

UNIVERSITY OF LJUBLJANA  
SCHOOL OF ECONOMICS AND BUSINESS

MASTER'S THESIS

**THE EFFECT OF ECO PACKAGING ON CONSUMER BUYING  
BEHAVIOUR. A STUDY OF SLOVENIAN CONSUMERS**

Ljubljana, December 2019

SIMONA STOJANOVA

## AUTHORSHIP STATEMENT

The undersigned Simona Stojanova, a student at the University of Ljubljana, School of Economics and Business, (hereafter: SEB LU), author of this written final work of studies with the title “The effect of eco packaging on consumer buying behaviour. A study of Slovenian consumers”, prepared under supervision of doc. dr. Barbara Culiberg

### DECLARE

1. this written final work of studies to be based on the results of my own research;
2. the printed form of this written final work of studies to be identical to its electronic form;
3. the text of this written final work of studies to be language-edited and technically in adherence with the FELU’s Technical Guidelines for Written Works, which means that I cited and / or quoted works and opinions of other authors in this written final work of studies in accordance with the FELU’s Technical Guidelines for Written Works;
4. to be aware of the fact that plagiarism (in written or graphical form) is a criminal offence and can be prosecuted in accordance with the Criminal Code of the Republic of Slovenia;
5. to be aware of the consequences a proven plagiarism charge based on the this written final work could have for my status at the FELU in accordance with the relevant FELU Rules;
6. to have obtained all the necessary permits to use the data and works of other authors which are (in written or graphical form) referred to in this written final work of studies and to have clearly marked them;
7. to have acted in accordance with ethical principles during the preparation of this written final work of studies and to have, where necessary, obtained permission of the Ethics Committee;
8. my consent to use the electronic form of this written final work of studies for the detection of content similarity with other written works, using similarity detection software that is connected with the FELU Study Information System;
9. to transfer to the University of Ljubljana free of charge, non-exclusively, geographically and time-wise unlimited the right of saving this written final work of studies in the electronic form, the right of its reproduction, as well as the right of making this written final work of studies available to the public on the World Wide Web via the Repository of the University of Ljubljana;
10. my consent to publication of my personal data that are included in this written final work of studies and in this declaration, when this written final work of studies is published.

Ljubljana, December 6<sup>th</sup>, 2019

Author’s signature: \_\_\_\_\_

# TABLE OF CONTENTS

<b>INTRODUCTION .....</b>	<b>1</b>
<b>1 SUSTAINABLE MARKETING .....</b>	<b>2</b>
<b>1.1 Sustainability .....</b>	<b>3</b>
<b>1.2 Defining sustainable marketing .....</b>	<b>5</b>
<b>1.3 Green marketing .....</b>	<b>6</b>
<b>1.4 Green advertising.....</b>	<b>9</b>
<b>1.5 Greenwashing.....</b>	<b>9</b>
<b>2 ECO-FRIENDLY PACKAGING .....</b>	<b>10</b>
<b>2.1 Role of product packaging .....</b>	<b>10</b>
<b>2.2 Eco packaging .....</b>	<b>11</b>
<b>2.3 Consumer understanding about eco packaging design .....</b>	<b>13</b>
2.3.1 Packaging material .....	13
2.3.2 Packaging design element - colour .....	14
2.3.3 Packaging information element - Eco-labels.....	15
<b>3 CONSUMER BUYING BEHAVIOUR.....</b>	<b>16</b>
<b>3.1 Green consumer .....</b>	<b>17</b>
<b>3.2 Factors affecting green consumer buying behaviour .....</b>	<b>18</b>
3.2.1 Environmental concern.....	20
3.2.2 Environmental knowledge.....	21
3.2.3 Perceived consumer effectiveness .....	23
3.2.4 Perceived personal relevance.....	24
3.2.5 Consumer scepticism.....	25
3.2.6 Price/monetary barriers.....	26
<b>4 EMPIRICAL STUDY ON CONSUMER BEHAVIOUR TOWARDS ECO- PACKAGED PRODUCTS .....</b>	<b>27</b>
<b>4.1 Purpose and objectives of the research.....</b>	<b>27</b>
<b>4.2 Proposed research model .....</b>	<b>28</b>

<b>4.3</b>	<b>Research hypotheses</b> .....	<b>29</b>
<b>4.4</b>	<b>Research design and methodology</b> .....	<b>32</b>
4.4.1	Slovenian market.....	32
4.4.2	Questionnaire content development .....	33
4.4.3	Questionnaire structure development.....	36
<b>4.5</b>	<b>Sampling design and procedures</b> .....	<b>37</b>
<b>4.6</b>	<b>Data collection</b> .....	<b>38</b>
<b>4.7</b>	<b>Data analysis and results</b> .....	<b>38</b>
4.7.1	Respondent profile .....	38
4.7.2	Reliability testing .....	39
4.7.3	Descriptive statistics.....	40
4.7.4	Hypotheses testing.....	45
4.7.4.1	<i>H1 – Analysis of packaging style elements material and colour</i> .....	46
4.7.4.2	<i>H2 – Analysis of the influence of environmental claims (eco-labels) on consumer buying behaviour</i> .....	47
4.7.4.3	<i>H3 – Analysis of consumer barriers for buying eco packaged products</i> ....	48
4.7.4.4	<i>H4 – Analysis of consumer scepticism towards eco packaging</i> .....	51
4.7.4.5	<i>H5 – Analysis of consumer psychographic characteristics’ relation with buying behaviour of eco packaged products</i> .....	52
4.7.5	Summary results from hypotheses testing.....	55
4.7.6	Additional analysis .....	57
<b>4.8</b>	<b>Discussion of the results</b> .....	<b>58</b>
4.8.1	Packaging style elements .....	58
4.8.2	Consumer attention to eco-labels on packaging.....	59
4.8.3	Barriers for buying eco-packaged products .....	60
4.8.4	Consumer scepticism.....	62
4.8.5	Consumer psychographic characteristics influence on buying behaviour ....	62
<b>4.9</b>	<b>Managerial implications</b> .....	<b>63</b>
<b>4.10</b>	<b>Limitations and recommendation for further research</b> .....	<b>65</b>
	<b>CONCLUSION</b> .....	<b>66</b>
	<b>REFERENCE LIST</b> .....	<b>68</b>

## **LIST OF FIGURES**

Figure 1: Three pillars of sustainability.....	4
Figure 2: A framework of sustainable marketing.....	6
Figure 3: Proposed research model .....	28
Figure 4: Understanding of term “Environmentally friendly packaging” .....	40
Figure 5: Paying attention to the amount of packaging and eco-labels.....	41

## **LIST OF TABLES**

Table 1: Reliability analysis using Cronbach Alpha .....	39
Table 2: Descriptive statistics – Environmental Concern .....	42
Table 3: Descriptive statistics – Buying Behaviour .....	42
Table 4: Descriptive statistics – Perceived Consumer Effectiveness .....	43
Table 5: Descriptive statistics – Perceived Personal Relevance.....	43
Table 6: Descriptive statistics – Environmental Knowledge.....	44
Table 7: Descriptive statistics – Consumer Scepticism.....	45
Table 8: Descriptive statistics – Price/Monetary Barriers .....	45
Table 9: Analysis summary .....	55

## **LIST OF APPENDIXES**

Appendix 1: Povzetek (Summary in the Slovene language) .....	1
Appendix 2: Research questionnaire on English language. ....	5
Appendix 3: Research questionnaire on Slovene language.....	12
Appendix 4: SPSS analysis output tables .....	19

## **LIST OF ABBREVIATIONS**

**ACC** – American Chemistry Council

**AMA** – American Marketing Association

**EC** – Environmental Concern

**ECCB** – Ecologically Conscious Consumer Behaviour

**EK** – Environmental Knowledge

**EU** – European Union

**KMO** – Kaiser-Meyer-Olkin

**NASA** – National Aeronautics and Space Administration

**NEP** – New Environmental Paradigm

**NGOs** – Non-governmental organizations

**NOAA** – National Oceanic and Atmospheric Administration

**OLS** – Ordinary Least Square

**PCE** – Perceived Consumer Effectiveness

**PPR** – Perceived Personal Relevance

**TBL** – Triple Bottom Line

**WRAP** – Waste & Resources Action Programme

## INTRODUCTION

Today there is a great debate about the issue of Global warming. The side effects of climate changes are visible more than ever. Based on an analysis by the National Aeronautics and Space Administration (hereinafter: NASA) and the National Oceanic and Atmospheric Administration (hereinafter: NOAA), 2016 was the third warmest year on record in a row and that is a continuous warming trend (Potter, Cabbage & McCarthy, 2017). Human factor has the biggest influence to the climate change. People are constantly increasing the emission of greenhouse gasses with activities such as deforestation, burning fossil fuels, biomass burning, decomposition of waste in landfills (Shaftel, n.d.).

The consumption of consumer goods has increased significantly over the last decade. This led to reduction in natural resources (Chen & Chai, 2010). Realizing the importance of this threat, most countries started their actions towards environmental protection which set the bases of “sustainable development” where minimization of negative impact on the environment is being promoted through eco innovation and green consumption. The first one is focusing on the creation of goods and services by incorporating environmental sustainability practices (Veleva & Ellenbecker, 2001). The latter is related to the consumption of such products and its aim is to make consumers to take into account the effect of products they buy on the environment (Moisander, 2007).

Green consumption is a priority today in many countries, that is why green markets are evolving. Sustainable consumption contributes to protecting natural resources but also has many other advantages such as improved economic benefits, reduced environmental concerns, improved wellbeing, healthy lifestyles and social responsibility (Maniatis, 2016).

Packaging waste is a serious problem the world is facing, starting from the production phase, where raw materials, water and energy are needed, usage and disposal. Legislation for recycling partly contributed to solving this problem, reaching recycling rate of around 65% of the total European Union (hereinafter: EU) packaging waste (Herbes, Beuthner & Ramme, 2018).

To date, researches have focused on how eco-friendly packaging<sup>1</sup> can be used in order to increase sustainability on packaging (Martinho, Pires, Portela & Fonseca, 2015). There is a relatively low number of research studies investigating the association among sustainable packaging and consumer behaviour regarding buying, using and post using, or the recycling phase of product packaging (Martinho et al., 2015).

---

<sup>1</sup> In this master’s thesis, terms “Environmentally friendly packaging”, “Environment-friendly packaging”, “Eco-friendly packaging” and shortly “Eco packaging” are going to be used interchangeably.

In addition, although the importance of packaging friendliness today is enormously rising, there is a poor research of the effectiveness of eco packaging on consumer buying behaviour for the Slovenian consumers. The **purpose** of this study is to contribute towards enriching the academic knowledge in this field and can be beneficial for marketers by presenting factors which drive the desired behaviour, and in that way influencing consumers' environmental mind-set and long-term behaviour.

The general **objective** of this thesis requires profiling the green consumer based on broader knowledge of their psychographic characteristics, recognition of most important packaging characteristics and consumer's preferences about them. **The main research question** is formulated as: what is the influence of eco packaging characteristics and consumer's perceptions of such green practices on their buying behaviour? In order to answer it, **additional research questions** are formulated:

- How packaging style attributes: material, colour, and eco-labelling impact consumer perceptions for eco packaged products and their buying behaviour?
- Which are the most influential barriers for buying eco packaged products?
- To what extent does the level of consumer scepticism towards eco-labels influence consumer buying behaviour?
- How are consumers' psychographic characteristics related with buying behaviour of eco packaged products?

For examining the topic of sustainable consumer buying behaviour, with an emphasis on eco packaging, reputable scientific studies were leveraged in chapter one, in order to create a clearer view of the sustainable marketing and its importance in the field of marketing. In the second chapter, the emphasis is put on eco packaging. Third chapter deals with the consumers and their buying behaviour. The empirical study is provided in chapter four, where the research methodology is explained, along with the results exposition and discussion. The concluding remarks are presented at the end of this paper.

## **1 SUSTAINABLE MARKETING**

Looking backwards, today we can differentiate three stages of marketing and all types of marketing are still present today, with different extent. Marketing 1.0 was present during the industrial age, which is also called product-centric era. Primary technology was industrial machinery. Products were standardized and produced massively, in order to be achieved lower costs, hence affordable to as many buyers as possible. The result of this strategy is Model T automobile by Hendry Ford. Consumer-oriented era 2.0 is characterized by information technology. Consumers have enough information available for any product and enough different products to choose from. Consumer needs differ between groups, so different products satisfy different consumer groups and marketers were trying to connect the products with the consumers emotionally. Today we live in the era of Marketing 3.0, or



values-driven era. Companies try to address the spirit fulfilment in their products, based on consumer need to contribute in living a better world and saving the world resources (Kotler, Kartajaya & Setiawan, 2010). Regardless of the type of product, nowadays it is becoming very important a new type of value to be developed. One which will not only focus on product quality, but also demonstrate its environmental performance (Environmental Resources Management, n.d.). The added value is seen in the increased benefit of a service or product (Bolton & Drew, 1991).

Increased consumer awareness for environmental threats, also contributed in companies' sustainability practices such as creating eco-friendly packaged products, enhancing the perceived value of their brands (Ng, Butt, Khong & Ong, 2014; Avcilara & Demirgünes, 2017). Sustainability as an ethical issue, with time became increasingly relevant in marketing and has emerged as a new marketing paradigm in the last few decades (Baldassarre & Campo, 2016). With the intention of defining and examining sustainable marketing, the concept of sustainability and its postulates are firstly presented.

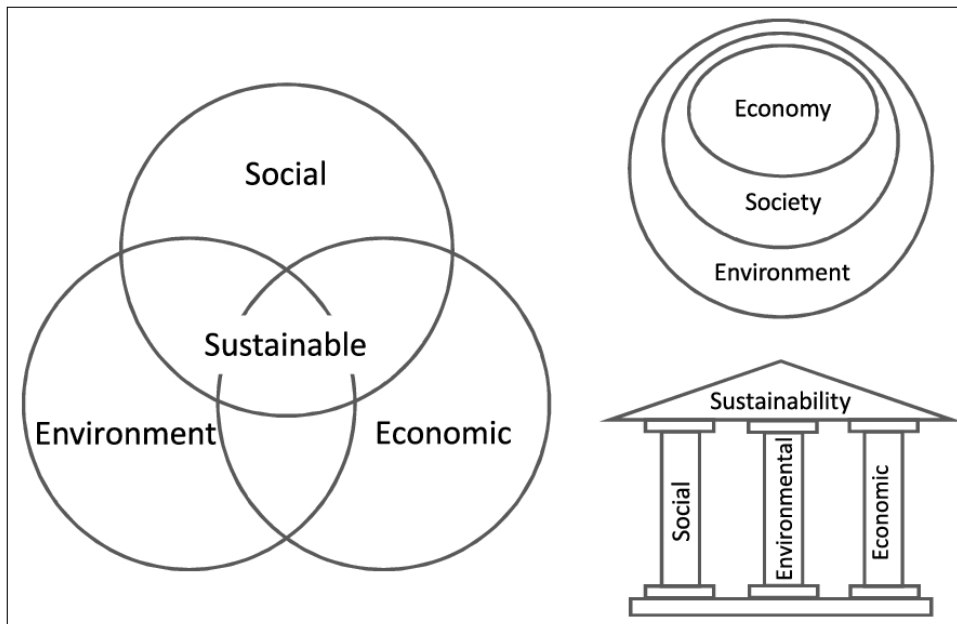
## **1.1 Sustainability**

“Sustainability” is a term that became very popular in recent years. It is socially constructed concept derived from scientific research findings, academic and political debate about environmental consequences from increased levels of production and consumption (Pawson, 2001).

The beginning of the idea about sustainability starts in 1955. Peter Drucker is one of the first scientists exploring this concept, indicating that each management action should benefit humanity (Drucker, 1955). Twenty years later he is also pointing out to the importance of the benefit for society produced by companies (Lunde, 2018). Sustainable consumption is defined as “consumption that simultaneously optimizes the environmental, social, and economic consequences of acquisition, use and disposition in order to meet the needs of both current and future generations” (Phipps et al., 2013, p.1227). Furthermore, Fuller (1999) also indicate the need of preserving the natural resources, which leads to increasing the focus on sustainable issues.

The framework of triple bottom line (hereinafter: TBL), or sustainability concept, was first proposed by John Elkington, a sustainability expert. Elkington (1994) states that sustainability encompasses the pillars from the triple bottom line. These interconnected pillars are also known in literature as dimensions (Stirling, 1999; Lehtonen, 2004; Moir & Carter, 2012), components (Zijp et al., 2015), aspects (Goodland, 1995; Tanguay, Rajaonson, Lefebvre & Lanoie, 2010) or perspectives (Arushanyan, Ekener & Moberg, 2017). They are graphically presented by three overlapping circles representing economy, environment and society all crossing through sustainability, as shown in Figure 1. An alternative representation is using nested concentric circles for three dimensions, or literally three independent pillars, as a base for sustainability (Purvis, Mao & Robinson, 2018).

*Figure 1: Three pillars of sustainability*



*Source: Purvis et al. (2018).*

Economic sustainability is focused on efficient and responsible usage of resources by business and countries, ensuring a business operation's profit and enduring sustainable activities (Circular Ecology, n.d.). The cost-benefit ratio of implementing sustainability practices in a company should always be estimated. On the long run, any sustainable practice should be profitable (Madu & Kuei, 2012).

The social aspect concerns human component and the focus is on social interactions, relationship and behavioural patterns (Dempsey, Bramley, Power & Brown, 2011). Its aim is continuously maintaining a good social well-being of an organisation, community or country (Circular Ecology, n.d.). Socially related product attributes include: child labour, safety working environment, comforting consumer needs and establishing a good communication between companies and society (Shao & Ünal, 2019). Every action in a company should be considered regarding the impact it would have on company's stakeholders. All parties involved should benefit from each company's action (Schroeder & DeNoble, 2014).

Environmental sustainability is focused on natural resources and points out to their right consumption, at a sustainable rate (Circular Ecology, n.d.). Minimising the ecological footprint is of the same importance today as the positive financial results of companies and entire environmental costs of company's operations should be accessed (Schroeder & DeNoble, 2014). In this context, companies should focus on minimising the use of energy or using renewable energy sources, recyclable materials, operation without damage to the environment, protecting the life quality of plants, animals and humans (Coskun & Kisacik, 2017).

## 1.2 Defining sustainable marketing

Providing a single definition of sustainability in marketing is rather a complicated task. The difficulty comes from the fact that there is lack of conceptualisation and theoretical clarification (Lunde, 2018). Fuller (1999) in his definition on this topic argue that in all of the strategic marketing processes, three rules should be followed: meeting consumer needs, achieving company's goals and performing processes suitable for the environment. Today the most commonly used definition for sustainability in marketing is the definition provided by the Brundtland Commission (Lunde, 2018). Brundtland Commission defines sustainable development as development that meets the needs of the present without compromising the ability of future generations to meet their own needs (Brundtland, 1987).

Lunde (2018), in his research review of marketing literature examines the evolution of theories used to frame sustainable marketing. Based on research about sustainability from more than twenty prominent marketing journals he is proposing a more comprehensive and consolidated definition, based on five assumptions:

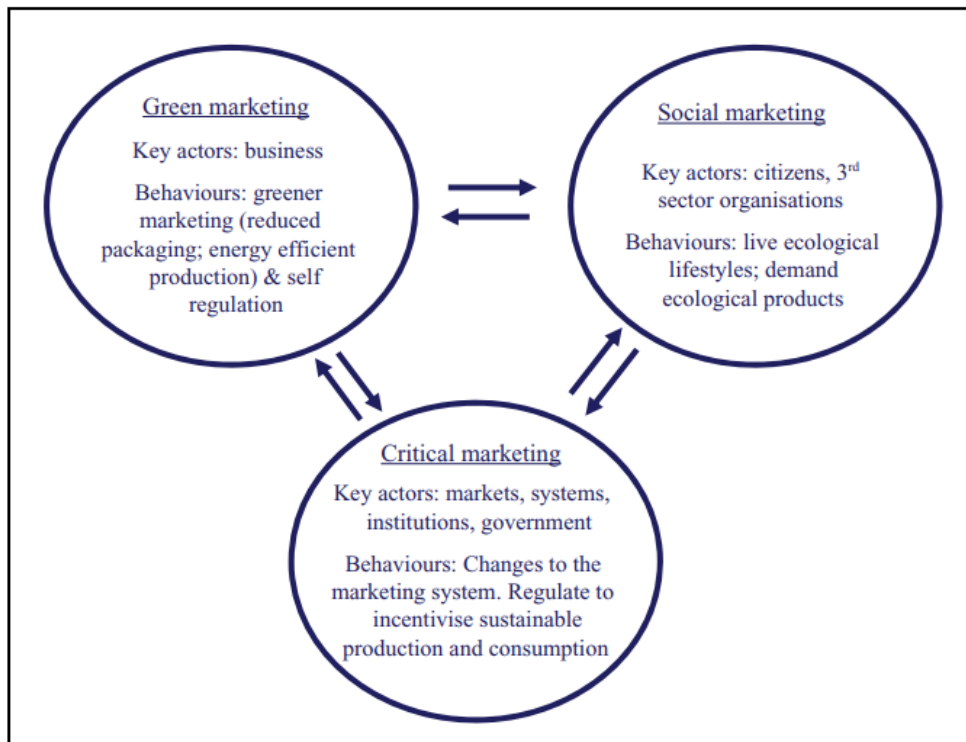
- Sustainable marketing is a globalised marketplace of value exchange.
- Humanity includes environmental responsibility in their behaviour.
- Companies employ sustainability related actions.
- Companies and consumers both accept more sustainable consumption.
- Consumers engage in improving their quality of life and well-being.

Although words “sustainable” and “green” are very often used interchangeably, they have a different meaning. Term “sustainable” estimates the implications products or services would have for a long term period, incorporating social and financial aspects. “Green” is assessing the environmental aspect of one specific product (Garrett, 2012). In the context of marketing, Gordon, Carrigan, and Hastings (2011) indicate that green marketing is one part of sustainable marketing, so sustainable marketing is obtained by three different forms:

- Green Marketing, meaning the development and marketing sustainable products and services and at the same time introducing sustainability efforts in company's processes.
- Social Marketing can be achieved by deploying the power of both aspects of marketing, long-term marketing strategies and tactical marketing operations in order to inspire sustainable behaviour.
- Critical Marketing, which focus is on leading the regulations and inspire sustainability related changes in marketing.

