same products - would you be willing to pay at least a small price premium for the product, packed in a relatively more environmentally-friendly packaging?		Levene Statistic	Statistic ^a	df1	df2	Sig.
		Sig.				
ATT	Welch	0.000	29.816	1	73.883	,000
PCE	Welch	0.015	7.836	1	86.089	,006
EC	Welch	0.000	15.613	1	75.157	,000
COLL	Welch	0.001	7.249	1	78.537	,009
a. Asymptotically F distributed.						

Table 52: Chi-square test between the willingness to pay more for environmentally-friendly packed products (Q13) and gender: count table

Gender * Q13: In case of same products - would you be willing to pay at least a small price premium for the product, packed in a relatively more environmentally-friendly packaging?								
			Q13					
			Yes	No	Total	Pearson Chi-Square		
						Value	df	Asymp. Sig. (2-sided)
Gender	male	Count	54	26	80	14.497*	1	0.000
		Expected Count	65,6	14,4	80,0			
	female	Count	246	40	286			
		Expected Count	234,4	51,6	286,0			
*0 cells (0.0%) have expected count less than 5. The minimum expected count is 32.13.								

Phi coefficients (number of valid cases = 366) = -0.199, Sig. = 0.000.

Table 53: Mann-Whitney U test between the willingness to pay more for the environmentally-friendly packed products (Q13) and (1) average disposable net monthly income, (2) highest achieved education group and (3) household size of the respondents

Q13 - In case of same products - would you be willing to pay at least a small price premium for the product, packed in a relatively more environmentally-friendly packaging?		N	Mean Rank	Sum of Ranks	Mann-Whitney U	Wilcoxon W	Z	Asymp. Sig. (2-tailed)
Income group	Yes	300	180.43	54129.00	8979,0	54129	-1.2501	0.2113
	No	66	197.45	13032.00				
	Total	366						
Education group	Yes	300	184.91	55473.00	9477	11688	-0.639	0.5225
	No	66	177.09	11688.00				
	Total	366						
Household group	Yes	300	185.09	55526.00	9424	11635	-0.641	0.5218
	No	66	176.29	11635.00				
	Total	366						