Figure 2 provides a graphical presentation of how sustainable marketing can be achieved through these three aspects of marketing. Each of the three elements are complementary and very often overlapping and all three must take a place to form a sustainable marketing activity. In other words, for achieving the goal of sustainable marketing, green marketing needs to be combined with other two elements (Gordon et al., 2011).

Figure 2: A framework of sustainable marketing



Source: Gordon et al. (2011).

### 1.3 Green marketing

Green marketing can be incorporated on each phase of product development with a goal of balancing companies' profit orientation with its environmental impact. "Green marketing is making use of commercial world and environmental factors with a goal of promoting sustainable products on the marketplace, but in broader view, it actually promotes sustainable development" (Gordon et al., 2011, p. 149). Green marketing is limiting adverse effects on sustainability by providing consumers a pleasant and acceptable sustainable options (Gordon et al., 2011). Terms "green" and "environmentally friendly" are used interchangeably (Pancer, McShane & Noseworthy, 2017).

The roots of green marketing lay in social and environmental concern (hereinafter: EC), starting during the 1960s and early 1970s (Peattie, 2001), integrating ecological issues in marketing strategy (Papadas, Avlonitis & Carrigan, 2017). It was introduced by the term ecological marketing (Fisk, 1974). Linking marketing and its negative impact on natural environment, the focus was on the most harmful industries such as chemicals, perceiving ecological issues as a constraint (Papadas et al., 2017). The characteristics of concern at that time were mainly focused on specific environmental problems, emphasizing pollution and resource depletion. It was connected with particular products and companies, reflected across narrow number of industries with relatively few consumers (Peattie, 2001).

Henion and Kinnear (1976) argue that ecological marketing was interested in actions for finding the sources of environmental issues or the ones that may assist in implementing a solution for it. During 1980s as consumers' awareness about environment was increasing, environmental or green marketing terms appeared in marketing literature (Prothero, 1998). Since 1990, consumer goods industries are affected by green marketing and today capturing environmental issues is a core competitive factor on the market place (Papadas et al., 2017).

Defining green marketing, using one definition only is impossible because of the fact that the term can be explained in different ways (Mishra & Sharma, 2010). Peattie (1995) defines it as a management action which is focused on identification and anticipation of consumers' needs, striving for their satisfaction. As stated by American Marketing Association (hereinafter: AMA), green marketing is about products that are environmentally safe, organic and are harmless for the environment (Mishra & Sharma, 2014).

More recent definition of green marketing is the definition on Kotler and Keller (2011), where they define green marketing as a commitment by a company to develop eco-friendlier products by using sustainable strategies. With emphasising the importance of green marketing to consumer, environmental influence of product's lifecycle can be minimised. Green marketing can be considered in five aspects and those are: purchasing, manufacturing, packaging, transport and distribution and waste disposal (Hart, 1995).

Mishra and Sharma (2014) argue that having limited available resources, marketers should focus on achieving companies' objectives using them efficiently. Of the same importance as companies pursuing a green marketing effort, are consumers. They have to adapt their behaviour to more sustainable choices, in this way adopting the indicated approach (Gordon et al., 2011).

Existing literature and studies show that environmental concern among consumers worldwide is growing in interest. Consumers are changing their behaviour, increasing their interest of more environment-friendly products. This all led to emerging of green marketing where socially responsible goods, which do not have a detrimental impact on the environment, are in its focus. This requires a company to implement changes from the production process, product and packaging modification and advertising (Mishra & Sharma, 2014). For companies, going green is a profitable opportunity for targeting a specific target group of environmentally conscious consumers which number has an increasing trend (Leonidou, Katsikeas & Morgan, 2013). According to Papadas, Avlonitis, Carrigan and Piha (2018), another reason for companies to go green is also because environmental strategy is an added value for organizations and on a long term it can lead to competitive advantage and high profitability.

With the increase of environmental concern, marketers and consumers are willing to switch over to green products and services. Going green and orientation towards green marketing is becoming essential even though it is expensive for both, consumers and business, but on

the long run it definitely pays off. Green marketing is addressing the environmental issues and its role is to build awareness between consumers of this issues and how they can help the environment by switching to green practices and lifestyle (Cherian & Jacob, 2012). Rex and Baumann (2007), state that including environmental aspect in marketing effort is the purpose of green marketing. Information regarding green characteristics for a specific product offered, will have a positive influence on consumers' purchasing decision. This will be a motive for companies to focus its production processes towards similar products.

Marketers should focus on creating innovative strategies which are going to contribute towards environmental well-being and at the same time be profitable for the company. Visionary marketers should recognize environmental issues as a room for satisfying the needs of a growing market segment of environmentally conscious consumers (Ranjan & Kushwaha, 2017). Green marketing is essential for sustainable development, combining ecology, industrialisation and human life (Handayani, 2017).

Papadas et al. (2018) state that companies are using green marketing practices in order to accomplishing its goals in sustainable business strategy, but the green marketing orientation is different for each company. Regarding the extent of green marketing practices applied, companies can fall in one of three groups:

- Strategic green marketing orientation, focused on corporate strategies and long-term actions, undertaken by the top management. They are oriented on current and future external stakeholders.
- Tactical green marketing activities which aim is to transform traditional marketing mix tactics into green marketing. It can be achieved through taking actions for improving environmental performance into the supply chain of a company, or product-related decisions such as using environmental friendly and recyclable packaging, or adoption of environmentally conscious pricing strategy.
- Internal green marketing orientation means changing internal company's culture. Managers take actions like employee training to promote and increase the level of environmental awareness. Such environmental values are shared within the company through different departments and marketed to its consumers.

Nagar (2015), concludes that companies using green marketing, more often look at the environmental concern as a strategic tool rather than short term, tactical tool. For more successful leveraging of green marketing, with a goal to achieve a competitive advantage, companies need to integrate the sustainability aspect in their entire marketing mix, including green advertising.

## **1.4 Green advertising**

Due to the increase of environmental concern during last few decades and consumer shift towards more sustainable behaviour, companies are trying to use this ongoing change and establish a competitive position. Using the potential of this marketing, companies shift to this type of advertising with a main goal to send a message about its products which are less harmful to the environment, in this way influencing consumer choices during purchasing (Cherian & Jacob, 2012). Green advertising is defined as claims that some product characteristic, or the way that product is produced have a positive influence on the environment (Chan, 2004).

Often, green advertising has created confusion among consumers by means of promoting false green behaviour of the company, in this way engaging in greenwashing practices (Gillespie, 2008). Mostly, firms are honest, but others tend to post difficult to understand product or manufacturing claims, in order to appeal to target consumers (Carlson, Grove, Kangun & Polonsky, 1996).

## **1.5 Greenwashing**

Increased consumers demand of green products, resulted in increasing the number of companies misleading consumers, thus leading to emerged condition known as “greenwashing” (Markham, Khare & Beckman, 2014). Greenwashing can be explained as using unsupported, deceptive information by a company to highlight reputational and environmentally responsible position on the market (Markham et al., 2014).

Magnier and Schoormans (2017) explain that informational messages and sustainability claims on packaging have to be understandable and to convey a clear message. When there is a manipulative aspect in sent messages or it seems not credible for the consumers, it might be seen as greenwashing. They interpret credibility as the level to which a consumer sees a claim as trustworthy. The same source (Magnier & Schoormans, 2017) defines greenwashing as using marketing tactics to point out to environmental pledges without a proof of actions. Lyon and Maxwell (2011) look at this concept as a “persuasion game” explaining that companies carefully choose which information to be presented, while deterring negative facts.

Gillespie (2008) points out to the most frequently used greenwashing practices, manifested by: packaging information using words with no clear signification or using green images which not necessary send a true message, promoting green products but the overall company work is not sustainable (e.g. contributes in pollution), posting irrelevant claims for only one unimportant attribute, using scientific jargon which is not understandable for the consumer, posting not proved claims, or totally fabricated claims or data.

Greenwashing can lead to consumer confusion regarding green claims (Chen & Chang, 2013). Consumer confusion is the inability to understand the product claim (Turnbull, Leek & Ying, 2000). When consumers realise they are exposed to uncertain and undesirable consequences, they perceive risk, which is an estimation related with possible negative results of wrong choices (Peter & Ryan, 1976). Anticipated risk indicates uncertainty in purchasing decision (Peter & Ryan, 1976; Mitchell, 1999) and that is why we can also say that perceived risk have a negative influence on behaviour (Pavlou, 2003).

In regard to trust in green marketing, it is seen as a precondition to establishing a market for green products (Nuttavuthisit & Thøgersen, 2017). Consumers are aware of these practices and even in the cases when companies are telling the truth, marketing managers have to face the challenge to deal with levels of scepticism about the perceptions of consumers and company's advertising strategy (Kalafatis, Pollard, East & Tsogas, 1999). In line with the above stated, companies need to face a dual challenge: to develop eco-friendly products with same or even better characteristics than a conventional product and the second is to create a positive consumer perception on eco-friendly advertising (Ng et al., 2014).

## **2 ECO-FRIENDLY PACKAGING**

With today's enormous number of products available, consumers are surrounded with many choices. Packaging on a retail level is seen as "salesman on the shelf" as it becomes the main way of communication with consumers (Rettie & Brewer, 2000).

Sustainable or environmentally friendly packaging is of greater interest today than regular packaging. Packaging is contributing in sustainability through promoting product protection, reducing waste and generating economic development. Several programs and initiatives like Sustainable Packaging Coalition in the United States of America, Sustainable Packaging Alliance in Australia, Waste & Resources Action Programme (hereinafter: WRAP) in the United Kingdom, show interest in sustainable packaging around the world (Martinho et al., 2015).

### **2.1 Role of product packaging**

Packaging is a communication device between companies and consumers and it serves for drawing consumers' attention. Consumers' general judgment of packaging is based on a few separate characteristics (Draskovic, Temperley & Pavicic, 2009). Packaging is important for a product's success, it has a strong influence on the decision of buying, as one third of the overall consumer perception about the product comes from packaging (Herbes et al., 2018). The role of packaging can be logistics or marketing. The first, logistical function is connected with product protection during distribution. Marketing perspective is connected with the communication role of packaging with consumers. It serves as a tool for promoting the product and to provide product information (Prendergast & Pitt, 1996). Lamb, Hair and



McDaniel (2012) explain that packaging has four marketing roles: product protection, promotion, helps in the usage phase and facilitates recycling.

Packaging serves for attracting consumer's attention, form and enhance brand image, gives value to a product and stimulates consumer buying behaviour. Among other packaging characteristics, packaging has to be attractive to consumers and to be economical in order to have a reasonable price. Packaging should be protective and not easily damaged, communicative, providing information, convenient allowing free and easy movement (Rita, Aiste & Laura, 2009).

The biggest drawback of packaging is the waste that it composes (Magnier & Schoormans, 2015). The fact that each European resident generated nearly 170 kg of packaging waste for the year 2016, demonstrates the influence of packaging on ecological inefficiency (Packaging waste statistics, 2019). One way of lowering this impact is with the usage of ecologically designed packaging (Esslinger, 2011).

## **2.2 Eco packaging**

Packaging, as the first way of interaction with the consumer, has a very important role in delivering information and creating perception about the product and the company. Eco-packaging is characterized by its packaging material, structure, its graphical or iconographic elements and its informational elements (Magnier & Crié, 2015). Studies that are investigating the role of packaging sustainability indicate that packaging design containing environmental features plays a significant role in buying behaviour (Rokka & Uusitalo, 2008).

Offering sustainable packaging companies meet consumers' expectations, but besides the environmental concern, companies benefit financial and strategic benefits of using such packaging products, as costs of production decrease as a result of more efficient production (Borgman, Mulder-Nijkamp & de Koeijer, 2018).

Capturing consumers' attention today requires more effort from producers than only paying attention to package colour, typography and graphics. Companies pay attention to packaging structure, size and shape (Thackston, Pham, Galvarino & Ouzts, 2011). The product itself is what the consumers are evaluating but quality judgement is largely influenced by product packaging. Product packaging also influences on creating brand preferences (Silayoi & Speece, 2007).

There are three different categories of eco-friendliness. The first one is governmental eco-friendliness which is connected with legalization. Scientific eco-friendliness is connected with the environmental impact of the product through its life cycle. The third is consumer category and it is connected with consumers' opinion about eco-friendliness (Boks & Stevels, 2007).

Recent studies show that for a packaging to be considered environment-friendly, there are more aspects, not only packaging recyclability which was a fundamental characteristic of environment-friendly packaging (Magnier & Schoormans, 2017). For a packaging to be eco-friendly it has to possess some of the three R's characteristics, reduce, reuse and recycle. An eco-friendly packaging can also be: biodegradable, compostable, made from recycled products, manufactured through low-impact means, made from faster-replenishing natural resources (Cameron, 2018).

Sustainable Packaging Coalition (2011) is defining sustainable packaging as packaging which:

- Is good for individuals and society.
- Have a cost-performance ratio with a positive value.
- Is produced using renewable energy.
- Leverage natural materials for production.
- Is produced using the most effective technologies.
- Is focused on efficient use of materials and energy.
- Can be utilized again in closed loop cycles (Definition of sustainable packaging, 2011).

As stated by Hansen (1986), packaging has three aspects of impacting buying behaviour. The first aspect is communication aspect, containing informational elements. Functionality is another aspect and it is related to product transportation as well as usage and storing. The third, environmental aspect is connected with after usage phase and describes packaging disposal.

Rettie and Brewer (2000), divide package design elements into visual (design, pictures) and verbal package elements (statements, explanations). Visual signals are easily noticeable and they serve for grabbing consumers' attention. Verbal claims are short, clear, direct and easy to understand messages. They are written with purpose to be read but are perceived as less trustworthy than visual elements (Obermiller & Spangenberg, 1998).

There are research studies which show that design elements (colour, shape, materials) influence consumers' evaluation (Schoormans & Robben, 1997; Magnier & Schoormans, 2017) and in order to be purchased, the package has to be categorised as sustainable by consumers, in this way triggering positive attitudes (Carrus, Passafaro & Bonnes, 2008; Koenig-Lewis et al., 2014; Meneses, 2010).

In order to understand consumers' evaluation of eco packaging, a comprehension of their evaluations is necessary (Magnier & Schoormans, 2017), but only a few number of studies focus on exploring the influence of packaging characteristics on buying behaviour (Magnier & Crie, 2015; Steenis, Van Herpen, van der Lans, Ligthart & van Trijp, 2017) showing that this packaging characteristics influence buying behavior to a great extent (Magnier & Crie, 2015; Rokka & Uusitalo, 2008).

## **2.3 Consumer understanding about eco packaging design**

Environmental friendliness of packaging has been studied based on three perspectives: environmental, economic and social (Magnier & Schoormans, 2017). Environmental aspect is focused on materials safety and performance characteristics and the method of production of such material (Roberge, 2017). Economic aspect represents the cost-benefit ratio of using environment-friendly materials (Eimpack, 2014). Social aspect means consumers' perceptions of packaging characteristics. Study of consumer's perceptions of environmental friendliness in packaging show that consumer's understanding and acceptance of eco packaging is crucial for choosing to buy that product, hence affecting the success of a product (Magnier & Schoormans, 2017).

Based on findings from previous studies, Herbes et al. (2018) sum up the results of consumers' understanding of "environmentally friendly" packaging and what it means for them. In general, consumers' understanding of the term "environmentally friendly" packaging is low environmental impact and low carbon footprint. They draw the conclusion based on different product attributes, grouped by phases, depending of where they appear during product life cycle:

- Phase 1 or resource extraction/material for consumers means minimising the use of packaging, especially on plastics and usage of recycled packaging material.
- Phase 2, production process and supply-chain management means using renewable energy sources.
- Phase 3, during use forms a perception of not harmful and safe to use packaging material.
- Phase 4 or post-use phase means recyclable, reusable, biodegradable or compostable material.

Packaging design is characterised by form, function and technology and environmental friendliness of a product is measured by style elements. Style elements for measuring eco-friendliness are packaging material, design elements and information messages on packaging. They all influence on the perception of packaging eco-friendliness for a particular product (Magnier & Schoormans, 2017).

### **2.3.1 Packaging material**

Consumers make sustainability judgements for packaging mainly based on packaging material (Lindh, Olsson & Williams, 2016). Innovative, sustainable packaging materials are emerging as substitutes for plastics. Some examples are ecologic paper bottles made from recycled newspapers, packages made from jute and recycled burlap bags, edible and biodegradable film as sustainable alternative to plastic film (Hunsberger, 2018). There is also a tendency of bypassing the packaging in shower products, producing solid shampoo bars, body wash, massage bars. It saves from production, transportation and disposal of plastic bottles (Can naked packaging clean up the environment, n.d.).

Another favourable approach towards eco packaging is bio based approach. It means producing a material such as bioplastics, derived from biomass. This kind of packaging material is produced from raw materials like corn, rice, soy which are readily available. The advantage of these materials is that they are renewable, often biodegradable and less toxic. This material is in high demand, especially for packaging industry (Herbes et al., 2018).

In cases where product packaging material is made of plant-based or recycled materials, it is easily recognisable by consumers as eco-friendly packaging. When this is not a case, graphical and textual elements have an important role in delivering this information (Magnier & Schoormans, 2017).

Previous study on packaging material and its connection with environmental friendliness by Lindh et al. (2016), suggest that paper based packaging material is seen as more environment-friendly than plastics. However, a study conducted by the Plastics Division of the American Chemistry Council (hereinafter: ACC) in 2018, stands in defense of plastics. The study of environmental effects of plastics compares analyzed material with a list of other materials and concluded that plastic packaging has lower impacts than substitute packaging for all evaluated impacts. Page report shows that plastics is more sustainable than other types of materials, measuring water and energy use, produced waste and other related relevant factors (Poole, n.d.).

### 2.3.2 Packaging design element - colour

Packaging colour, images and logos are part of design, or graphical elements of a package and they have to be chosen carefully (Magnier & Schoormans, 2017). Previous researches on this topic found a connection between eco-friendly packaged products and natural package design. This design is characterised by natural colours and images (landscape, plants, vines) and it is anticipated to be healthy, less chemical, high quality and expensive (Magnier & Schoormans, 2017).

Companies use different packaging colours to grab consumer's attention, to send a message and emphasize different moods. Colour is used by companies to differentiate their products from competitors' products (Zekiri & Hasani, 2015). Different colours symbolise different meanings, so consumers have some expectations about the colour of particular packaging (Keller, 2009). Previous findings show that green colour is perceived to be most likely connected to environmental friendliness. Except green, white colour is also linked to sustainability, signalling purity. Bright colours like red are less environment-friendly (Magnier & Schoormans, 2017). Another research finding, testing two variables on product

packaging- colour (green) and eco-label<sup>2</sup>, suggest that individual use of either of these cues separately, can have unfavourable effect on purchase intentions (Pancer et al., 2017).

### 2.3.3 Packaging information element - Eco-labels

Green marketing makes use of environmental claims on packaging which actually are statements put on packaging by the seller, carrying a message about the environmental impact (Scammon & Mayer, 1995). Packaging information elements are figures or text explicitly describing environmental claims (Magnier & Schoormans, 2017). Labelling is an extrinsic factor and guides consumers providing information for product category, product ingredients and product instructions (Zekiri & Hasani, 2015). Labelling function has four main objectives and those are: identifying a product or brand, grading the product, describe and promote the product. Today consumers pay more attention to labelling because they look for more information (Zekiri & Hasani, 2015). The quantity of green messages together with product type, and source credibility can influence on consumers' attitudes about a brand (Olen, Slotegraaf & Chandukala, 2014).

Studies about consumers' trust and credibility towards eco packaged products demonstrate that consumers see environmental claims as confusing and the level of trust appears to be low. Scepticism exists because of the greenwashing practices, where producers are making false green claims (Carrete, Castaño, Felix, Centeno & González, 2012).

The goal of using eco-labelling is to increase the awareness of green product attributes (Delafrooz, Taleghani & Nouri, 2014) and it also has informational role for consumers, displaying green benefits and certification for a specific product. They vary from international labels, EU eco-labels to privately sponsored and consumers are ready to pay more for a green product when an eco-label is attached on it (Maniatis, 2016).

Eco-label is characterised as an information, mainly utilizing logo, to send environmentally related message for consumers (Tang, Fryxell & Chow 2004). Eco-labels guide consumers and help them choose environmentally friendly products (Ranjan & Kushwaha, 2017) and that is why this information has to be clear and understandable for consumers (Magnier & Schoormans, 2017). Rex and Baumann (2007) describe that eco-labels nudge consumers for good helping them in their decision making, as it is easily accessible information on the environmental characteristics of a product. Products carrying an environmental claim have higher estimations for packaging friendliness (Magnier & Schoormans, 2017).

Eco-labels help in decreasing the gap among buyers and sellers by providing information of two aspects. First aspect is providing intangible quality. The second aspect is value, related to packaging recyclability (Sammer & Wüstenhagen, 2006).

---

<sup>2</sup> In this master's thesis, terms "Environmental claim", "Environmental label" and shortly "Eco-label", are going to be used interchangeably.

Research reveals that eco-labelling is a powerful way for achieving sustainable buying behaviour and on the other hand, the portion of a market on eco-labelled products is small in comparison of the total market. In the focus of recycling, consumers are more oriented on the end-of-life product packaging instead of paying attention on renewable origins (do Paco, Shiel & Alves, 2019). Another study shows that product label influence on purchased quantity. Consumers tend to purchase bigger quantity of a particular product if they find it as well-labelled product, denoting sustainability (Saeed et al., 2013). However, some studies do not show that purchasing occurs based on labels recognition (Leire & Thidell, 2005).

Consumer knowledge of eco-labelling and its influence on consumer intention for buying has been researched but conflicting results are found (Cherian & Jacob, 2012). Rashid (2009), has identified a positive relationship between consumers' awareness of eco-label and their purchase behaviour. In the same manner, another finding by Kuhn (1999), also shows that presenting sustainable marketing strategies through labeling will improve company's market share.

In contrary to this results, Leire and Thidell (2005), found that this proposition does not necessarily lead to green purchase intention. Bleda and Valente (2009), also state the negative relationship of eco-labeling and firm performance. The effectiveness of labels is not clear. Consumers have problems in recognizing eco-labels, in making a difference between these and regular labels and sometimes they do not understand the information provided (Joshi & Rahman, 2015).

Another study describes that consumers' reactions on information about sustainability differs depending of the level of environmental concern (Bamberg, 2003; Van Birgelen, Semeijn & Keicher, 2009). Consumers with high level of environmental concern, pay more attention on these information, compared with less environmentally concerned consumers (Matthes & Wonneberger, 2014). Thøgersen (2000) in one of his studies states that paying attention to environmental claims is not a goal in itself, but a useful tool in the intention of buying environment-friendly products. It means that it is less probable that a consumer would pay attention to eco-labels if there is no presence of environmental concern.

### **3 CONSUMER BUYING BEHAVIOUR**

Sustainability today is not only a well-known term. It is of great interest for governments, consumers and marketers as well. Obtaining sustainability practices among companies is highly connected with green consumer behaviour, reflected through some of the following activities: choosing recyclable products, avoiding over packaged goods, buying high quality products with ecological labelling, buying energy efficient products, consuming goods that do not contribute in pollution, do not damage the nature, avoiding excessive consumption, being aware of the social implications of each taken action, reducing every day energy and resources consumption (Do Paco et al., 2019).

Schiffman and Kanuk (1997, p. 648) define consumer behaviour as: “the behaviour that consumers display in searching for, purchasing, using, evaluating and disposing of products, services, and ideas”. According to the theory of metaneeds from Maslow (2013), in the purchasing behaviour, consumers are motivated by a series of needs. When they reach the basic need, they go after satisfaction of other needs, actually the metaneeds: learning, creativity, harmony or achieving environment-friendly status in the case of environmentally conscious consumers (Smith & Brower, 2012). In relation to eco-packaged products, this is not always a case (Moisander, 2007; Thøgersen, 2000). Thøgersen (1999) explains that the decision to buy happens when environmental characteristics are recognized and at the same time there is no additional important characteristic that affects the decision for buying. An example is given with a high product price, which can be an obstacle of buying although the environmental characteristics were recognized and are seen as favourable.

Similarly, Ottman and Books (1998), state that when a consumer identifies two products as equal, the decision for buying is made based on a sustainability characteristic. In another study on beverages, results present that unless it is for product taste and price, consumers are willing to exchange one feature for the feature of environmental friendliness (Van Birgelen et al., 2009).

Factors studied in terms of consumer buying behaviour can be divided in two groups, those who can be controlled by brand owners and those who cannot be controlled. The first group of factors are the 4Ps, product, price, place and promotion, whereas demographic, socio economic, cultural, geographical and psychological factors are uncontrollable factors (Vila & Ampuero, 2007). Another, more recent classification of these factors is done by Imiru (2017). He states that purchase decision or selection is influenced by three groups of factors: internal (knowledge, personality), external (culture, household) and marketing factors (product, package, promotion, distribution, service and price).

### **3.1 Green consumer**

In recent years, general public awareness and interest about the environment elevated and caused changes in consumer buying behaviour. Consumers not only tend to buy eco-friendlier products, but also expect that companies are working toward reducing their effect on the environment, and contributing in saving it (Gershoff & Frels, 2015).

Green consumerism started with increased consumer awareness about their right to get safe, eco-friendly product and today, people are concerned about sustainability related issues like never before (White, Hardisty & Habib, 2019). In the past, the consumer would buy whatever was produced. Today it is different. Consumers are smarter, have enough information available and want to do their best in order to support the sustainable development (Khan, 2017).

Because of the increased consciousness for environmental protection, consumers are more oriented toward green purchasing, which means buying more environment-friendly products (Chan, 2001). Green consumers are described as consumers who engage in environment-friendly consumer practices (Connolly & Prothero, 2008). Consumers labeled as green consumers are also known as socially conscious (Singh, 2009), mindful, or ethical consumers (Balderjahn, Peyer, Seegebarth, Wiedmann & Weber, 2018) and environmentally concerned behaviour is also known as eco-friendly behaviour or socially responsible behaviour.

That is why corporate strategies and marketing activities towards sustainability today, truly depend on consumers, who are seen as very important stakeholders. The emergence of green consumer was a key driver for green marketing (Elkington, 1994).

In the last few years, besides the fact that the number of consumers ready to buy green products has increased, when it comes to actions and the actual buying of green and sustainable products, the evidence shows low numbers. Market share of such products takes 1-3 % of the entire market (Bray, Johns & Killburn, 2011). Green products are very often avoided even by consumers with very high environmental consciousness. Their choice is based on ecological perspective and assessment of other product attitudes as well. Situational factors also have influence on the purchasing behaviour of green products (Rokka & Uusitalo, 2008).

### **3.2 Factors affecting green consumer buying behaviour**

Environmentally sustainable consumption is of interest for different industries. There are existing studies of this topic related with different product categories such as food, electricity, textile (Chan, 2001; Harrison, Newholm & Shaw, 2005; Kim & Choi, 2005; Vermeir & Verbeke, 2006; Vermeir & Verbeke, 2008; Hustvedt & Dickson, 2009; Lin, 2010; Lee, 2011; Ozaki, 2011; Ritch & Schröder, 2012; Wesley, Lee & Kim, 2012).

Existing literature on green marketing uses different variables for profiling green consumer, estimating cultural, geographic and socio-demographic attributes (Nair, 2015). Joshi and Rahman (2015) analysed more than fifty articles on green buying behaviour in attempt to identify propositions that affect consumer perceptions, buying intentions and actual buying of green products. They classified these propositions in two general groups:

- Individual factors are related specifically to the decision maker and those are: emotions, environmental concern, perceived consumer effectiveness (hereinafter: PCE), personal values (environmental, social, ethical) and norms, trust or belief about the environmental impact of green products, habits or changes in buying behaviour, perceived behavioural control or the capacity of a person to behave on a desired way.
- Situational factors consist of: product price, eco-labelling and certification informing consumers on eco friendliness of the product characteristics, product attributes and



quality, product availability and convenience in purchasing, subjective norm/social norm and reference groups, store related characteristics, brand image.

They found that the biggest drivers towards desired actual green purchase are consumer's environmental concern and knowledge together with product's practical and green attitudes. The biggest barriers towards actual purchase are high product prices and inconvenience during purchasing.

Literature findings of the impact of pro-environmental consumer attitudes on green purchasing reveal that there is a gap between "green movement" attitudes and green behaviour (do Paco et al., 2019). Identifying characteristics of eco consumers is of great interest among researchers of green marketing (Rex & Baumann, 2007; Sony & Ferguson, 2017; Narula & Desore, 2016), that is why various approaches for segmentation exist (Apaydin & Szczepaniak, 2017). Kotler and Keller (2005) classify these characteristics into four groups: geographic characteristics, demographic and socioeconomic characteristics, psychographic characteristics and behavioural variables or situational factors.

Many studies use sociodemographic characteristics for segmentation and studying of green consumers and the main reason is because those are easily available information and compared to other variables, it is relatively easy applying this kind of segmentation measures (Myers, 1996). But there is limited value using demographic characteristics for consumer segmentation process. That is why many researchers focus on studying psychographic characteristics for analyzing this group of consumers. They are better characteristics than demographic for explaining differences between consumer segments (Apaydin & Szczepaniak, 2017).

Consumers' perceptions about eco packaging and their buying behavior is influenced by their prior attitudes and beliefs. Consumers' reactions to product information differ based on their involvement with a given topic. That is why an understanding of consumer psychographic characteristics are needed. Literature findings on packaging prove that psycho-sociological characteristics are the most important and the most relevant when analysing green consumers (Magnier & Crié, 2015).

Some authors (Harrison et al., 2005; Lindenberg & Steg, 2007; Vermeir & Verbeke, 2008; Lin, 2010) have identified consumer groups with strong environmental characteristics and suggest that it is better to target a specific group of consumers for promoting environment-friendly products, instead to all consumers. Vermeir and Verbeke (2008) state that it is very important for targeting young people because of the reason that they are in the phase of developing their attitudes and beliefs, so that they can build positive attitude about this and express it via every day product choice. Oppositely of this, Kang, Liu and Kim (2013), argue that targeting specific groups of consumers is a wrong tactic. They state that marketers should promote it to the general public in order to achieve profit maximization.

Study on consumer demographic characteristics from 1900s shows that people with positive green attitudes are older females who are better educated, with high incomes. Least green oriented were young males who are less educated (Levin, 1990). Another study of environmentally conscious consumer behaviour by Zabkar and Hosta (2013) also showed bigger participation of educated women with high incomes in being more environmentally friendly oriented group of consumers.

### 3.2.1 Environmental concern

Environmental concern is defined as positive attitudes about sustainability (Bickart & Ruth, 2012). Environmental concern is expressed via attitudes but also through actual behaviour and the consequences of each consumer action (Fransson & Gärling, 1999). Dunlap and Jones (2002) explain that EC is the level of which people are attentive to environmental problems and possible solutions. Grunert and Juhl (1995), argue that consumers are aware that every step from a product lifecycle like production process, transport, use and disposal leads to costs. They evaluate this costs negatively and with their behaviour they try to influence on minimising them.

Many studies on consumer behaviour explain that consumers with higher level of environmental concern are more likely to engage in ecologically conscious consumer behaviour (hereinafter: ECCB), but in reality there is poor attitude-behaviour consistency (Roberts & Bacon, 1997), which means that beside the fact that consumers have high levels of environmental concern, they do not always choose that option when buying (Vermeir & Verbeke, 2008). Butler and Francis (1997) confirm the same conclusion in their research on apparel purchasing behaviour. This attitude-intention gap has been studied by many authors trying to identify green consumer's characteristics (Butler & Francis, 1997; Kim & Damhorst, 1998; Vermeir & Verbeke, 2006; Ritch & Schröder, 2012).

Stern (1992) in his review of how psychology can play a role in addressing environmental concerns establish four value orientations, ranging from very specific to general environmental concern. The first one, also called the New Environmental Paradigm (hereinafter: NEP) represents new believes. This group investigates the existence of general perception about society and the environment, instead of focusing only on very specific topics (Roberts & Bacon, 1997). In the second group EC is connected to anthropocentric altruism, where the safety and health of consumers is the main concern, because of the believes that damage to environment means treat to human lives. In this case people take care of the environment because it directly influences on their lives. Third value orientation is about self-interest and personal threats caused from the environment, which is an important factor underlining environment-friendly behaviour. According to last value, he assumes that EC is a result of some deeper cause like religion, or post-materialistic values.

Follows and Jobber in their study (2000) indicate that when consumers are purchasing green products they make a compensation between environmental concern and attributes of the

product. Eco-friendlier oriented consumers with high environmental concern and social consequences are looking for products with green characteristics, but do not always result in buying it. This also highlights the attitude-behavior gap. On the other hand, they found that those consumers which are attached more to individual consequences seek for functional attributes of the product and regardless of the level of their EC they do not manifest green buying behaviour.

In general, the literature proposes that concern for the environment is manifested by purchasing behaviour. This is shown in a research on renewable energy, where the positive relationship between EC and consumer's willingness to pay more for it is confirmed (Bang, Ellinger, Hadjimarcou & Traichal, 2000). Zabkar and Hosta (2013), studying the gap between environmentally conscious consumer and willingness to act, also found a positive relationship between EC and willingness to behave in the desired way. They also add that besides high levels of EC, information about environmental effect strengthens this positive relationship.

However, there are also studies who analyse this gap and conclude that this relation is low to moderate. (Hines, Hungerford & Tomera, 1987; Bamberg, 2003). In a study by Nittala (2014), done with educated consumers in India found that there is not a significant relationship between EC and willingness to purchase environmental friendly products.

### 3.2.2 Environmental knowledge

Literature on green consumer behaviour shows that knowledge is one of the most influential factors towards desired behaviour (Joshi & Rahman, 2015). Many authors conclude that green consumer behaviour highly depends from consumer education of this topic. Nittala (2014) states that consumers with higher levels of environmental knowledge (hereinafter: EK) are more socially responsible. She states that consumers who are more educated about this topic are more willing to change their behaviour, that is why marketers should provide more information to consumers. Knowledge as an important factor, is present in all the phases of the consumer decision making process. It guides consumers towards sustainable consumption, but also can contribute in permanent changes in their attitudes and behaviour (Bator & Cialdini, 2000).

Fryxell and Lo (2003) explain that EK is a generic knowledge of natural ecosystem processes and the association between its components. Schahn and Holzer (1990) differentiate between abstract and concrete EK. Abstract knowledge is oriented to very specific issues like problems, causes, solutions, whereas concrete knowledge is behavioural knowledge that can be changed. Rolston and Di Benedetto (1994) suggest for using abstract environmental knowledge over factual because it is very difficult to measure the effect on the environment from only one product and even experts cannot agree on that.

Previous researches have focused on general EK when exploring its impact on sustainable consumption, meaning that knowledge has been regarded as a broad concept consisting of knowledge related to energy saving, renewable energy, recycling, pollution (Chan, 2001; Lee, 2011). As reported by the literature studies, consumers lack EK about the idea of sustainability (Lindh et al., 2016; Nordin & Selke, 2010; Steenis et al., 2017).

Philippe and Ngobo (1999) differ between two groups of consumer EK, familiarity and product knowledge. Familiarity means collected experience from consumption and product knowledge is accumulated product class information and rules. Another knowledge classification is made by Schahn and Holzer (1990). They talk about knowledge about facts, referring definitions, causes and results of environmental related problems. The second is action-related knowledge which indicate information about possible behaviour, which is more likely to affect consumers on participating in certain green behaviour.

McEachern and Warnaby (2008) confirm the positive relation between this variable and buying behaviour, exploring consumers' knowledge of eco-labelled food products. In the same manner, Goh and Balaji (2016), also discovered that customers with higher levels of EK are more likely to buy environmental friendly products. Lin (2009) in his study about consumers' willingness to buy organic cotton found that consumers who have a better understanding of the natural systems either previously owned organic cotton products or were more likely to buy it in the future. They further conclude that except for this specific product, they are more likely to buy other green products and are ready to pay higher prices for them.

Most studies show that consumers' EK has a positive effect on their actual purchasing of green products (Joshi & Rahman, 2015). Conversely, lack of EK act as a barrier for consumers to buy such products (Tanner & Wölfling Kast, 2003). However, there are also studies that show a weak relationship between these two factors (Bang et al., 2000; Wolsink, 2007). A possible reason for this would be that consumers have basic social and environmental knowledge, which is not enough for motivating them towards sustainable consumption practices (Joshi & Rahman, 2015).

Consumers with greater levels of EK tend to show more interest and concern for the environment, compared to consumers with lower environmental knowledge and higher levels of concern lead consumers during purchase choices. It makes consumers consider the environmental features of a product (Kim & Damhorst, 1998). Ellen, Wiener and Cobb-Walgren (1991), also argue that stronger EK influence on perceived consumer effectiveness. More environmentally educated consumers feel that their individual environmental act is working in favour of reducing environmental problems, when compared to consumers who are less educated on this topic.

### 3.2.3 Perceived consumer effectiveness

Perceived consumer effectiveness is defined as a “domain-specific belief that the efforts of an individual can make a difference in the solution to a problem” (Ellen et al., 1991, p. 103). Ellen et al. (1991), argue that PCE is a different factor from environmental concern or attitudes and has its influence on environmentally conscious behaviour. They also state that consumers’ concern on environmental issues might not necessarily means green purchase, but when they have a strong believe that their behaviour is the right one, are more likely to engage in such behaviour. The same source state that PCE is limited to specific and concrete actions, arguing that if somebody believes that a certain issue can be solved by taking some action, this believe will motivate them to take that action.

Roberts (1996) also states that when people feel that they can be very effective in saving the environment with their specific action, they will show more concern for the environment, doing that action. PCE is a significant predictor for sustainable behaviour because consumers are more likely to engage in buying sustainable products when they think that it would have a positive difference.

Many studies indicate that PCE positively affects green purchase intention (Gleim, Smith, Andrews & Cronin, 2013; Gupta & Ogden, 2009). Vermeir and Verbeke (2008), also point out that consumers who believe that their own behaviour of buying sustainable products would have a positive influence on the environment, are more likely to buy sustainable products.

Apaydin and Szczepaniak (2017), analysing the profile and purchase intentions of green consumers confirm the positive relationship among PCE and buying behaviour, because of what suggest that companies should provide an encouraging feedback to their consumers. PCE is also a very motivating factor for expressing positive attitudes with actual purchasing behaviour (Vermeir & Verbeke, 2008).

Consumers’ perceived effectiveness is influenced through communication efforts provision of information (Vermeir & Verbeke, 2006). Lord and Putrevu (1998), studied the influence of positively and negatively stated claims and show that consumers with high levels of PCE are more likely to be responsive to messages. Especially to negatively stated claims.

Kim and Choi (2005) found another important factor that affects high levels of PCE and that is the collectivistic factor which also stimulates sustainable choices in the process of choosing for buying. Thus, consumers believe that each individual green behavior is part of a group of other people who are also believed to act in the same desired manner (Kim & Choi, 2005). But sometimes consumers find it hard to anticipate how their behavior influence others (Culiberg & Bajde, 2013). It is very likely that consumers very often feel that a single purchase of green product or the purchases of any one individual, does not make a difference or impact of the environment (Gleim et al., 2013).

### 3.2.4 Perceived personal relevance

Perceived personal relevance (hereinafter: PPR) is described as a personal postulate that a particular behaviour is related to personal interest and in line with own lifestyle habits (Celsi, Chow, Olson & Walker, 1992). Human's consumption patterns are influenced by their perceptions and evaluations about themselves. People buy products that are in compatibility with their identity, social status, and values (Belk, 1988). When consumers examine that a certain action is relevant for them, they are more motivated to engage in that action (McQuarrie & Munson, 1992).

The literature on green behaviour also theorize that when an individual consumer believes that when buying a green product is of their personal relevance, they build positive attitudes and are more willing to buy that product (Kang et al., 2013). Kang et al. (2013), in their research on buying sustainable clothes found that the role of PPR is an important factor of green behaviour. When a consumer sees that a certain behavioural action is important to their life, is more likely to behave positively towards that action.

Similarly, Hustvedt and Dickson (2009), explored US consumers and their approach towards organic clothes. They found that consumers were highly motivated by beneficial outcomes for themselves, environment and the organic industry, but the green behaviour benefited especially from the believe that organic products are good for their health. Specifically, the health related item "improving my health or the health of my family" was significant for both groups of consumers, more interested in buying organic cotton and less interested group of consumers.

When it comes to food packaging, it is a crucial factor for a product to be stored on different temperatures, to extend the shelf life and safeguard the food. Plastics has been chosen very often as a primary food packaging, but it has been shown that it can contaminate stored food or beverage (Fasano, Bono-Blay, Cirillo, Montuori & Lacorte, 2012). Hazardous chemicals that are present in plastics and other materials, can leach into food and from there into human bodies, causing different diseases (Food contact materials and chemical contamination, 2016).

The impact of chemicals in plastics food containers has been studied in both animals and humans. The health effects vary from inconclusive to disturbing, depending on the type of plastic polymer. Most of the plastic wraps are made from polycarbonate plastics, carrying some compounds which can leak into the food and drinks they're holding (Belluz & Viswanathan, 2018). Results from a study done by Katz (2018) reveal that 90 % of bottled water from famous brands was contaminated with micro plastics. This is an emerging field of scientific research of micro plastics exposure and its effect on human health. Currently, there is not a regulatory oversight on plastic packaging industry and it is up to consumers to decide on their exposures to the chemicals in plastics (Belluz & Viswanathan, 2018).

### 3.2.5 Consumer scepticism

Consumer scepticism or “the tendency towards disbelief of advertising claims” is attracting great interest in academic research (Obermiller & Spangenberg, 1998, p. 160). Scepticism towards environmental claims and consumers’ negative reaction to green marketing is because of false, unsubstantiated or exaggerated claims (Mostafa, 2009). Davis (1991) claims that terms such as “biodegradable” or “recyclable” are adopted by managers to indicate some product benefits which actually are not true or proven.

Although information today is less confusing and more consistent, the variety of labels is still confusing rather than informative for consumers (do Paco & Reis, 2012). This difficulty in the recognition of true claims is creating a generalized scepticism for green marketing (Carlson et al., 1996). Scepticism comes as a result of consumers’ knowledge and differs depending on the communication content and context (Mohr, Eroğlu & Ellen, 1998). D’souza and Taghian (2005), concluded that consumers with higher levels of EC do not perceive green advertising as convincing, but just overstating the information.

Existing studies provide contradicting results on sceptical consumers and their willingness on further exploring their doubts. Leonidou and Skarmeas (2017), claim that sceptical consumers are willing to look for additional information that will contradict or confirm their doubts. In contrary, Goh and Balaji (2016), state that in order to make a decision, sceptical customers may not need additional information, but this would depend on their level of EK and EC.

Both, environmental knowledge and concern are very often mentioned as crucial factors which either influence or are influenced by green scepticism. At the same time, there is a disagreement in the literature regarding the way by which green scepticism affects green buying behaviour (Goh & Balaji, 2016). In most researches, environmental concern is identified as a predictor of green buying behaviour (Hartmann & Apaolaza-Ibanez, 2010; Newton, Tsarenko, Ferraro & Sands, 2015). Prior literature on environmental knowledge suggest that knowledge positively influence on consumer beliefs and attitudes towards green behaviour (Mostafa, 2006; Suki, 2013). In terms of scepticism, Goh and Balaji (2016), state that green scepticism negatively affects EK and EC which have a negative impact on green buying behaviour.

Furlow (2010), found an opposite relationship where environmental knowledge is a reason for consumer’s scepticism toward green advertising. He explains that this is because of the fact that it is a complex issue, which is changing constantly, making a confusion among consumers. In the same way, Carlson, Grove and Kangun (1993), point out that one of the reasons for consumer suspicion and confusion is consumer lack of knowledge of understanding environmental claims.

Do Paco and Reis (2012) studied factors that influence scepticism towards green advertising and discovered that consumers with higher EC are more sceptical regarding green

communication. These results match the findings from a previous research of D'Souza and Taghian's (2004) where they discovered that this group of consumers with high EC do not find green advertising enough credible for them.

Bonini, and Oppenheim (2008) found that except consumers' lack of knowledge, negative attitudes, high skepticism and low accessibility, high product prices are the biggest barrier for not purchasing environmentally friendly products.

### 3.2.6 Price/monetary barriers

Consumers see price as a crucial factor for purchasing behaviour (Magnusson, Arvola, Koivisto Hursti, Åberg & Sjöden, 2001). Most of eco products are priced higher prices than regular, making them too costly for many consumers (Connell, 2010). Many other factors act as barriers of buying green products, increasing the attitude-behaviour gap, but higher prices are very powerful barrier. Companies usually charge superior prices were at the same time consumers are price sensitive (Joshi & Rahman, 2015).

The strongest influence of consumers' decision making on green consumption are economic costs (Lynn & Oldenquist, 1986; Osterhus, 1997). Economic factor is not just the price, it includes the time and effort needed for product search and evaluation. For a positive green behaviour, perceived benefits must be greater that costs for that product or service (Geller, 1992). In general, consumers are reluctant in conducting extensive information search (Petty & Cacioppo, 1984). Price has the biggest impact and if consumers feel that green product is priced too high, it is likely that the green consumption is impeded (Kavilanz, 2008; Gleim et al., 2013).

Vermeir and Verbeke (2006), examined the attitude-behaviour gap of green behaviour and found that although consumers have a positive attitude, when it comes to actual buying they are restricted from available budget. Gleim et al. (2013) studied barriers of green consumption and found that high price of eco products was a significant negative factor. Another study of attitudes toward organic food among Swedish consumers, shows that the most important impediment for buying organic food was products' premium prices (Magnusson et al., 2001).

Consumers make the final choice by deciding if the product is worth for buying, but very often they avoid buying them because of this reason. The importance of each barrier is different for different products, industry and location. But awareness and perceptions are predecessors of product price. On the other side, there are consumers who believe that some green products are worth paying the premium price, although their number varies across countries (Bonini & Oppenheim, 2008). A survey in China, concludes that half of the participants were not willing to pay more for green products, one third of them are ready to pay 5% more money and the percentage of those who would pay more is decreasing (Xue et al., 2010).



Here we conclude the literature review, where a detailed analysis was done on packaging characteristics, consumer psychographic characteristics, consumer scepticism and product price/monetary barriers and continues further with the empirical part of this study. The theoretical part will serve as a base for the research of the effect of eco packaging on consumer buying behaviour in Slovenia.

## **4 EMPIRICAL STUDY ON CONSUMER BEHAVIOUR TOWARDS ECO-PACKAGED PRODUCTS**

In this section the empirical part of the research is presented. At the beginning research purpose and research questions are presented. Then, building up from the literature review, a conceptual research model is presented followed by presenting research hypotheses which are going to be tested and answered in next subchapters. Research design and methodology are next described, followed by sampling design and procedures and data collection. Next, data analysis is presented by the following order: respondent profile, reliability testing, descriptive statistics, hypothesis testing and additional analysis. The chapter further includes discussion of the results, managerial implications and concludes with limitations and recommendations for further research.

### **4.1 Purpose and objectives of the research**

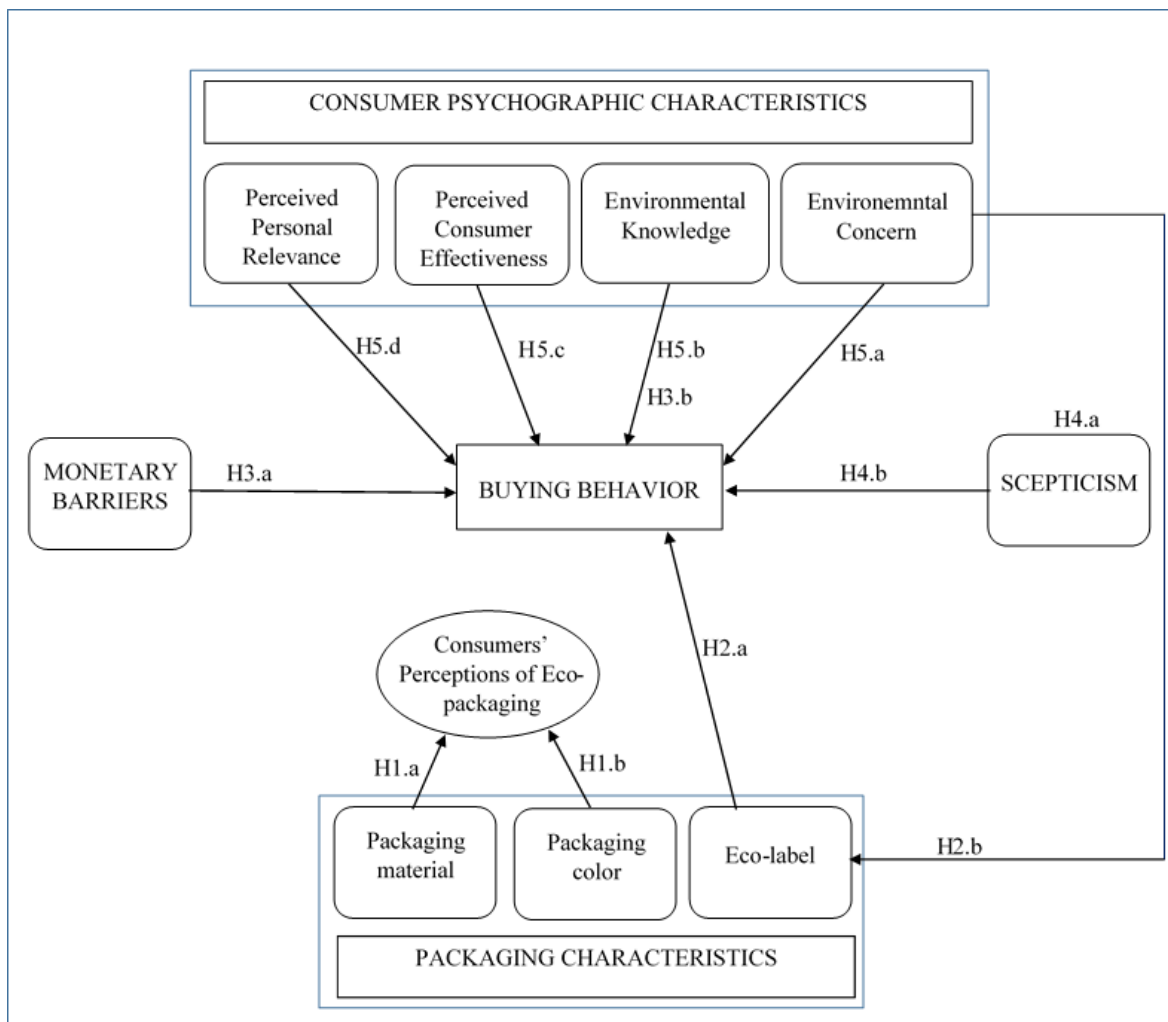
The purpose of this research is to draw attention to eco packaged products, as a green marketing practice and explore their influence on consumer buying behaviour. Furthermore, this research aims to identify the influence of consumer psychographic characteristics and perceptions on green buying behaviour among Slovenian consumers. The **main research question** is stated as: what is the influence of eco packaging characteristics and consumer's perceptions of such green practices on their buying behaviour? In order to give an answer to this question more precise **research questions** are formulated:

- How packaging style attributes: material, colour, and eco-labelling impact consumer perceptions for eco packaged products and their buying behaviour?
- Which are the most influential barriers for buying eco packaged products?
- To what extent does the level of consumer scepticism towards eco-labels influence consumers buying behaviour?
- How are consumers' psychographic characteristics related with buying behaviour of eco packaged products?

## 4.2 Proposed research model

In order to expand the existing knowledge on consumer green buying behaviour of eco packaged products, a new model is proposed, integrating the attitude-intention framework with concepts related to consumer and packaging characteristics which influence the decision of purchasing eco packaged products. Proposed research model scheme is based on the theory of planned behaviour by Ajzen (1985). Following this proposition, where the main focus is on the actual buying, four key concepts are included in the proposed model: (1) consumer psychographic characteristics, (2) packaging characteristics, (3) monetary barriers and (4) scepticism. The proposed research model is presented in Figure 3. Based on the prevalent findings from previous studies, this master's thesis proposes five main hypotheses, which are presented in the next subchapter.

Figure 3: Proposed research model



Source: Own work.

### **4.3 Research hypotheses**

The main hypotheses are related to topics reviewed: eco packaging characteristics, consumer psychographic characteristics, the concept of consumer scepticism and barriers for buying eco-friendly packaged products.

Packaging design consists of structural (materials), graphical (colour) and verbal (explanatory) components. Studies that focus on exploring consumer's perceptions of packaging eco friendliness point out that consumers make their judgements mainly based on packaging material (Lindh et al., 2016; Lindh, Williams, Olsson & Wikström, 2016; Magnier & Crié, 2015; Van Dam, 1996). In a study of preferred eco packaging material, plastic and mixed material containers, were considered as not sustainable by consumers (Steenis et al., 2017). Another recent study by Magnier and Schoormans (2017), points out that organic materials like paper and fiber-based materials are identified to be more sustainable than plastics. That is why, the first hypothesis is stated as:

#### **H1.a Paper packaging material is significantly associated with eco packaging.**

Packaging elements should be combined in a way that they attract consumers to buy a particular product (McNeal & Ji, 2003). Colour plays an important role and has been studied by many authors (Ampuero & Vila, 2006; Hutchings, 2003; Marshall, Stuart & Bell, 2006; Silayoi & Speece, 2007). Green colour has always been associated with nature-related concepts (Lichtenfeld, Elliot, Maier & Pekrun, 2012) and sustainability (Hoogland, de Boer & Boersema, 2007; Magnier & Schoormans, 2015; Pancer et al., 2017). Naz and Epps (2004) also suggest of the correlation between colour green and nature. Labrecque, Patrick and Milne (2013) say that the colour green has been used very often to denote environmental friendliness. As this colour has been attached to environmental responsibility, environmentally related thoughts can be triggered by colour green (Pancer et al., 2017). Based on the conclusions from existing studies, we propose that green colour is perceived to be most likely connected to eco packaging, hence following hypothesis is developed:

#### **H1.b The green packaging colour is significantly associated with eco packaging.**

This study proposes that consumer behaviour of purchasing environmentally friendly products is influenced by environment-friendly claims (eco-labels) on packaging. Support for this relationship can be found in literature, or studies exploring this relationship (D'Souza & Taghian, 2005; Rashid, 2009; Whitson & Henry, 1996). Nik Abdul Rashid (2009) found that awareness about eco-label positively impacts consumer's intention to purchase. Similarly, Cho (2015) discovers that the presence of an eco-label on a package influences consumers' product evaluations in terms of buying intention and willingness to pay. Some authors point out that this topic should be further explored (D'Souza & Taghian, 2005). Thus, we can conclude that:

## **H2.a Paying attention to environmental claims (eco-labels) is positively related to buying behaviour of eco packaged products.**

Very often consumers fail in recognizing environmental labels on packaging and the main reason for it is the packaging design (Jacoby, 1984). It is more likely an environmental label to be noticed by a consumer if he/she is more concerned in protecting the environment and believes that buying eco products is one way of achieving this goal, protecting the environment (Stern, Dietz, Abel, Guagnano & Kalof, 1999). Newton et al. (2015) also showed that customers with high level of environmental concern are more conscious of environmental claims on green products and also were more involved in looking for additional information to help them in their purchase decision. It is hypothesizing as follows:

## **H2.b Consumers with high levels of environmental concern, pay more attention to environmental claims (eco-labels).**

For many consumers, product price is an important determinant of purchase. Studies provide conclusions that although consumers would be highly motivated to buy a green product, high price is very often a barrier (Lockie, Lyons, Lawrence & Mummery, 2002). Many studies point out that product price is one of the factors contributing to the attitudes-behavioural gap and that it acts as a barrier for purchasing eco-friendly products (Connell, 2010; Gleim et al., 2013; Padel & Foster, 2005). Another study concludes that environmental knowledge is a crucial determinant for a consumer to choose whether to buy or not an eco-friendly good (Khare, Nema & Baredar, 2013). Most researchers agree that any environmental behaviour truly depends on this characteristic (Kollmuss & Agyeman, 2002) and it prevents them to act in the proper way (Kempton, Boster & Hartley, 1996).

## **H3.a Price/monetary barriers are negatively related to buying behaviour of eco packaged products.**

## **H3.b Lack of environmental knowledge is negatively related to buying behaviour of eco packaged products.**

Scepticism is explained as a doubt towards green claims (Mohr et al., 1998). There is considerable evidence to suggest that skepticism is due to fake and unsupported statements on product packaging (Carlson et al., 1993). Schwartz and Miller (1991) also state that lack of trust and scepticism are contributors to ineffectiveness in eco-labeling as a green marketing tool. In a study of Chase and Smith (1992), more than a half of the participants stated that they do not find environmental advertisements as credible sources. Calfee and Ringold (1988) explain that people are skeptical by default, except they have strong proofs to believe in it. Hughner, McDonagh, Prothero, Shultz and Stanton (2007) found that scepticism is a big restraint for buying organic food. Leonidou and Skarmas (2017) explored the precedents and consequences of green scepticism and found that it is negatively related to future purchase intentions. Thus, it is hypothesized as follows:

#### **H4.a Consumers are skeptical towards environmental claims (eco-labels) on packaging.**

Out of the 53 studies review by Joshi and Rahman (2015), six articles are observing the influence of scepticism or trust in environment-friendly claims (eco-labels) on consumer green purchase behaviour. Common thing from these studies is the conclusion that high levels of skepticism was a significant impediment for buying eco products (Bang et al., 2000; Fotopoulos & Krystallis, 2002; Gupta & Ogden, 2009). Tung, Shih, Wei and Chen (2012) state that consumers have low trust in products marked as “organic”. Vermeir and Verbeke (2005) came to the same conclusion that consumers with higher levels of confident are more likely to purchase green products. Consumers will rely their decision for buying based on eco-labels only if they trust them (Hansen & Kull, 1994). Based on the above considerations, we propose:

#### **H4.b Scepticism towards environmental claims on packaging (eco-labels) is negatively related to buying behaviour of eco packaged products.**

Existing literature suggests that environmental concern is essential for explaining green buying behaviour (Dunlap & Van Liere, 1978). Prior studies on factors influencing green purchase behaviour suggest that consumers’ concern for environmental issues has a strong impact on purchasing environmentally friendly products (Kim & Choi 2005; Mostafa, 2006) and it also has a positive effect on other sustainable actions such as adopting renewal energy or fictitious green energy brand (Bang et al., 2000; Hartmann & Apaolaza-Ibanez, 2010). Thus, we propose that environmental concern determines green buying behaviour, or:

#### **H5.a Environmental concern is positively related to buying behaviour of eco packaged products.**

Environmental knowledge is one of the most studied variables of green buying behaviour (Joshi & Rahman, 2015) and many studies reveal that it positively influences both, intention and actual buying of these products (Eze & Ndubisi, 2013; de Barcellos, Krystallis, de Melo Saab, Kügler & Grunert, 2011). Literature studies of green buying behaviour show that EK is an influential variable that positively affects this behaviour (Wang, Liu & Qi, 2014; Mostafa, 2009). It can be explained that higher levels of EK mean that consumers have more information which guide them to buy more green products and in this way behave more sustainably (Lee, Choi, Youn & Lee, 2012; Mahesh & Ganapathi, 2012). As a consequence of this, we hypothesize that:

#### **H5.b Environmental knowledge is positively related to buying behaviour of eco packaged products.**

Consumers’ ambition to provide environmental benefits for others and their ability to influence future outcomes influence on their pro-environmental behaviour (McCarty & Shrum, 2001). Hines et al. (1987) in their meta-analysis of 15 studies present that consumers

who took actions that contributed to environmental sustainability, more often were those with high perceived effectiveness, whereas consumers who think that certain changes are because of other factors, less often showed environmentally responsible behaviour. Ellen et al. (1991) found that PCE was a powerful driver of three environmental behaviours: buying, recycling, and contributing to environmental groups. Roberts (1996) also found that PCE can explain 33 % of the variation in ecologically conscious behaviour. Thus, it is hypothesized as follows:

**H5.c Perceived consumer effectiveness is positively related to buying behaviour of eco packaged products.**

Studies on organic products offer conclusions that health is one of the most powerful motivators for buying organic products (Smith & Paladino, 2010). Literature findings show that consumers are more highly involved in environmentally positive behaviours when there is an individual benefit out of it (Zaichkowsky, 1985; McQuarrie & Munson, 1992). Ozaki (2011) also pointed out that in order for a consumer to adopt some green change, it must follow their individual identity, self-image and values. Related conclusions can also be found in other studies by Pickett-Baker and Ozaki (2008) and Hustvedt and Dickson (2009). Accordingly, the following hypothesis is suggested:

**H5.d Perceived personal relevance is positively related to buying behaviour of eco packaged products.**

#### **4.4 Research design and methodology**

The proposed conceptual model was tested on a sample of consumers from Slovenia. For a better understanding of the current situation in this country, short explanation of the Slovenian market is provided in the following paragraph. Also, as part of the research design and methodology, questionnaire content and structure development are described.

##### **4.4.1 Slovenian market**

For better understanding of Slovenian consumers, a short summary about Slovenian market, covering the main aspects about the topic of sustainability is provided. In general, the issue of sustainable development is gaining a lot of attention in Slovenia (Golob et al., 2017). The same source states that Slovenians rate themselves as fairly conscious consumers but the attitudes behaviour gap is visible here as well. Besides this, the general conclusion is that Slovenian consumers are aware of sustainability issues, have created a positive attitude about the importance of implementing sustainability practices in their lives, showing it through their everyday activities. Positive attitudes and sustainable changes are seen on the side of Slovenian companies as well. According to the National Geographic Traveller magazine, Slovenia was declared the most sustainable country for year 2016, based on sustainability indicators such as: environment, culture, nature, biodiversity (Costas, 2018).

Slovenian government is also supporting green initiatives in the country. A recent publication by The Slovenia Times presents governmental ambitions for supporting proposed measures designed to eliminate some single-use plastic products, aim to phase out the use of lightweight plastic carrier bags in 2019, plan to ban single-use food containers and glasses to be followed by a ban on all single-use plastic products (Sloveniatimes, 2018).

The RCERO waste treatment center in Ljubljana is the most sophisticated and one of the biggest in Europe. It manages with the waste from 58 municipalities, more than 170.000 tons of waste is processed there yearly. Up to 98% is recycled into objects, compost or fuel. The established waste management system is also contributing to people's culture, beliefs and motivation for green behaviour (Velez, 2018).

Non-governmental environmental Slovenian organizations (hereinafter: NGOs) are also active regarding this issue (Golob et al., 2017). They organized one of the first initiatives in 2009, "Plan B – The Initiative for Sustainable Development" with the aim to form a civil society platform for sustainable development, cooperate with government, raise awareness among citizens and encourage them to engage in sustainable practices in their everyday life (Plan B, 2017).

#### 4.4.2 Questionnaire content development

In order to examine the relationships of the concepts explored in the thesis, the questionnaire questions were developed by using scales from the literature which measured the concepts in a similar way. The research questionnaire, in both, English and Slovene language are attached in Appendix 2 and Appendix 3, respectively. An explanation of the questionnaire and its sections is presented, together with the scales used as a basis for each questions. The questionnaire consisted from five parts.

##### **Part 1: Consumer buying behaviour habits**

At the beginning, or part one of the questionnaire, participants were asked to answer how they **understand the term "environmentally friendly packaging"** with a goal to build up an insight of what an eco-packaging is considered to be and how consumers understand this term. It has been used very often and not only on packaging, but for so many different practices, commercials or talk shows, that its meaning is in danger of being lost (Holzer, 2018). Multiple choice answer was applied, using following response categories: Packaging which is non-harmful for the environment; Packaging which is biodegradable; Packaging which is recyclable; Packaging with friendly manufacturing process; Packaging which is reusable; Packaging which is organic; Packaging which is green; Minimal packaging.

Following two questions helped to examine the purchase attitudes and behaviour while shopping, so they were firstly asked how often they **pay attention to the amount of packaging** used for products. The original scale adopted from Thøgersen (2000) suggested

response categories such as: always, often, sometimes, and never. For better clarification, response categories in thesis questionnaire were modified, specifying the answers to: “Always”; “About  $\frac{3}{4}$  of the time”; “About  $\frac{1}{2}$  of the time”; “About  $\frac{1}{4}$  of the time”; “Never”.

Next question examined consumers’ behaviour during shopping in regard to **paying attention to environmental claims on product packaging** when choosing a product. The same source (Thøgersen, 2000) was used for adopting a scale for this question and the same modifications in possible answers were applied here: “Always”; “In  $\frac{3}{4}$  of the cases”; “In  $\frac{1}{2}$  of the cases”; “In  $\frac{1}{4}$  of the cases”; “Never”.

## **Part 2: Packaging characteristics**

The following two questions focused on packaging style elements: material and colour. Respondents were asked what type of material reminds them the most to an eco-friendly material, and which colour they associate with an eco-friendly packaging.

The original scale, exploring preferred eco-friendly **packaging material** was adopted from Orzan, Cruceru, Bălăceanu and Chivu (2018). They explored Romanian consumer behaviour towards sustainable packaging. From the original scale only the following possible answers were provided: glass, paper, cardboard, wood and biodegradable plastic. In this thesis research, the list was enlarged with additional materials: plastics, plant starch material, aluminium, steel. Following the same concept, from previous scale of packaging material, **packaging colour** as a characteristic was explored. A list of colours was provided.

## **Part 3: Psychographic characteristics**

Gill, Crosby and Taylor (1986) argue that attitudes are best measured by numerous measures, also measuring environmental issues instead of single item questions is better done using several items. There is no conclusion for the number of scale points to be used for Likert-type questions, but mostly often used are 4 to 7 points and adding more points can decrease skewness (Leung, 2011). All constructs used in this study were measured by different items on 5-point Likert-type scale ranging from 1 = “Fully disagree” to 5 = “Fully agree”, including a neutral point (Neither agree, nor disagree), which makes the scale symmetric and equidistant. This was not a case only for the scale measuring environmental concern, where the neutral point was eliminated, and total of four points were used for measurement.

**Environmental concern** is the degree of people’s consciousness about environmental issues and their willingness and efforts in solving them (Dunlap & Jones, 2002). The level of EC was measured using a scale from Bang et al. (2000). The original scale consisted of six items, measured on 7-point Likert scale. For the purpose of this research, the items were reduced to four, using 4-point Likert scale and following possible response items: “Very unconcerned”, “Unconcerned”, “Concerned”, “Vey concerned”.



In this research, consumers' **environmental knowledge** is studied using perceived environmental knowledge instead of factual, using a scale by Mostafa (2006). The original scale is developed by Ellen, Eroglu and Webb (1997). The scale was found to be valid and reliable with reported Cronbach's alpha value of 0.86 (Mohr et al., 1998). It is a five items scale, taken in full as they were, with minor modifications in one of them, where the focus was on recycling, changed to eco packaging. Because of the consistency in measurement of the concepts, in this thesis a 5-point Likert scale was used for measurement of all of them, where the answers ranged from 1 - "Fully disagree" to 5 - "Fully agree".

**Consumer buying behaviour** was next explored, adopting a scale from Kim and Choi (2005). From the reported Cronbach's alpha value of 0.83 the scale was found to be compelling and credible. It was a set of five items, measured on a 5-point Likert scale where 1= "Strongly disagree" and 5 = "Strongly agree", as in the original source.

**Perceived consumer effectiveness** was defined as believe that each individual can contribute in reducing environmental problems by the right choice of products (Roberts, 1996). In order to measure PCE, a scale from Kang et al. (2013) was used. They explored the role of PCE as one of the components affecting purchasing of sustainable clothes. The scale consisted of four items, originally developed by Roberts (1996) in a study for profiling green consumers in the 1990s and analysing such implications for advertisers at that time. In the thesis questionnaire, the scale was used in full with its four items, but measuring them on a 5-point Likert scale.

**Perceived personal relevance** was defined as the believes that consuming eco products is in line with consumer's own lifestyle. The same source as for measuring PCE was used for measuring PPR. Kang et al. (2013) are using five items originally adapted from a Likert Self-Relevance scale of Celsi et al. (1992) study, exploring this component's effectiveness in explaining consumer behaviour. All five items were used in this thesis questionnaire, measured on 5-point Likert scale.

#### **Part 4: Other related concepts that influence buying behaviour of eco packaged products**

For measuring consumers' level of **trust or scepticism** toward environmental claims on packaging, a scale from Mostafa (2006) was used, which was originally adopted from the scale by Mohr et al. (1998). This tool is a measure of scepticism toward marketing communications that make environmental claims. The scale reported value of 0.79 (Mohr et al., 1998) and all four items were used as they are without any modifications. It is important to be noted that last item of this scale, was negatively or reversely stated, compared to other items. In order to be correctly analyzed, it was reversely coded and then included in the analysis.

A scale from Tanner and Wölfling Kast (2003) was adopted in order to measure consumer **price/monetary barriers** for buying eco packaged products. The original scale suggested

three items and the terms used were organic products and green products. In the thesis questionnaire the same items were used, but above mentioned terms were changed to eco packaged products, and respondents were asked to rate their level of agreement with each statement regarding price of eco-packaged products. As in previous cases, a 5-point Likert scale was used.

### **Part 5: Demographic characteristics**

Demographic variables were examined through questions about age, gender, level of education, standard of living and profession/occupation as independent variables in developing a profile of the green consumer in Slovenia.

#### 4.4.3 Questionnaire structure development

Based on the literature review, the questionnaire for this research was developed. It was build up in regard to be able to apply to every person asked to respond to the same set of questions. The order and flow of questions was developed in a way logical to the respondent, using clear wording and easy to understand terms. Each question included in the questionnaire was aligned with research objectives for this study, which together would answer the main research question, stated at the begging. As the design of a questionnaire affects the response rate and validity and reliability of data collection, the following steps were followed for maximisation of response rates, validity and reliability: careful design of questions, clear questionnaire layout, pilot testing and careful execution (Saunders, Lewis & Thornhill, 2009).

The questionnaire was sent together with a cover letter, disclosing the purpose of the survey. Research questions were developed by adopting existing questions from literature and adapting them to this research topic. Adopting and adapting questions allows an assessment of reliability and comparison of this finding with another studies (Saunders et al., 2009). At the beginning of the questionnaire, questions were more straightforward and enjoyable for answering. More complex questions were placed towards the middle of the questionnaire, whereas demographic questions were set at the end.

Questions are closed-ended and forced-choice, providing different answers, from which respondents are instructed to choose (de Vaus, 2002). Following types of closed questions can be found in this questionnaire: list, category, rating and quantity questions. List questions contain list of responses, from where the respondent can choose their answer, ensuring that all possible responses are considered and provided. Category questions, designed in a way that each answer can fit only one category, arranged in a logical order which are mutually exclusive (do not overlap). They are useful for exploring behaviour and attitudes and in this research were used to identify consumer habits during shopping. Rating questions, often used for opinion data collecting. Most frequently they use Likert-style rating scale where respondents are asked of the level of agreement or disagreement with statement or series of

statements on a four to seven-point rating scale. Quantity question, where the response is an actual number, was used for age question. This is considered as self-coded question (Saunders et al., 2009).

Types of data that can be found in this research questionnaire are: nominal, ordinal, interval and ratio. Descriptive or nominal data are not measured numerically, but are classified into sets (categories). Ordinal, or ranked data, where an ordering or ranking of categories is possible. Interval data where there is a clear difference among any two data values for a specific variable, but not a relative difference. Ratio - relative difference can be calculated for any two data values for a variable (Saunders et al., 2009).

The questionnaire was built on English and then translated to Slovene. During translation, the attention was paid to lexical, idiomatic and experiential meaning and also grammar and syntax. Translated questionnaire was reviewed by another bilingual person and was pre-tested which allowed final modifications. For data analysis it was translated back to English language.

The questionnaire was pilot tested prior to distributing it to actual data collection, with a purpose of refining it, so that respondents will have no problems in answering the questions (Saunders et al., 2009). Number of pilot testing was six people, using friends and family from different ages. Each pilot testing was done in researcher's presence and during each testing, the researcher paid attention to: time length for completing the questionnaire, comprehensibility of instructions, unclear questions, not easy to answer questions, major topic omissions, clear layout, other comments (Saunders et al., 2009).

#### **4.5 Sampling design and procedures**

The sampling design procedure consist of few steps necessary for any market research and those are: specifying the target population, selecting a sampling technique, deciding on a sample size, and executing the sampling process" (Malhotra, 2010).

Target population includes Slovenian consumers from both genders and all ages, who are actually making purchase decisions and shopping on their own. It does not separate people by only those who always consider eco-packaged products and those who haven't bought one yet.

The chosen sampling technique was snowball sampling. This is a non-probabilistic technique where the research participants are asked to refer the questionnaire to other respondents and so on (Saunders et al., 2009). The biggest disadvantage of this non probabilistic research technique is that in these referrals, participants are very likely to identify other potential respondents similar to them, which can lead to forming a homogeneous group and the problems of bias are huge (Lee, 1993).

The sample size was less than 400 respondents, even though at least 200 were aimed for. The final sample size, after making the review of the survey answers and the screening process of possibly not suitable ones and/or unsatisfactory answers, decreased to total of 344 responses. All 344 responses were included in each analysis.

The sampling process was completed based on the above defined target population, sample technique and size, in parallel with the actual survey distribution.

#### **4.6 Data collection**

Data was gathered by distributing the survey online through social media platforms and mail, directing respondents to the online questionnaire. The questionnaire was self-administered, which means completed by respondents themselves. Invitations to participate were sent on a voluntary basis firstly to friends and colleagues, who were asked to share it with other people, taking the form of “snowball sampling” (Saunders et al., 2009). With clicking on the link, respondents were directed to “Qualtrics”, an online platform for creating and analysing surveys. Survey was distributed in July, 2019 and time period of data collection lasted for three weeks.

#### **4.7 Data analysis and results**

The collected data was downloaded and analysed using IBM’s SPSS statistical software. To get a general understanding of the data, basic descriptive statistics or frequency distribution were looked at. Also, the following methods for data analysis and testing the hypotheses were applied: reliability testing, one-way ANOVA, one sample t-test, linear regression analysis, factor analysis, Chi-square test for goodness of fit and Chi-square test of independence.

##### **4.7.1 Respondent profile**

In the following section, based on the demographic characteristics age, gender, education level, perceived standard of living and employment status, an overview of participant’s profile is provided. Table output for these consumer characteristics can be found in Appendix 4.1.

The total number participants were 344, out of which 23.8 % were males and 76.2 % were females. Age of respondents had a normal distribution but skewed towards the younger portion. The overall age mean was 34 years, with the youngest respondent of 17 years whereas the oldest was 75 years.

Analyzing the level of education of all participants, we can conclude that the majority were highly educated. 39.5 % had a bachelor’s degree, 22.7 % had master’s degree. 19.5% have

finished high school and 15.1% have completed an associate degree. An explanation about the associate level of education is that, it is a level of qualification between a high school diploma and a bachelor's degree. This is very common education type, familiar for Slovenian nationalities as “Višješolski program” (Haidar, 2013). The rest 2.3 % have a doctoral degree and 0.9 % finished only elementary school.

Data about the perceived standard of living show that greater part of respondents, or 63.1 % stated their standard as average. 24.4 % reported above the average, followed by 9.6 % with below the average. The rest of the respondents had much above the average standard of living and quite below the average or 2.3 % and 0.6 % respectively.

#### 4.7.2 Reliability testing

The reliability of a scale demonstrates how free it is from random error (Pallant, 2013). In this research, internal consistency was used as an indicator of a scale’s reliability, measured by Cronbach’s coefficient alpha. Internal consistency tells us the degree to which the items from a particular scale are measuring the same attribute. Cronbach’s alpha coefficient expresses the average correlation among items that make up a scale. Values of Cronbach’s alpha coefficient range from 0 to 1 and higher values indicate greater reliability (Pallant, 2013). For different scales, different values of this coefficient are needed, but Nunnally (1978) is suggesting a level of 0.7 Cronbach alpha values. Some authors suggest value of more than 0.6 to be considered as satisfactory internal reliability (Malhotra, 2010).

Table 1 below provides a summary of the reliability statistics for each of the scales used for this research. From the values of the Cronbach Alpha it can be seen that most of the scales used have a coefficient level higher than 0.7 so scales are characterized by satisfactory internal reliability.

*Table 1: Reliability analysis using Cronbach Alpha*

<b>Scale</b>	<b>Cronbach's Alpha</b>	<b>N of items</b>
Environmental Concern	0.857	4
Buying Behaviour	0.842	5
Perceived Personal Relevance	0.817	5
Environmental Knowledge	0.815	5
Perceived Consumer Effectiveness	0.748	4
Consumer Scepticism	0.745	4
Price/Monetary Barriers	0.612	3

*Source: Own work.*

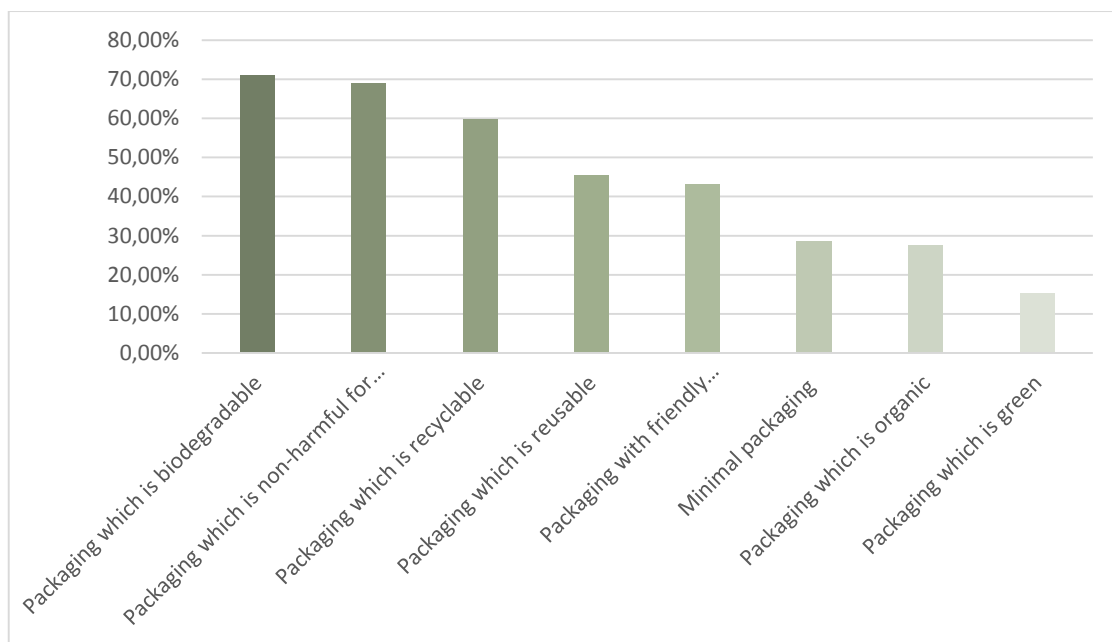
In the scale for “Consumer Scepticism”, Cronbach's Alpha value initially was lower as one of the question items was negatively stated. After recoding it, the value of 0.745 was gained. In the scale for “Price/Monetary Barriers” this value is lower than 0.7 but it was still considered as satisfactory and applied in the analyses. In a cases when there are a small

number of items in the scale, this coefficient can have a very small values (Briggs & Cheek, 1986).

#### 4.7.3 Descriptive statistics

Before focusing on the hypotheses testing it is important to give an overview of general concepts examined with this survey. As an introduction to the questionnaire, respondents were asked to indicate their **understanding of the term “Environmentally friendly packaging”**. Packaging waste is major concern in Slovenia, as Ljubljana is the first European capital to commit going zero-waste (Dakskobler, 2019), thus understanding Slovenian consumers’ knowledge, perceptions and actions about eco packaging is important. A list of eight possible answers for the question was provided, allowing respondents to choose more than one answer. Multiple response frequency statistic was applied for the analysis of this question. In order to conduct this type of analysis, separate variables were grouped under a multiple response variable set, labelled as “Understanding of term Environmentally friendly packaging”. Figure 4 gives a graphical overview of response frequency.

Figure 4: Understanding of term “Environmentally friendly packaging”



Source: Own work.

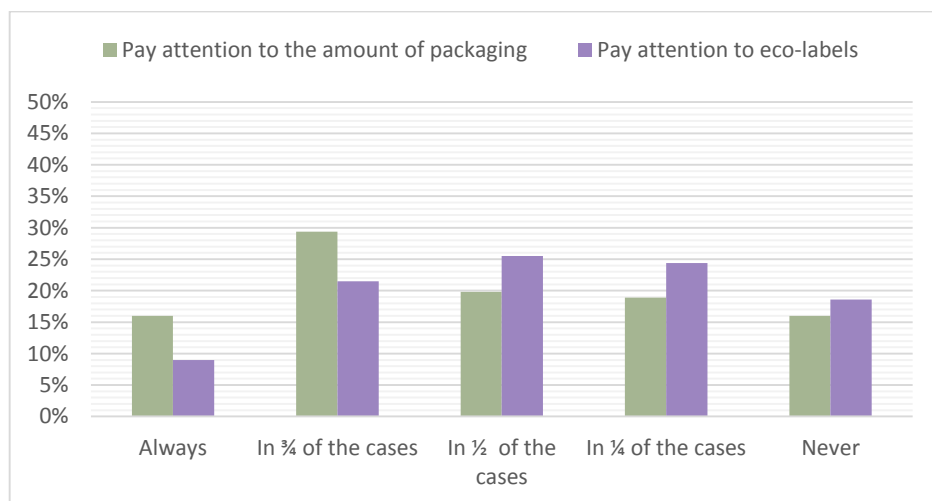
The most common terms chosen by respondents were “Packaging which is biodegradable”, “Packaging which is non-harmful for the environment” and “Packaging which is recyclable” chosen in 70.9 %, 68.9 % and 59.6 % of the cases. This was followed by “Packaging which is reusable” with 45.3 % and “Packaging with friendly manufacturing process” with 43 % of the cases. The rest: “Minimal packaging”, “Packaging which is organic” and “Packaging which is green” were chosen in less than 30 % of the cases. Response categories do not sum

to 100 % because respondents' explanations could have included multiple terms. Table summary for term understanding frequency analysis is attached in Appendix 4.2.

From the results we can conclude that respondents understand the term “environmentally friendly packaging” to mean biodegradable, non-harmful for the environment and recyclable, covering some aspects of the Sustainable Packaging Coalition definition for sustainable packaging (Definition of sustainable packaging, 2011). This shows some, although incomplete, knowledge of what the term means. These findings are similar to those of Young (2008); Scott and Vigar-Ellis (2014) who found that knowledge of the meaning of this term is limited and partially completed, mainly associated with recycling.

Second question was exploring **consumers' attention to the amount of packaging** used during shopping. Descriptive statistic was used as a technique for this analysis, based on the example of the article the scale for measuring was taken from (Thøgersen, 2000). The mean score for this analysis was 2.9, measured on a 5-point scale. The greatest percentage of respondents or 29.4 % are paying attention to the amount of product packaging in three quarters of the time. 19.8 % do that in half of the time, followed by 18.9 % in a quarter of the time. 16 % of consumers always pay attention to this factor during buying behaviour and at the same time, also 16 % never do that. Figure 5 gives graphical presentation of results for paying attention to the amount of packaging together with the next question's responses, paying attention to eco-labels. Table output for both questions are attached in Appendix 4.2.

*Figure 5: Paying attention to the amount of packaging and eco-labels*



*Source: Own work.*

As already mentioned, next question allowed study on consumer behaviour during product purchase based on consumer's **attention to eco-labelling on product package**. The mean score, measured on a 5-point scale for this analysis was 3.22. Results are presented in figure 5 and the frequency analysis table is attached in Appendix 4.2. We can see that more than a quarter of respondents (26.5 %) check for any environmental labelling during buying in half

of the time. 24.4 % do it in a quarter of the time, 21.5 % check for environmental labelling about three quarters of the time. 18.6 % never check eco-labels and 9 % always do that.

In the next part, a short summary of **descriptive statistics for each concept** used in this thesis research is presented. For this purpose, following measures are analysed: mean or the average value, mode or the value that appears most commonly and standard deviation showing the extent of spread of numerical data (Field, 2009). The same order as in the research questionnaire is used for detailed description of each concept.

The first concept explored was **environmental concern**. From Table 2 below we can see the results for each item. The average response for all of the items constructing this question are very similar, ranging around 3.5. The reason behind this can be said to be due to similarity between each statement. Also, in all of the cases, the most commonly used response was the highest ranked, last response “Very concerned”, concluded from mode vale 4.

*Table 2: Descriptive statistics – Environmental Concern*

<b>Environmental Concern</b>			
<b>Item</b>	<b>Mean</b>	<b>Mode</b>	<b>Std. Deviation</b>
How concerned are you about the environment when making purchases?	3.27	4	0.796
How concerned are you about air pollution?	3.35	4	0.044
How concerned are you about water pollution?	3.49	4	0.752
How concerned are you about land use?	3.17	4	0.853

*Source: Own work.*

Next explored concept was the main dependent variable – **consumer buying behaviour**. Table 3 summarises results about this variable. All of the items have average response value higher 3.5, but there is one item with a value of 4.08, meaning that the most important thing for consumers when considering purchasing of eco packaged products was the fact that when there is a choice between two equal products, they would buy the one with less harmful effects. In all of the cases, the most commonly used response rate on the 5-point scale of agreement was the fourth response - “Agree”.

*Table 3: Descriptive statistics – Buying Behaviour*

<b>Buying Behaviour</b>			
<b>Item</b>	<b>Mean</b>	<b>Mode</b>	<b>Std. Deviation</b>
I make a special effort to buy paper and plastic products that are made from recycled materials.	3.77	4	0.914
I have switched products for ecological reasons.	3.53	4	1.101
When I have a choice between two equal products, I buy the one less harmful to other people and the environment.	4.08	4	0.935

*Table continues*



Table 3: Descriptive statistics – Buying Behaviour (cont.)

I make a special effort to buy household chemicals such as detergents and cleaning solutions that are environmentally friendly.	3.70	4	1.118
I have avoided buying a product because it had potentially harmful environmental effects.	3.78	4	1.066

Source: Own work.

Descriptive statistics results for **perceived consumer effectiveness** show that consumers believe that this is an important thing when purchasing eco packaged products. This is supported with the fact that in all of the cases, except one, the most chosen answer was the highest ranking level “Fully Agree”. This leads to high levels of averaged responses, mainly above 4, except for the second item. Results can be found in Table 4.

Table 4: Descriptive statistics – Perceived Consumer Effectiveness

Perceived Consumer Effectiveness			
Item	Mean	Mode	Std. Deviation
It is worth it for an individual consumer to make efforts to preserve and improve the environment.	4.58	5	0.724
When I buy products, I tend to try to consider how my use of them will affect the environment.	3.80	4	0.949
Since each individual can have any effect upon environmental problems, what I do can make meaningful difference.	4.21	5	0.876
By purchasing Eco friendly packaged products, each consumer’s behaviour can have a positive effect on the environment and society.	4.35	5	0.824

Source: Own work.

From Table 5, summarising results for **perceived personal relevance**, can be seen the average response mean of around 3.5 except for the first and last item, having lower values, closer to 3. Similarly, the most common item response was “Agree” (mode value 4) except for the first and last item where it was the neutral point “Neither agree, nor disagree”. This means that buying eco packaged products is of personal importance to Slovenian consumers and they connect this green behaviour with their own personal needs.

Table 5: Descriptive statistics – Perceived Personal Relevance

Perceived Personal Relevance			
Item	Mean	Mode	Std. Deviation
The purchase and/or use of Eco friendly packaged products let others see me as I ideally would like them to see me.	2.59	3	1.152
The purchase and use of Eco friendly packaged products helps me to attain the type of life I strive for.	3.73	4	0.972

Table continues

*Table 5: Descriptive statistics – Perceived Personal Relevance (cont.)*

I can make connections or associations between the purchase and use of Eco friendly packaged products and other experiences and/or behaviours in my life.	3.57	4	0.984
The purchase and use of Eco friendly packaged products is of personal importance to me.	3.87	4	0.920
The purchase and use of Eco friendly packaged products helps me to express who I am.	3.15	3	1.144

*Source: Own work.*

When it comes to **environmental knowledge**, similar results can be found. The average response was 3.5 and around 3 for the first two items, where the statements were broader than others. The most commonly chosen answer was “Agree”, except for the first two items, where respondents could not identify themselves in neither of the categories, so in most of the times they choose “Neither agree nor disagree”. Standard deviation was similar for all items. Table 6 presents the results for this statistics.

*Table 6: Descriptive statistics – Environmental Knowledge*

<b>Environmental Knowledge</b>			
<b>Item</b>	<b>Mean</b>	<b>Mode</b>	<b>Std. Deviation</b>
I know that I buy products with packages that are environmentally safe.	3.06	3	0.911
I know more about Eco packaging than the average person.	3.22	3	1.010
I know how to select products and packages that reduce the amount of waste ending up in landfills.	3.60	4	0.929
I understand the environmental phrases and symbols on product package.	3.50	4	0.999
I am very knowledgeable about environmental issues.	3.53	4	0.944

*Source: Own work.*

Descriptive statistics for **consumer scepticism** indicate lower levels of average response means, all less than 3 (Table 7). This means that respondents were mainly inconclusive, so most of the times they choose the category response “Neither agree nor disagree” which can be seen from mode value.

Table 7: Descriptive statistics – Consumer Scepticism

<b>Consumer Scepticism</b>			
<b>Item</b>	<b>Mean</b>	<b>Mode</b>	<b>Std. Deviation</b>
Most environmental claims made on package labels are true.	2.99	3	0.855
Because environmental claims are exaggerated, consumers would be better off if such claims on package labels were eliminated.	2.45	3	1.134
Most environmental claims on package labels are intended to mislead rather than to inform consumers.	2.77	3	1.032
I do not believe most environmental claims made on package labels are true.	2.9360	3	1.06985

Source: Own work.

Descriptive statistics for **price/monetary barriers** can be seen in Table 8. It shows that consumers perceive eco packaged products as more expensive, providing an average value for this question item of 3.49 and mostly chosen response “Agree”. They were mainly indifferent for other two statements related to this question, which can be seen from average values of around 3 and mode response 3 – “Nether agree nor disagree”.

Table 8: Descriptive statistics – Price/Monetary Barriers

<b>Price/Monetary Barriers</b>			
<b>Item</b>	<b>Mean</b>	<b>Mode</b>	<b>Std. Deviation</b>
I cannot afford to pay more for Eco packaged products.	2.86	3	1.050
Eco packaged products are still too expensive.	3.49	4	1.041
People should buy Eco packaged products, even though they are more expensive.	3.22	3	0.940

Source: Own work.

#### 4.7.4 Hypotheses testing

In this section a detailed analysis for each hypothesis and sub-hypothesis are presented, using different statistical analyses. The results are presented in an order where firstly the null hypothesis and alternative hypothesis are formulated, then the analysis method is assigned and the most important coefficients are explained, from where main conclusions are drawn.

#### *4.7.4.1 H1 – Analysis of packaging style elements material and colour*

**H1 Paper packaging material and the green packaging colour are significantly associated with eco packaging.**

**H1.a Paper packaging material is significantly associated with eco packaging.**

**H1.b The green packaging colour is significantly associated with eco packaging.**

Research hypotheses for H1.a are formulated as:

- Null hypothesis: There are no differences in the preferences of eco packaging material among Slovenian consumers.
- Alternative hypothesis: There are differences in the preferences of eco packaging material among Slovenian consumers.

Chi-square test for goodness of fit was applied to test this hypothesis and output results from this analysis is attached in Appendix 4.3.1. To be able to analyze the results, expected values for each packaging material were specified as equal. The smaller the chi-square value, the less likely we are to be able to reject the null hypothesis. In this case we have a very high chi-square value, associated with a very small p value, 0.000 or highly significant even at level lower than 0.001. From this we can formulate the following conclusion: based on sample data, we can reject the null hypothesis and we can say that there are differences in the preferences of eco packaging material among Slovenian consumers. The analysis allows us to see that actually two types of materials share the first place of the most preferred materials. Those are paper and also plant starch material, chosen exactly 85 times each. Slightly less preferred than these two is glass, followed by cardboard, biodegradable plastics, wood and aluminum. Plastics and steel are the least preferred materials.

In the case of H1.b the observed variable is preferences in packaging colour, consisted of total of thirteen different categories with independent observations. The hypotheses for H1.b can be stated as:

- Null hypothesis: There are no differences in the preference of eco packaging colour among Slovenian consumers.
- Alternative hypothesis: There are differences in the preference of eco packaging colour among Slovenian consumers.

For results analysis, expected values for each packaging colour were stated equal. The results (Appendix 4.3.2) are similar to the previous analysis, very high chi-square value, associated with a very small p value of 0.000, meaning that we can reject the null hypothesis, or we can say that: based on sample data, we reject the null hypothesis and we can say that there are differences in the preference of eco packaging colour among Slovenian consumers. From the analysis we can actually see that the most preferred colour, associated with eco packaging

was brown and next is green, white being on the third place followed by gray. Other colours are not very much preferred.

#### *4.7.4.2 H2 – Analysis of the influence of environmental claims (eco-labels) on consumer buying behaviour*

**H2 Paying attention to environmental claims (eco-labels) is positively related to buying behaviour and consumers with high levels of environmental concern, pay more attention to environmental claims (eco-labels).**

**H2.a Paying attention to environmental claims (eco-labels) is positively related to buying behaviour of eco packaged products.**

- Null hypothesis stated that population means are equal.
- The alternative hypothesis is assuming that not all means are equal.

For testing H2.a analysis of variance between groups (ANOVA) was applied. It was chosen as the most appropriate because we want to compare the mean scores (of buying behaviour) of more than two groups, and the independent variable (paying attention to eco-labels) has more than three different levels, involving different people in each level. The ‘one-way’ part of the title shows that there is only one independent variable, and ‘between-groups’ express that there must be different cases in each of the groups. ANOVA analysis actually compares the variance between the different groups with the variability within each of the groups. In other words, it tells us if there are significant differences in the mean scores on the dependent variable across the groups. Table output from this analysis is presented in Appendix 4.4.1.

After conducting the analysis, from the table “Descriptive” we can see that there are no missing values and the number of N is correct for each group. Next, we checked the significance value (Sig.) for Levene’s test for homogeneity of variances, who tells us if the variance in scores is the same for each of the three groups. If this number is greater than 0.05, then we have not violated the assumption of homogeneity of variance. In this case the Sig. value is 0.000. As this is lower than 0.05, the homogeneity of variance assumption is violated, or it means that the variances are statistically significant. In this case of violated assumption, we look at the output table “Robust Tests of Equality of Means”. Two tests shown there, Welsh and Brown-Forsythe are preferable when the assumption is violated. They are actually replacing the level of significance from table “ANOVA” In this case both of them have a value of 0.00 which is less than 0.05, suggesting that even though there is a statistical difference among the variances it is because the groups are different among each other. We reject the null hypothesis that there's no difference between the means and conclude that a significant difference does exist.

The conclusion can be also interpreted as: based on sample data, we reject the null hypothesis and we can say that not all means are equal, or that paying attention to environmental claims

(eco-labels) is positively related to buying behaviour of eco packaged products. Paying attention to environmental claims (eco-labels) during product purchase differs based on consumers' frequency of buying eco packaged products by: "Always" (M=4.87, SD=0.341); "About  $\frac{3}{4}$  of the time" (M=4.53, SD=0.646); "About  $\frac{1}{2}$  of the time" (M=4.30, SD=0.527); "About  $\frac{1}{4}$  of the time" (M=3.90, SD=0.651) and "Never" (M=3.30, SD=0.867). Further post-hoc analysis can be found in Appendix 4.4.1.

## **H2.b Consumers with high levels of environmental concern, pay more attention to environmental claims (eco-labels).**

- Null hypothesis: There is no association between environmental concern and attention to eco-labels.
- Alternative hypothesis: There is an association between environmental concern and attention to eco-labels.

For conducting Chi-square test of independence, scale variables of environmental concern were merged in two groups: "Unconcerned" (merging responses of "Very Unconcerned" and "Unconcerned") and "Concerned" (merging responses of "Very Concerned" and "Concerned"). Answers from "Paying attention to eco-labels" scale was combined to consist in total of three groups, or consumers who "Pay more attention", "Pay attention half of the time" and "Pay less attention" (merging responses of "Always" and "About  $\frac{3}{4}$  of the time" in first group; "About  $\frac{1}{4}$  of the time" and "Never" in the last group; "About  $\frac{1}{2}$  of the time" was left in the second group as a middle point). The assumptions for this analysis is that the expected count is not less than 5, or 20 % of the cells have expected count greater than 5. In this case, we have not violated this assumption and the table is presented in Appendix 4.4.2. Pearson Chi-Square value is lower than 0.001, or highly statistically significant. From here, we interpret the result as: based on sample data, we reject the null hypothesis and we can say that there is an association between environmental concern and attention to eco-labels.

### *4.7.4.3 H3 – Analysis of consumer barriers for buying eco packaged products*

## **H3 Price/monetary barriers and lack of environmental knowledge are negatively related to buying behaviour of eco packaged products**

### **H3.a Price/monetary barriers are negatively related to buying behaviour of eco packaged products.**

### **H3.b Lack of environmental knowledge is negatively related to buying behaviour of eco packaged products.**

Based on the above, research hypotheses for H3.a are:

- Null hypothesis: there is no relationship between price/monetary barriers and buying behaviour of eco packaged products.

- Alternative hypothesis: there is a negative relationship between price/monetary barriers and buying behaviour of eco packaged products.

In the case of H3.b as we are measuring levels of environmental knowledge:

- Null hypothesis: There is no relationship between environmental knowledge and buying behaviour of eco packaged products.
- Alternative hypothesis: There is a positive relationship between environmental knowledge and buying behaviour of eco packaged products.

The dependent variable is consumer buying behaviour of eco packaged products, and the aim is to determine how much variance in the dependent variable is explained by a set of independent variables – price/monetary barriers and environmental knowledge. Multiple regression analysis was used to answer this hypothesis and in order to conduct multiple regression analysis, it needs to fulfill the requirement of the normal assumptions of Ordinary Least Square (hereinafter: OLS). These assumptions include: linearity of the measured aspect, homoscedasticity, normality of the error term distribution, and multicollinearity (Tabachnick, Fidell & Ullman, 2007). All of the assumptions were met and all figures associated can be found in Appendix 4.5.

From the SPSS table output (Appendix 4.5) we can see the significance level of the t statistics for every independent variable. The significance level is telling whether this variable is making a statistically significant unique contribution to the equation. If the significance value is less or equal to 0.05 then the variable is making a significant unique contribution to the prediction of the dependent variable and the opposite if greater than 0.05 (Pallant, 2013). From our analysis we can see that environmental knowledge with significance value of 0.000 made a statistically significant contribution to the prediction of consumer buying behaviour. Whereas the significance value for price/monetary barriers is 0.050 and it is still considered as significant at 95% confidence interval.

Analyzing standardized beta values we can indicate the number of standard deviations that scores in the dependent variable would change if there was one standard deviation unit change in one of the independent variable, having the rest of the independent variables held as constants or controlled. The largest beta coefficient is 0.588 related to consumer environmental knowledge. Environmental knowledge makes the strongest unique contribution to explaining buying behavior when the variance explained by all other variables in the model is controlled for. We can also interpret this result as: a single unit increase in the level of consumers' environmental knowledge will increase the purchasing of eco packaged products by 0.588 units, having the other independent variables kept constant or otherwise controlled. The standardized beta value for price/monetary barriers is lower and negative (– 0.085), indicating that it made less of a contribution. Here we state the following conclusion: single unit increase in product price or other monetary barriers will

decrease the purchasing of eco packaged products by 0.085 units, having the other independent variables kept constant or otherwise controlled.

For model evaluation, we look at the value of R Square, or the coefficient of multiple determination. This value tells how much of the variance in the dependent variable (buying behaviour) is explained by the model (consisted of environmental knowledge and price/monetary barriers), (Pallant, 2013). In other words, it tells the precision with which the overall regression line fits the data. R square coefficient ranges from 0 to 1 and the closer it is to 1, the better the overall fit of the estimated regression equation to the actual data (Baye, Prince & Squalli, 2006). In this case the value is equal to 0.365. Expressed as a percentage, it can be interpreted as follows: 36.5 % of the total variability in consumer buying behaviour of eco packaged products can be explained by consumers' environmental knowledge and products' price/monetary barriers.

To determine the statistical significance of the result and prove the explanatory power of the model, the significance level of the F statistic, or the p value should be considered and in this case the significance level is 0.000 which is lower than 0.05 taken as a cutoff value, even lower than 0.001. This is a very strong evidence for rejecting the null hypothesis (the lower the significance level, the stronger the evidence is) and consequently it can be concluded that consumers' environmental knowledge and price/monetary barriers are important factors which together determine the level of buying behaviour for eco packaged products. By saying this, H3 in this thesis is confirmed with high level of confidence.

The results of the analyses presented above allow us to formulate following summary conclusions:

- Our model, which includes control of consumer environmental knowledge and price/monetary barriers, explains 36.5 % of the variance in buying behaviour.
- Of these two variables, consumer environmental knowledge makes the largest unique contribution ( $\beta=0.588$ ), although consumer's environmental knowledge also made a statistically significant contribution ( $\beta=-0.085$ ).

We can also draw following conclusions regarding sub-hypotheses:

- Based on sample data we reject the null hypothesis at  $p$  value of 0.05 and we can conclude that there is a negative relationship between price/monetary barriers and buying behaviour of eco packaged products.
- Based on sample data we reject the null hypothesis at  $p$  value of 0.000 and we can conclude that there is a positive relationship between environmental knowledge and buying behaviour of eco packaged products. Expressed reversely, lack of environmental knowledge is negatively related to buying behaviour of eco packaged products.



#### 4.7.4.4 H4 – Analysis of consumer scepticism towards eco packaging

**H4 There is consumer scepticism towards environmental claims (eco-labels) on packaging and scepticism is negatively related to buying of eco packaged products.**

**H4.a Consumers are skeptical towards environmental claims (eco-labels) on packaging.**

Research hypotheses can be stated as:

- Null hypothesis: Sample mean is less than or equals 3.
- Alternative hypothesis: Sample mean is greater than 3.

In order to assess whether a sample comes from a population with a specific mean, one sample t-test was applied. There are some assumptions of using these analyses that need to be checked before doing the analysis and they were all met:

- The dependent variable is measured using a continuous scale.
- Scores are gathered using a random sample.
- Independence of observations should exist.
- The distribution of scores for each group should be normally distributed (Pallant, 2013).

In our case the sample mean is calculated as 2.78, which is less than the critical value of 3, meaning that we cannot reject the null hypothesis (Appendix 4.6.1.). The analysis of one sample t-test tells us the significance value is equal to 0.000 which is below 0.05, even below 0.001, meaning that observed mean is highly statistically significant. We can also interpret the above conclusion as: based on sample data, we cannot reject the null hypothesis and we cannot say that sample mean score is greater than 3. In other way, we cannot say that consumers are skeptical towards environmental claims (eco-labels) on packaging.

We can also interpret the results as follows: Mean scepticism score ( $M = 2.78$ ,  $SD = 0.63$ ) was lower than the normal scepticism score of 3.0, a statistically significant mean difference of 0.22, 95% CI [0.15 to 0.28],  $t(343) = -6.357$ ,  $p = 0.000$ .

**H4.b Scepticism towards environmental claims on packaging (eco-labels) is negatively related to buying behaviour of eco packaged products.**

Research hypotheses are formulated as following:

- Null hypothesis: there is no relationship between scepticism and buying behaviour of eco packaged products.
- Alternative hypothesis: there is a negative relationship between scepticism and buying behaviour of eco packaged products.

The dependent variable is consumer buying behaviour of eco packaged products, measured on a continuous scale and the aim is to examine whether and how this variable is affected by consumers' scepticism of eco packaged products, as independent variable, also measured on a continuous scale. The assumptions for a linear regression analysis, linearity, homoscedasticity, normality and multicollinearity were all met. Results from this analysis are attached in Appendix 4.6.2.

Significance level of the t statistics for this independent variable is 0.418 and it tells us that this variable is not making a statistically significant unique contribution to the equation. The standardized beta coefficient is -0.044 indicating that the independent variable consumer scepticism has a low level of contribution in explaining the dependent variable and the relationship between consumer scepticism towards eco packaged products and buying behaviour of these products is negative. As the value of the independent variable increases, their effect on the dependent variable will decrease. More specifically, single unit increase in the level of consumers' scepticism will decrease the purchasing of eco packaged products by 0.044 units, having the other independent variables kept constant or otherwise controlled.

The value of the coefficient of multiple determination, R Square was very low 0.002. It can be interpreted as follows: 0.2 % of the total variability in consumer buying behaviour of eco packaged products can be explained by the level of consumer scepticism towards eco packaged products. This means that our model, which includes control of consumer scepticism explains only 0.2 % of the variance in buying behaviour.

In order to determine the statistical significance of the result and prove this explanatory power of the model, we look at the F statistics, which coefficient value is 0.418, or highly statistically insignificant. From this we draw a conclusion that consumer scepticism towards eco packaged products is not a statistically significant factor in defining consumer buying behaviour of such products.

A conclusion about hypothesis can be stated as follows: based on sample data we cannot reject the null hypothesis at  $p$  value of 0.05 and we cannot conclude that there is a negative relationship between scepticism and buying behaviour of eco packaged products.

#### *4.7.4.5 H5 – Analysis of consumer psychographic characteristics' relation with buying behaviour of eco packaged products*

**H5 Psychographic characteristics are positively related to buying behaviour of eco packaged products.**

**H5.a Environmental concern is positively related to buying behaviour of eco packaged products.**

**H5.b Environmental knowledge is positively related to buying behaviour of eco packaged products.**

**H5.c Perceived consumer effectiveness is positively related to buying behaviour of eco packaged products.**

**H5.d Perceived personal relevance is positively related to buying behaviour of eco packaged products.**

The research hypotheses can be stated as:

- Null hypothesis: there is no relation between consumer psychographic characteristics and buying behaviour of eco packaged products.
- Alternative hypothesis: there is a positive relation between consumer psychographic characteristics and buying behaviour of eco packaged products.

Research hypotheses for sub-hypotheses are defined as:

- Null hypothesis: there is no relation between EC/EK/PCE/PPR and buying behaviour of eco packaged products.
- Alternative hypothesis: there is a positive relation between EC/EK/PCE/PPR and buying behaviour of eco packaged products.

For testing H5, a multiple regression analysis was used. Before conducting the multiple regression analysis, factor analysis was performed for each of the scales associated with consumer psychographic characteristics: scale for environmental concern, environmental knowledge, perceived consumer effectiveness, perceived personal relevance and the dependent variable consumer buying behaviour.

The purpose of factor analysis was to examine the relationship among all the variables constituting a particular scale used to measure consumers' psychographic characteristics. Factor analysis serves as a data reduction tool, allowing a large set of variables be reduced to a smaller, more manageable number of dimensions, prior to using them in other analyses (Pallant, 2013). This particular data set allows us for this type of analysis, as Osterlind, Tabachnick and Fidell (2001) propose that it is comforting to have at least 300 cases in order to conduct factor analysis, although some authors state even lower number of cases (Pallant, 2013). A table summarizing the results for each factor analysis, including KMO index, Bartlett's test significance, number of extracted components and the percentage of total variance explained for each scale can be found in Appendix 4.7.1.

Two statistical measures helped in assessing the factorability of the data: Kaiser-Meyer-Olkin (hereinafter: KMO) measure of sampling adequacy and Bartlett's test of sphericity. The KMO index ranges from 0 to 1, where a level of 0.6 is suggested as the minimum value for a good factor analysis, proving sampling adequacy (Osterlind, Tabachnick & Fidell, 2001). KMO index in all of the cases was greater than the recommended value of 0.6

indicating that the factor analysis is appropriate. The Bartlett's test of sphericity should be significant for the factor analysis to be considered appropriate (Osterlind, Tabachnick & Fidell, 2001). The value of Bartlett's test was statistically significant in all of the cases, with value less than 0.001, supporting the factorability of the correlation matrix.

The correlation matrix shows presence of many coefficients of 0.3 and above, and in the final output only items with factor loadings higher than 0.3 were considered as representative. In each case of factor analysis, only one component was extracted, which suggest that all of the scale items fit onto a single theoretical construct. As there are no more factors to potentially correlate with, hence no need to rotate, to reduce correlation. Newly created variables were used in a regression analysis to test H5. The requirement of the normal assumptions for multiple regression analysis, linearity, homoscedasticity, normality and multicollinearity were all met. All tables from this analysis are attached in Appendix 4.7.2.

Looking at the significance level of the t statistics for every independent variable, it tells us whether that particular variable is making a statistically significant unique contribution to the equation. In this case, all independent variables are highly statistically significant, with value lower than 0.001. We can conclude that each of the explored variables: EC, EK, PCE and PPR made a unique, and statistically significant contribution to the prediction of buying behaviour of eco packaged products.

The standardized beta coefficient for the first factor, environmental concern is 0.220 indicating moderate level of contribution in explaining the dependent variable. The positive sign of the same coefficient shows that the relationship between this item and the dependent variable is positive. More specifically we can say that single unit increase in the level of consumers' environmental concern, will increase the purchasing of eco packaged products by 0.220 units, having the other independent variables kept constant or otherwise controlled. Next item, environmental knowledge is also positively connected with the dependent variable, with a value of 0.302 for standardized beta coefficient and similarly, for perceived consumer effectiveness it is 0.300. For the last item - perceived personal relevance this value is 0.171. We can also interpret these values for the rest of the variables, in the same way. Single unit increase in consumers' environmental knowledge / perceived consumer effectiveness / perceived personal relevance will increase the purchasing of eco packaged products by 0.302 / 0.300 / 0.171 units, having the other independent variables kept constant or otherwise controlled.

The coefficient of multiple determination, R Square value is 0.614 telling the precision with which the overall regression line fits the data. Expressed in percent, it can be said that: 61.4 % of the total variability in consumer buying behaviour of eco packaged products can be explained by consumer psychographic characteristics.

The F statistics evaluate the statistical significance of the result and prove the explanatory power of the model. In this case it shows highly significant value of 0.000. Based on this we

can conclude that we can reject the null hypothesis, and say that there is a positive relation between consumer psychographic characteristics and buying behaviour of eco packaged products. By saying this, the alternative hypothesis in this thesis is accepted with high level of confidence.

The results allow us to draw following conclusions:

- Our model, which includes control of consumer psychographic characteristics explains 61.47 % of the variance in buying behaviour of eco packaged products.
- Of these four variables, consumer environmental knowledge makes the largest unique contribution (beta=0.302), followed by perceived consumer effectiveness (beta=0.300), consumer environmental concern (beta=0.220) and perceived personal relevance (beta=0,171).

A conclusion about sub-hypothesis can be stated as follows:

- Based on sample data we reject the null hypothesis at  $p$  value of 0.000 and we can conclude that there is a positive relation between consumer environmental concern and buying behaviour of eco packaged products.
- Based on sample data we reject the null hypothesis at  $p$  value of 0.000 and we can conclude that there is a positive relation between consumer environmental knowledge and buying behaviour of eco packaged products.
- Based on sample data we reject the null hypothesis at  $p$  value of 0.000 and we can conclude that there is a positive relation between perceived consumer effectiveness and buying behaviour of eco packaged products.
- Based on sample data we reject the null hypothesis at  $p$  value of 0.001 and we can conclude that there is a positive relation between perceived personal relevance and buying behaviour of eco packaged products.

#### 4.7.5 Summary results from hypotheses testing

Table 9 below is summarizing the results from confirmed or rejected hypotheses and sub-hypotheses.

*Table 9: Analysis summary*

<b>Hypothesis</b>	<b>Result</b>
<b>H1 Paper packaging material and the green packaging colour are significantly associated with eco packaging.</b>	<b>Confirmed</b>
H1.a Paper packaging material is significantly associated with eco packaging.	Confirmed

*Table continues*

Table 9: Analysis summary (cont.)

H1.b The green packaging colour is significantly associated with eco packaging	Confirmed
<b>H2 Paying attention to environmental claims (eco-labels) is positively related to buying behaviour and consumers with high levels of environmental concern, pay more attention to environmental claims (eco-labels).</b>	<b>Confirmed</b>
H2.a Paying attention to environmental claims (eco-labels) is positively related to buying behaviour of eco packaged products.	Confirmed
H2.b Consumers with high levels of environmental concern, pay more attention to environmental claims (eco-labels).	Confirmed
<b>H3 Price/monetary barriers and lack of environmental knowledge are negatively related to buying behaviour of eco packaged products</b>	<b>Confirmed</b>
H3.a Price/monetary barriers are negatively related to buying behaviour of eco packaged products.	Confirmed
H3.b Lack of environmental knowledge is negatively related to buying behaviour of eco packaged products.	Confirmed
<b>H4 There is consumer skepticism towards environmental claims (eco-labels) on packaging and scepticism is negatively related to buying of eco packaged products.</b>	<b>Rejected</b>
H4.a Consumers are skeptical towards environmental claims (eco-labels) on packaging.	Rejected
H4.b Scepticism towards environmental claims on packaging (eco-labels) is negatively related to buying behaviour of eco packaged products.	Rejected
<b>H5 Psychographic characteristics are positively related to buying behaviour of eco packaged products.</b>	<b>Confirmed</b>
H5.a Environmental concern is positively related to buying behaviour of eco packaged products.	Confirmed
H5.b Environmental knowledge is positively related to buying behaviour of eco packaged products.	Confirmed
H5.c Perceived consumer effectiveness is positively related to buying behaviour of eco packaged products.	Confirmed
H5.d Perceived personal relevance is positively related to buying behaviour of eco packaged products.	Confirmed

Source: Own work.

#### 4.7.6 Additional analysis

Beside the main goals and hypothesis testing, an understanding of consumer demographic characteristics and its influence of the actual buying of eco packaged products is presented in the following section. Then an analysis of demographic characteristics on other main concepts are explored. Following demographic characteristics were analysed: gender, age, education level, employment status and perceived living standard. In the case of the scale for employment status, beside the regularly provided options: “Employed”, “Unemployed”, “Student”, “Retired”, two more categories, “Self-employed” and “Exceptional situation” can be noticed. They have been formulated based on the option “Other” in the questionnaire, which allowed respondents text entry.

A multiple linear regression was run to predict consumer buying behaviour levels from the above mentioned demographic variables (regression output analysis is presented in Appendix 4.8.1). When we look at the values of the t test statistic for the regression coefficients we can see that statistically significant variables at the 0.05 level are age, gender and education level.

The first highly statistically significant coefficient at level of significance even lower than 0.001 is age. Based on the standardized beta coefficient the interpretation of this coefficient is that the correlation between consumers’ age and buying behaviour of eco packaged products is positive and a single unit increase in age will bring an increase the purchasing of eco packaged products by 0.322 units if other demographic variables are held as constant. Put in other way, this indicate that the older the respondents are, the higher their willingness of buying of eco packaged products.

Next statistically significant predictor is gender. The regression coefficient for gender provides a measure of the difference between the group identified by the dummy variable (males, coded with 1) and the group that serves as a reference (females, coded with 0). This vale for gender is -0.124 and the negative regression coefficient suggests that female has a positive contribution over male.

Next, the results prove that education level and consumer buying behaviour are negatively related. Based on this, we can say that single unit increase in the level of education, will decrease the purchasing of eco packaged products by 0.128 units if other demographic variables are held as constant. The influence of other demographic variables could not be proved as the values of the partial regression coefficient were not significant enough.

The R square value is 0.146, meaning that 14.6 % of the variance of consumer buying behaviour of eco packaged products, can be explained by the influence of the demographic variables: age, gender, education level, employment status and perceived level of living standard.

Following the same principles from the regression analysis of the dependent variable buying behaviour and coefficients mentioned above, with a level of significance set at 0.05, conclusions can be drawn about demographic influence on other main concepts explored with this research: environmental concern, environmental knowledge, perceived consumer effectiveness, perceived personal relevance, consumer scepticism and price/monetary barriers. Detailed regression analyses for all of the main constructs are going to be presented in Appendix 4.8 and here only the main highlights are pointed out.

The results of the multiple regression analysis for *environmental concern* show statistically significant level for age and gender. The negative sign of standardised beta coefficient for gender refers that females have a positive contribution over males. Table results of the analysis are shown in Appendix 4.8.2. Variable age appeared as a statistically significant coefficient in explaining the variability in consumer *environmental knowledge* (Appendix 4.8.3). Multiple regression analysis for *perceived consumer effectiveness* (Appendix 4.8.4) also display high statistical significance of the model and influence of the variables age and gender, where the negative sign of standardised beta coefficient for gender refers that females have a positive contribution over males. The results for *perceived personal relevance* show high statistical significance with a value of 0.000 and influence of variables age and gender, females (Appendix 4.8.5). For *consumer scepticism* the regression analysis result indicates statistical significance of the model with a value of t statistics of 0.046 and a positive relation of age and consumer scepticism (Appendix 4.8.6). For the last construct, *price/monetary barriers* the results show that the only significant variable was age. This variable is negatively correlated with the dependent price/monetary barrier (Appendix 4.8.7).

## **4.8 Discussion of the results**

Following part of the research thesis, the discussion of results, is determined for presenting the results of the primary research's findings with the related findings of the previous researches, mentioned in the theoretical part of this research and also some other related findings. The order of presented results follows a previous order of hypothesis development and data analysis from H1 to H5.

### **4.8.1 Packaging style elements**

Based on the fact that packaging style elements can influence consumer's perceptions about environmental friendliness of a product, we wanted to discover the proportions of preferred packaging characteristics material and colour. Chi-Square test let us conclude that paper packaging material is one of the most associated with eco packaging. But, data show that consumers in Slovenia also prefer the natural, plant starch material, where product packaging material is made of plant-based or recycled materials, easily recognisable by consumers. Glass was chosen as third most preferred material.



As many research results show a preference of paper packaging material (Lindh et al., 2016; Singh, Sharma & Malviya, 2011), preference for plant starch material is found in a recent study by Magnier and Schoormans (2017), exploring packaging style preferences among Dutch consumers. Another study findings reveals the most environmentally friendly packaging and products estimated to be glass containers, aluminium cans and also products sold in bulk, concentrated liquids, and packaging that is made from recycled materials (Kolppo, 2009).

Estimation of packaging environment-friendliness is not easily determined and consumers use different elements for evaluation. But preferences for plant-based material signifies that consumers are looking at this issue earlier in the life cycle of the product design where environment-friendly materials such as recycled post-consumer materials, renewable materials and biodegradable materials are used.

Exploring the proportions of preferred packaging colour, Chi-square test results present that brown eco packaging colour was the most preferred by Slovenian consumers, followed by green, white and grey. However, there are many studies already listed in the literature review part, confirming that green packaging colour is the most preferred one. In contrary, above mentioned study by Magnier and Schoormans (2017) shows that in the case for Dutch consumers neither green nor brown was preferred, but white colour positively and significantly influenced the evaluation of the environmental friendliness, explained by the fact that the white colour denotes morality.

#### 4.8.2 Consumer attention to eco-labels on packaging

Exploring consumer buying behaviour during shopping, from the question of how often they look for any environment-friendly claims on packaging, we see that majority of them pay attention to eco-labels, or more precisely only 18 % declared that never look for eco-friendly claims during shopping. Measured on a 5-point scale, the mean score for this question is 3.22. We can further compare this results with the original source where the author is exploring this on a multinational level, comparing consumers from East Germany, West Germany, Great Brittan, Ireland and Italy. The mean score interval for all explored consumers varies between a narrow range, from 2.56 to 2.98. The researcher also shows that consumers pay least attention to eco-labels in West Germany. From those who pay attention, the Irish are the most, and the Germans least consistent. As the author itself states, this is not the main goal, but it leads to achieving the main goal of buying eco-friendly products, which is part of a greater concept of protecting the environment (Thøgersen, 2000).

This study finding suggest that paying attention to product eco-label is positively related to buying behaviour of eco packaged products. In the literature, there seems to be a disagreement about the impact of eco-labels on consumer buying behaviour, or at least no conclusive consensus exists. This can be understandable as different labels cannot be easily compared. To be able to get meaningful results, other factors have to be considered: who is

the label provider, is it own label or a third party provider, is it connected with the country regulations or not, or is it connected with later stage of packaging disposal i.e. sorting for recycling. However, similar results, where the organic label plays a significant role in consumers' choice for organic products can be seen in a study from Mondelaers, Verbeke and Van Huylenbroeck (2009). On the other side, many studies conclude the negative relationship, or that the awareness of eco-label do not necessarily lead to purchasing because of failure of understanding or unrecognizing of these labels (e.g. Leire & Thidell, 2005; Bleda & Valente, 2009; Joshi & Rahman, 2015).

The second sub-hypothesis tested whether consumers with higher levels of EC, pay more attention to environmentally friendly claims (eco-labels) during product purchasing and findings are that these two variables are significantly and positively correlated. In the literature there are other researchers supporting this finding, such as Bamberg (2003) emphasizing the positive relationship between explored variables. Van Birgelen et al. (2009), also find this factor as important in eco-friendly purchase and also disposal choices for beverages.

Consumers' environmental concern and its influence on buying decision is analysed again in testing H5, as part of consumer psychographic characteristics together with EK, PCE and PPR, using a regression analysis. More detailed explanation of how this variable influence the model from this perspective can be found in section 4.8.5.

#### 4.8.3 Barriers for buying eco-packaged products

Data analysis shows that the model proposed for explaining consumers' barriers toward eco packaged products is valid and accounts for one third of the total variance. This means that there are other influencing variables that additionally affect consumer barriers of buying such products and have to be further discovered and a new model which explains a bigger portion of the variability constructed. They have to be researched in order to reduce their influence and improve purchasing rates. Besides monetary barriers, the original source where the scale was adopted from (Tanner & Wölfing Kast, 2003) is exploring determinants of green purchases by Swiss consumers, including a list of barriers. Statistically significant predictors were found to be five personal factors: pro-environmental attitudes, fair trade, regional products, action-related knowledge, perceived time barrier and one contextual factor, frequency of supermarket use. Perceived monetary barriers in the above mentioned study for Swiss consumers was not proved to be a relevant predictor of the buying behaviour and the study provides evidence that cost do not influence green purchases. The explanation for this was that consumers with high motivation are less sensitive to price and are more likely to pay a premium for eco products.

In this thesis research price/monetary barriers are not the most important barrier for the intention to buy eco packaged products, although they are statistically significant at the 95% confidence interval. Regarding the direction of the association between the two variables, in

the thesis research it is discovered that they are negatively related. As Ham, Pap and Bilandžić (2016) state, influence of price upon purchasing decisions differs between countries, but the result is always the same, lower prices means expansion in demand, or the higher the monetary barriers, the less likely are consumers of buying eco packaged products. Same source shows very similar results as this, having cost barrier as significant but, not among the biggest barriers ( $t=-3.500$ ;  $p=0.001$ ;  $\beta=-0.123$ ).

However, there are many previous studies, which found that price has a big impact and that if an eco-packaged product is priced too high, it is likely that the green consumption is impeded (Kavilanz, 2008; Gleim et al., 2013). Price barrier is seen as crucial for buying organic food (Hill & Lynchehaun, 2002; McEachern & Willock, 2004, McEachern, Seaman, Padel & Foster, 2005, Lea & Worsley, 2005, Botonaki, Polymeros, Tsakiridou & Mattas, 2006).

Another tested variable, consumer environmental knowledge, makes greater unique contribution to the model of barriers towards buying eco packaged products. These actually relate to the sub-hypotheses of H3.b, in fact, the thesis research find that consumers' environmental knowledge has an effect of the buying behaviour of eco packaged products. As an explanation, it can be noted that in this research, consumer environmental knowledge is considered as perceived EK instead of factual, but the comparison of results is not strictly related only to the former, as there are studies that combine both under one factor – environmental knowledge.

This finding was confirmed in previous researches as well. In the original source of scale adoption from Mostafa (2006), the final regression model summary findings present that perceived environmental knowledge is positively and significantly connected to ecologically favourable attitudes and behaviours. Similar findings can be seen in other related studies of pro-environmental behaviour (Amyx, DeJong, Lin, Chakraborty & Wiener, 1994; Chan, 1999, Eze & Ndubisi, 2013). In the same manner, other studies show that lack of knowledge results with inability of decoding the information (Fullmer, Geiger & Parent, 1991; Schapira, Kumar, Lyman & McMillan, 1990) or it acts as a barrier for buying more in quantity (Harper & Makatouni, 2002; Demeritt, 2002).

The study of Tanner and Wölfling Kast (2003) explored action related knowledge and found that knowledge about organic food is influencing the intention for buying. Although the relationship among knowledge and behaviour was not strong, certain level of EK is necessary for taking proper behaviour ( $t=-4.499$ ;  $p=0.000$ ;  $\beta=-0.168$ ). There are also studies that did not find any relation between EK of the consumer and green buying behaviour (Chan & Lau, 2000; Ramayah & Rahbar, 2013; Wolsink, 2007).

Consumers' environmental knowledge is analysed again in testing H4, as part of consumer psychographic characteristics together with EC, PCE and PPR, using a regression analysis.

More detailed explanation of how this variable influence the model from this perspective can be found in section 4.8.5.

#### 4.8.4 Consumer scepticism

Analysing consumer trust in eco-labels and the level of scepticism, this study finding allow to conclude that Slovenian consumers are not sceptical toward eco-labels on product packaging. Support for this findings can be found in an analysis of Rahbar and Abdul Wahid (2011). They show that trust in eco-label is positively and significantly related to actual buying behaviour. They further explain the conclusion that consumers will choose eco products instead of their alternatives, when they trust the eco-label. In contrary to this findings, Ogunyo (2013) concludes that consumers are sceptical towards eco-labels and 88 % of the respondents in this study reported that it is important that manufacturers are inspected for claims of environmental responsible production.

The analysis of consumer scepticism on buying behaviour in this study demonstrate that the model proposed accounts for a small part of the total variance in consumer behaviour. This means that besides scepticism, there are other determinants that additionally affect this behaviour which have to be researched. Although findings show that scepticism negatively affects consumer buying behaviour, it was not statistically significant.

The study using the same scale for consumer scepticism, used hierarchical regression analysis for exploring this behaviour and the results show a negative correlation ( $\beta = -0.136$ ) and statistically significant influence of this variable on consumer buying behaviour (Mostafa, 2006). In the same manner, Petty, Gray-Lee, Scammon and Mayer (1994) theorize that one reason for consumer's rejections of green products may be due to distrust and scepticism about green marketing communications. Many other studies report conclusions that lack of trust in green product is negatively related to buying decision (e.g. Tsakiridou, Boutsouki, Zotos & Mattas, 2008; Magnusson et al., 2001; Gossling et al., 2005; McEachern et al., 2005).

#### 4.8.5 Consumer psychographic characteristics influence on buying behaviour

As already emphasized, by understanding the psychographic profile, marketers can better tailor their approach when promoting eco packaged products. The model proposed for explaining consumers' psychographic characteristics in this research is valid and accounts for more than a half of the total variance, but it also tells that there are other characteristics that can be explored from this perspective.

Apart from the findings regarding the influence of the independent variables as predictors in buying behaviour within the frames of a model, the findings of the individual influence of the independent variables should be discussed. These actually relate to the sub-hypotheses

of H5. In fact, this thesis research found a positive relationship between each of the variables with the dependent variable. EC, EK, PCE and PPR are all positively related to this green buying behaviour. This finding was confirmed in previous researches as well. Study exploring green consumer behaviour towards renewable energy (Bang et al., 2000), from where environmental concern scale was adopted, revealed that consumers who were more environmentally concerned were more willing to perform a green behaviour. Another study (Mostafa, 2006) exploring Egyptian consumers' green purchase intentions also found similar results, significant at the 0.001 level and positive standardized coefficient for EC (beta = 0.345).

Comparing the results of environmental knowledge with the article using the same scale as in this research (Mostafa, 2006), revealed consumers' EK to be positively and highly significantly related to ecologically favourable attitudes and behaviours (beta = 0.060). Other studies by Chan (2001); Tan (2011), Eze and Ndubisi (2013), also found that EK positively influenced both, the intention and actual buying of eco products. In contrary, there are some research findings that did not find any relation between EK and green behaviour (Chan & Lau, 2000; Ramayah & Rahbar, 2013; Wolsink, 2007) or such that lack of information influence negatively on this behaviour (Connell, 2010; Padel & Foster, 2005).

Kang et al. (2013) in their research (the research from where PCE and PPR scales are adopted), conclude that PCE and PPR influence on behavioural control of apparel consumption. PCE is one of the most studied variables (Joshi & Rahman, 2015) and many previous studies confirm the positive influence of this factor on consumer green buying behaviour (e.g., Gleim et al., 2013; Gupta & Ogden, 2009). The literature shows contradicting results for the effect of PPR on consumer buying behaviour. When the perceived personal relevance is of health concern (Magnusson, Arvola, Koivisto Hursti, Åberg & Sjöden, 2003), perceived personal relevance is positively related to buying behaviour. Whereas a study already mentioned in the literature review part, by Follows and Jobber (2000) give a conclusion about the negative correlation between these two variables, explaining that when consumers are purchasing green products they make a compensation between environmental concern and individual consequences.

#### **4.9 Managerial implications**

This research results lend numerous implications for managers and decision makers. Respectively, the results can contribute in establishing useful and valid marketing strategies which can lead to increasing rates in buying behaviour of eco packaged products among Slovenian consumers.

As packaging influence consumer perceptions and believes about product eco-friendliness, product managers are continuously working on improving their products through the choice of **packaging style elements** such as material and colour or the informative message through eco-labels. Knowledge about possible impact of packaging characteristics on consumers'

reactions are helpful for creating successful product packaging. The conclusion of packaging attributes preferences can help designers to enhance the design of their eco packaging and meet consumers' expectations of eco friendliness and ensure the acceptance of their packaging.

Understanding how consumers perceive **environmental claims** and knowing the level of trust and **scepticism** consumers have for them, can help marketers to establish a proper communication message. Research findings illustrate that Slovenian consumers trust in eco-labels on packaging, appropriated by insignificant levels of scepticism. Marketers and policy regulators should use this advantage and keep on enhancing their eco-labels. They should further continue ensuring consumers that environmental claims of their packages are adequate and trustworthy, make them understandable and more informative at the same time.

The impact of product **price or other monetary barriers** also holds implications for companies. With the purpose of reducing these barriers, it is needed that companies inform consumers of the cost-value ratio and make the eco packaged products more appealing as a lifestyle choice.

What comes as a managerial implication out of this research findings, regarding consumers' psychographics, would be that consumers interest of buying eco packaged products really depends from its environmental concern, knowledge and their perceived effectiveness and personal relevance. As consumers' **environmental concern** holds implications for companies, marketers of eco packaged products could promote pro-environmental behaviour by raising consumer awareness of an environmental issue and presenting the solution through the product packaging. Marketers can also make strategies to use more buzz marketing to encourage consumers' engagement in pro-environmental practices and recommendations.

**Environmental knowledge** was tested from two perspectives and based on both analyses we can conclude that it is a crucial factor influencing desired green behaviour. For Slovenian consumers we can say they are knowledgeable about eco packaging, but these rates could be improved. Marketing managers need to be certain about the level of consumers' knowledge about products that are eco packaged in order to build an effective communication to expand these levels.

Companies can take advantage of the findings from this research using the findings from **perceived consumer effectiveness** and **perceived personal relevance** in identifying potential consumers for their products, retain current consumers and to drive profitable consumer actions. Managers can use this conclusion by preparing campaigns where they would focus on pointing out the benefits of green behaviour with a goal of motivating and inspiring individuals to take actions of supporting sustainable choices. Also, it has been found that when people feel that a sustainable consumption is relevant to them personally, they are more likely to buy an eco-packaged product. As an implication, managers could

take steps to more closely align altruistic causes of buying such products, by emphasizing the altruistic aspects of them. In either way, it is essential for marketers to offer recommendations why it is good for them or for the environment, to buy products that use eco packaging.

As a conclusion, in the design of eco packaged products, marketers need to rely on consumers' preferences and design package which is self-explanatory, so that it conveys a message about its eco-friendliness. They also need to undertake other marketing activities associated with raising consumer environmental concern which at the same time can educate consumers, clearly indicating the benefits of buying their product, for the environment but for the individual consumer as well. When consumers are going to be able to clearly recognise all these characteristics, they will be more willing to buy that product believing they are making good for the environment and themselves.

#### **4.10 Limitations and recommendation for further research**

In this part of the study some research limitations are indicated and suggestions are proposed for further and better understanding of consumer buying behaviour of eco packaged products. The first thing to point out is the method of data collection using online survey, which main drawback is connected with sample representativeness.

Regarding product packaging design, except the packaging material and colour, more characteristics can be explored. Packaging shape is getting a lot of attention nowadays. More structural elements like packaging size or the existence of over-packaging could have been tested, as well as other graphical elements such as images. Regarding eco-friendly claims or labels, they can be detailed explored by their format and divide them by visual (logo, symbols) or verbal (textual) claims featuring more scientific arguments. Also, it would be of use eco-labels to be explored in terms of preferences, trust and scepticism by dividing them between own, companies' claim origin vs. certified by a third-party organization.

Another suggestion for further research is that psychographic and demographic consumer characteristic can be explored based on similar consumer lifestyle habits. Buying motivation of eco packaged products can be directly related to their post use phase, for example recycling. A relation between consumer pro-environmental behaviour can be explored based on egoistic motives of easing the process of recycling.

Future research should be focused on discovering and assessing other barriers for buying eco packaged products. From the literature reviewed, barriers who can influence on buying eco packaged products have been short-listed to environmental knowledge and monetary barriers. The suggestion is these factors to be combined together with other potential barriers. Taking a more insightful approach could provide a better comprehension of the changes in the proposed model.

Based on the literature review, another suggestion for further research is that other factors can be mentioned in regard to this topic, which were not explored in this research, but proved to be significant in previous studies of eco packaging or green consumer behaviour. Future studies could incorporate the effect of branding and company's overall environmental responsibility policy, product substitutes, or same products packaged in different sizes and packaging shapes; situational factors such as availability and convenience during shopping would also play an important role and should be explored. Conducting such a research would enable broadening the knowledge of other antecedents of Slovenian consumer buying behaviour. Further, a cross-cultural perspective could be incorporated in future studies, allowing comparisons of the factors that influence on consumer buying behaviour of eco packaged products in different countries.

## **CONCLUSION**

The main goal of this master's thesis research is to assimilate what is the influence of eco packaging characteristics and consumer perceptions of green practices on their buying behaviour. The analysis allows a conclusion to be formulated.

Based on the explored packaging style elements, we can conclude that Slovenian consumers mostly perceive paper and natural, plant based starch material packaging with brown and green colour as the eco friendliest packaging. For Slovenian consumers we can conclude that they are above the average environmentally conscious consumers, as they consider the amount of product packaging during purchasing and also look for more packaging information on eco-labels, especially consumers with higher levels of environmental concern. It was further concluded that paying attention to environmental claims (eco-labels) during product purchase is positively related to consumers' buying behaviour of eco-packaged products. Trust in eco-labels was confirmed by the insignificant levels of explored consumer scepticism. Further, the hypothesized negative relationship between scepticism and buying behaviour of eco-packaged products was not statistically significant.

Regarding product price/monetary barriers, the evidence shows that actions undertaken until now have not reached the expected level in inspiring sustainable consumption, and the potential for green consumerism growth is inhibited by this barrier. Price will always be an issue for consumers as they always tend to look for more affordable choices. Market growth and wide range of available products choices also add to customers' price sensitivity.

Key factors that influence the buying behaviour of eco packaged products were consumers' psychographic characteristics: environmental concern, environmental knowledge, perceived consumer effectiveness and perceived personal relevance. All of these factors appeared to be highly statistically significant, explaining high levels of the total variance of the proposed model. Psychographics normally provide a better method of segmenting consumers than demographics because consumption is heavily influenced by personality, lifestyle and social



practices (Briceno & Stagl, 2006). However, some of the demographic predictors in our model achieve statistical significance and we can conclude the most sustainability oriented consumers are females, and buying behaviour of eco packaged products increases with age.

Answering these five proposed hypothesis, we provide an answer to research questions stated at the beginning of this research. Conclusively, we can say that for non-sustainable consumption to be transformed into sustainable, there is a need of participation from all parties involved - consumers, companies, state regulations (Gandenberger, Garrelts & Wehlau, 2011). The enforcement of voluntary participation into green buying behaviour may be potentially efficient economic instruments for preserving the natural resources (Prosperi & Viscecchia, 2007).

## REFERENCE LIST

1. Ajzen, I. (1985). From intentions to actions: A theory of planned behaviour. In *Action control* (pp. 11-39). Heidelberg: Springer.
2. Ampuero, O. & Vila, N. (2006). Consumer perceptions of product packaging. *Journal of consumer marketing*, 23(2), 100-112.
3. Amyx, D. A., DeJong, P. F., Lin, X., Chakraborty, G. & Wiener, J. L. (1994, February). Influencers of purchase intentions for ecologically safe products: An exploratory study. *AMA winter educators' conference proceedings* (pp. 341-347). Chicago, IL: American Marketing Association.
4. Apaydin, F. & Szczepaniak, M. (2017). Analyzing the profile and purchase intentions of green consumers in Poland. *Ekonomika*, 96(1), 93-112.
5. Arushanyan, Y., Ekener, E. & Moberg, Å. (2017). Sustainability assessment framework for scenarios–SAFS. *Environmental impact assessment review*, 63, 23-34.
6. Avcilara, M. Y. & Demirgünes, B. K. (2017). Developing Perceived Greenwash Index and Its Effect on Green Brand Equity: A Research on Gas Station Companies in Turkey. *International Business Research*, 10(1), 222-239.
7. Baldassarre, F. & Campo, R. (2016). Sustainability as a marketing tool: To be or to appear to be. *Business Horizons*, 59(4), 421-429.
8. Bamberg, S. (2003). How does environmental concern influence specific environmentally related behaviors? A new answer to an old question. *Journal of environmental psychology*, 23(1), 21-32.
9. Bang, H. K., Ellinger, A. E., Hadjimarcou, J. & Traichal, P. A. (2000). Consumer concern, knowledge, belief, and attitude toward renewable energy: An application of the reasoned action theory. *Psychology & Marketing*, 17(6), 449-468.
10. Bator, R. & Cialdini, R. (2000). The application of persuasion theory to the development of effective proenvironmental public service announcements. *Journal of Social Issues*, 56(3), 527-542.
11. Balderjahn, I., Peyer, M., Seegebarth, B., Wiedmann, K. P. & Weber, A. (2018). The many faces of sustainability-conscious consumers: A category-independent typology. *Journal of Business Research*, 91, 83-93.
12. Baye, M. R., Prince, J. & Squalli, J. (2006). *Managerial economics and business strategy*. New York, NY: McGraw-Hill.
13. Belk, R. W. (1988). Possessions and the extended self. *Journal of consumer research*, 15(2), 139-168.
14. Beck, K. (2018). *What Is the Tukey HSD Test?* Retrieved August 3, 2018 from <http://classroom.synonym.com/tukey-hsd-test-2611.html>
15. Belluz, J. & Viswanathan, R. (2018, December 04). *The problem with all the plastic that's leaching into your food*. Retrieved March 10, 2019 from <https://www.vox.com/science-and-health/2018/9/11/17614540/plastic-food-containers-contamination-health-risks>

16. Bickart, B. A. & Ruth, J. A. (2012). Green eco-seals and advertising persuasion. *Journal of advertising*, 41(4), 51-67.
17. Bleda, M. & Valente, M. (2009). Graded eco-labels: a demand-oriented approach to reduce pollution. *Technological Forecasting and Social Change*, 76(4), 512-524.
18. Boks, C. & Stevels, A. (2007). Essential perspectives for design for environment. experiences from the electronics industry. *International Journal of Production Research*, 45(18/19), 4021-4039.
19. Bolton, R. N. & Drew, J. H. (1991). A multistage model of customers' assessments of service quality and value. *Journal of consumer research*, 17(4), 375-384.
20. Bonini, S. & Oppenheim, J. (2008). Cultivating the green consumer. *Stanford Social Innovation Review*, 6(4), 56-61.
21. Borgman, I., Mulder-Nijkamp, M. & de Koeijer, B. (2018, June). The influence of packaging design features on consumers' purchasing & recycling behavior. In *21st IAPRI World Conference on Packaging 2018* (pp. 276-284). Zhuhai.
22. Botonaki, A., Polymeros, K., Tsakiridou, E. & Mattas, K. (2006). The role of food quality certification on consumers' food choices. *British Food Journal*, 108(2), 77-90.
23. Bray, J., Johns, N. & Kilburn, D. (2011). An exploratory study into the factors impeding ethical consumption. *Journal of Business Ethics*, 98(4), 597-608.
24. Briceno, T. & Stagl, S. (2006). The role of social processes for sustainable consumption. *Journal of Cleaner Production*, 14(17), 1541-1551.
25. Briggs, S. R. & Cheek, J. M. (1986). The role of factor analysis in the development and evaluation of personality scales. *Journal of personality*, 54(1), 106-148.
26. Brundtland, G. H. (1987). Report of the World Commission on environment and development: our common future. Oxford: Oxford University Press.
27. Butler, S. M. & Francis, S. (1997). The effects of environmental attitudes on apparel purchasing behavior. *Clothing and Textiles Research Journal*, 15(2), 76-85.
28. Calfee, J. E. & Ringold, D. J. (1988). Consumer scepticism and advertising regulation: what do the polls show. *ACR North American Advances*.
29. Cameron, S. (2018, October 30). *What Is Eco-Friendly Packaging?* Bizfluent. Retrieved March 20, 2019 from <https://bizfluent.com/facts-6743400-eco-friendly-packaging-.html>
30. Can naked packaging clean up the environment. (n.d.). Retrieved March 23, 2019, from <https://www.cbscompany.com/blog/can-naked-packaging-clean-up-the-environment/>
31. Carlson, L., Grove, S. J. & Kangun, N. (1993). A content analysis of environmental advertising claims: A matrix method approach. *Journal of advertising*, 22(3), 27-39.
32. Carlson, L., Grove, S. J., Kangun, N. & Polonsky, M. J. (1996). An international comparison of environmental advertising: substantive versus associative claims. *Journal of Macromarketing*, 16(2), 57-68.
33. Carrete, L., Castaño, R., Felix, R., Centeno, E. & González, E. (2012). Green consumer behavior in an emerging economy: confusion, credibility, and compatibility. *Journal of consumer marketing*, 29(7), 470-481.

34. Carrus, G., Passafaro, P. & Bonnes, M. (2008). Emotions, habits and rational choices in ecological behaviours: The case of recycling and use of public transportation. *Journal of environmental psychology*, 28(1), 51-62.
35. Celsi, R. L., Chow, S., Olson, J. C. & Walker, B. A. (1992). The construct validity of intrinsic sources of personal relevance: An intra-individual source of felt involvement. *Journal of Business Research*, 25(2), 165-185.
36. Chan, R. Y. (1999). Environmental attitudes and behavior of consumers in China: survey findings and implications. *Journal of international consumer marketing*, 11(4), 25-52.
37. Chan, R. Y. & Lau, L. B. (2000). Antecedents of green purchases: a survey in China. *Journal of consumer marketing*, 17(4), 338-357.
38. Chan, R. Y. (2001). Determinants of Chinese consumers' green purchase behavior. *Psychology & marketing*, 18(4), 389-413.
39. Chan, R. Y. (2004). Consumer responses to environmental advertising in China. *Marketing Intelligence & Planning*, 22(4), 427-437.
40. Chase, D. & Smith, T. K. (1992). Consumers keen on green but marketers don't deliver. *Advertising Age*, 63(26), S-2.
41. Chen, T. B. & Chai, L. T. (2010). Attitude towards the environment and green products: Consumers' perspective. *Management science and engineering*, 4(2), 27- 39.
42. Chen, Y. S. & Chang, C. H. (2013). Greenwash and green trust: The mediation effects of green consumer confusion and green perceived risk. *Journal of Business Ethics*, 114(3), 489-500.
43. Cherian, J. & Jacob, J. (2012). Green marketing: A study of consumers' attitude towards environment friendly products. *Asian social science*, 8(12), 117.
44. Cho, Y. N. (2015). Different shades of green consciousness: The interplay of sustainability labeling and environmental impact on product evaluations. *Journal of business ethics*, 128(1), 73-82.
45. Circular Ecology. (n.d.). *Sustainability and Sustainable Development*. Retrieved May 4, 2019, from <http://www.circularecology.com/sustainability-and-sustainable-development.html#.XNnrgxQzbIU>
46. Connell, K. Y. H. (2010). Internal and external barriers to eco-conscious apparel acquisition. *International Journal of Consumer Studies*, 34(3), 279-286.
47. Connolly, J. & Prothero, A. (2008). Green consumption: Life-politics, risk and contradictions. *Journal of consumer culture*, 8(1), 117-145.
48. Costas, C. (2018, June 27). *This Is the World's Most Sustainable Country*. Retrieved March 27, 2019 from <https://www.nationalgeographic.com/travel/destinations/europe/slovenia/worlds-most-sustainable-eco-green-country/>
49. Coskun Arslan, M. & Kisacik, H. (2017). The Corporate Sustainability Solution: Triple Bottom Line. *Journal of Accounting & Finance*, 18-34.
50. Culiberg, B. & Bajde, D. (2013). Consumer recycling: An ethical decision-making process. *Journal of Consumer Behaviour*, 12(6), 449-459.

51. D'Souza, C. (2004). Ecolabel programmes: a stakeholder (consumer) perspective. *Corporate Communications: An International Journal*, 9(3), 179-188.
52. Dakskobler, L. (2019, May 23). *From no recycling to zero waste: how Ljubljana rethought its rubbish*. Retrieved August 9, 2019 from <https://www.theguardian.com/cities/2019/may/23/zero-recycling-to-zero-waste-how-ljubljana-rethought-its-rubbish>
53. Davis, J. J. (1991). A blueprint for green marketing. *Journal of Business Strategy*, 12(4), 14-17.
54. de Barcellos, M. D., Krystallis, A., de Melo Saab, M. S., Kügler, J. O. & Grunert, K. G. (2011). Investigating the gap between citizens' sustainability attitudes and food purchasing behaviour: empirical evidence from Brazilian pork consumers. *International Journal of Consumer Studies*, 35(4), 391-402.
55. deVaus, D.A. (2002) *Surveys in Social Research* (5th ed.). London: Routledge.
56. Definition of sustainable packaging. (2011, August). *Sustainable Packaging Coalition*. Retrieved October 30, 2018 from <https://sustainablepackaging.org/wp-content/uploads/2017/09/Definition-of-Sustainable-Packaging.pdf>
57. Delafrooz, N., Taleghani, M. & Nouri, B. (2014). Effect of green marketing on consumer purchase behavior. *QScience Connect*, (1), 5.
58. Demeritt, L. (2002). *All things organic 2002: A look at the organic consumer*. Bellevue, WA: The Hartman Group.
59. Dempsey, N., Bramley, G., Power, S. & Brown, C. (2011). The social dimension of sustainable development: Defining urban social sustainability. *Sustainable development*, 19(5), 289-300.
60. do Paco, A. M. F. & Reis, R. (2012). Factors affecting skepticism toward green advertising. *Journal of advertising*, 41(4), 147-155.
61. do Paco, A., Shiel, C. & Alves, H. (2019). A new model for testing green consumer behaviour. *Journal of cleaner production*, 207, 998-1006.
62. Draskovic, N., Temperley, J. & Pavicic, J. (2009). Comparative perception (s) of consumer goods packaging: Croatian consumers perspective (s). *International journal of management cases*, 11(2), 154-163.
63. Drucker, P. F. (1955). *The practice of management*. London: Heinemann.
64. Dunlap, R. E. & Jones, R. E. (2002). Environmental concern: Conceptual and measurement issues. *Handbook of Environmental Sociology*. ST: *Greenwood Press, Westport*.
65. Dunlap, R. E. & Van Liere, K. D. (1978). The "new environmental paradigm". *The journal of environmental education*, 9(4), 10-19.
66. D'souza, C. & Taghian, M. (2005). Green advertising effects on attitude and choice of advertising themes. *Asia Pacific Journal of Marketing and Logistics*, 17(3), 51-66.
67. Eimpack. (2014, January). *Economic Impact of the Packaging and Packaging Waste Directive Cost and Benefits of Packaging Waste Recycling*. Retrieved May 10, 2019 from [http://eimpack.ist.utl.pt/docs/Final%20report\\_Eimpack\\_rev\\_nuno\\_PS\\_RCM.pdf](http://eimpack.ist.utl.pt/docs/Final%20report_Eimpack_rev_nuno_PS_RCM.pdf)

68. Elkington, J. (1994). Towards the sustainable corporation: Win-win-win business strategies for sustainable development. *California management review*, 36(2), 90-100.
69. Ellen, P., Eroglu, D. & Webb, D. (1997). *Consumer Judgments in a Changing Information Environment: How Consumers Respond to 'Green Marketing Claims* (working paper). Georgia: State University.
70. Ellen, P. S., Wiener, J. L. & Cobb-Walgren, C. (1991). The role of perceived consumer effectiveness in motivating environmentally conscious behaviors. *Journal of public policy & marketing*, 10(2), 102-117.
71. Environmental Resources Management. (n.d.). booklet. Retrieved May 6, 2019, from [https://erm.com/globalassets/documents/publications/2009/erm\\_product\\_stewardship\\_booklet.pdf](https://erm.com/globalassets/documents/publications/2009/erm_product_stewardship_booklet.pdf)
72. Esslinger, H. (2011). Sustainable design: Beyond the innovation-driven business model. *Journal of product innovation management*, 28(3), 401-404.
73. Eze, U. C. & Ndubisi, N. O. (2013). Green buyer behavior: Evidence from Asia consumers. *Journal of Asian and African Studies*, 48(4), 413-426.
74. Fasano, E., Bono-Blay, F., Cirillo, T., Montuori, P. & Lacorte, S. (2012). Migration of phthalates, alkylphenols, bisphenol A and di (2-ethylhexyl) adipate from food packaging. *Food Control*, 27(1), 132-138.
75. Field, A. (2009). *Discovering Statistics Using SPSS* (3rd ed.) CA: Sage Publications.
76. Fisk, G. (1974). *Marketing and the ecological crisis*. New York: Harper & Row.
77. Follows, S. B. & Jobber, D. (2000). Environmentally responsible purchase behaviour: a test of a consumer model. *European Journal of Marketing*, 34(5/6), 723- 746.
78. Food contact materials and chemical contamination. (2016, February). *Health and Environmental Alliance HEAL*. Retrieved March 15, 2019, from [https://www.env-health.org/IMG/pdf/15022016\\_-\\_heal\\_briefing\\_fcm\\_final.pdf](https://www.env-health.org/IMG/pdf/15022016_-_heal_briefing_fcm_final.pdf).
79. Fotopoulos, C. & Krystallis, A. (2002). Organic product avoidance: reasons for rejection and potential buyers' identification in a countrywide survey. *British Food Journal*, 104(3/4/5), 233-260.
80. Fransson, N. & Gärling, T. (1999). Environmental concern: Conceptual definitions, measurement methods, and research findings. *Journal of environmental psychology*, 19(4), 369-382.
81. Fryxell, G. E. & Lo, C. W. (2003). The influence of environmental knowledge and values on managerial behaviours on behalf of the environment: An empirical examination of managers in China. *Journal of business ethics*, 46(1), 45-69.
82. Fuller, D. A. (1999). *Sustainable marketing: Managerial-ecological issues*. Thousand Oaks, CA: Sage Publications.
83. Fullmer, S., Geiger, C. J. & Parent, C. R. (1991). Consumers' knowledge, understanding, and attitudes toward health claims on food labels. *Journal of the American Dietetic Association*, 91(2), 166-171.
84. Furlow, N. E. (2010). Greenwashing in the new millennium. *The Journal of Applied Business and Economics*, 10(6), 22.

85. Garrett, R. (2012, February 15). *The Difference Between Green And Sustainability*. Retrieved May 9, 2019, from <https://www.cleanlink.com/hs/article/The-Difference-Between-Green-And-Sustainability--13976>
86. Geller, Scott E. (1992), It Takes More than Information to Save Energy. *American Psychologist*, 47(6), 814–5.
87. Gershoff, A. D. & Frels, J. K. (2015). What makes it green? The role of centrality of green attributes in evaluations of the greenness of products. *Journal of Marketing*, 79(1), 97-110.
88. Gill, J. D., Crosby, L. A. & Taylor, J. R. (1986). Ecological concern, attitudes, and social norms in voting behavior. *Public Opinion Quarterly*, 50(4), 537-554.
89. Gillespie, E. (2008). Stemming the tide of greenwash': How an ostensibly greener market could pose challenges for environmentally sustainable consumerism. *Consumer Policy Review*, 18(3), 79.
90. Gleim, M. R., Smith, J. S., Andrews, D. & Cronin Jr, J. J. (2013). Against the green: a multi-method examination of the barriers to green consumption. *Journal of retailing*, 89(1), 44-61.
91. Goh, S. K. & Balaji, M. S. (2016). Linking green skepticism to green purchase behavior. *Journal of Cleaner Production*, 131, 629-638.
92. Golob, U., Kos Koklič, M., Slabe Erker, R., Murovec, N., Ogorevc, M., Bartolj, T. & Zabkar, V. (2017). Going Beyond Green: Exploring Sustainability in Slovenia. In *Green Economy in the Western Balkans: Towards a Sustainable Future* (pp. 41-77). Bingley, UK: Emerald Publishing Limited.
93. Goodland, R. (1995). The concept of environmental sustainability. *Annual review of ecology and systematics*, 26(1), 1-24.
94. Gordon, R., Carrigan, M. & Hastings, G. (2011). A framework for sustainable marketing. *Marketing theory*, 11(2), 143-163.
95. Gossling, S., Kunkel, T., Schumacher, K., Heck, N., Birkemeyer, J., Froese, J. ... & Schliermann, E. (2005). A target group-specific approach to “green” power retailing: students as consumers of renewable energy. *Renewable and Sustainable Energy Reviews*, 9(1), 69-83.
96. Gandenberger, C., Garrelts, H. & Wehlau, D. (2011). Assessing the effects of certification networks on sustainable production and consumption: The cases of FLO and FSC. *Journal of consumer policy*, 34(1), 107-126.
97. Grunert, S. C. & Juhl, H. J. (1995). Values, environmental attitudes, and buying of organic foods. *Journal of economic psychology*, 16(1), 39-62.
98. Gupta, S. & Ogden, D. T. (2009). To buy or not to buy? A social dilemma perspective on green buying. *Journal of Consumer Marketing*, 26(6), 376-391.
99. Haidar, H. (2013). *What is an Associate's Degree*. Top Universities. Retrieved August 5, 2019 from <https://www.topuniversities.com/blog/what-associates-degree>
100. Handayani, W. (2017). Green Consumerism: an Eco-Friendly Behaviour Form Through The Green Product Consumption and Green Marketing. *Sinergi: Jurnal Ilmiah Ilmu Manajemen*, 7(2), 25-29.

101. Ham, M., Pap, A. & Bilandžić, K. (2016, January). Perceived barriers for buying organic food products. In *18th International Scientific Conference on Economic and Social Development–“Building Resilient Society”* (pp. 162-174). Varazdin: Varazdin Development and Entrepreneurship Agency.
102. Hansen, U. (1986). Verpackung und konsumentenverhalten (packaging and consumer attitudes). *Marketing*, 8(1), 5-12.
103. Hansen, U. & Kull, S. (1994). Öko-label als umweltbezogenes Informationsinstrument: Begründungszusammenhänge und Interessen. *Marketing ZFP*, 16(4), 265-274.
104. Harper, G. C. & Makatouni, A. (2002). Consumer perception of organic food production and farm animal welfare. *British Food Journal*, 104(3/4/5), 287-299.
105. Harrison, R., Newholm, T. & Shaw, D. (2005). *The ethical consumer*. Sage.
106. Hart, S. L. (1995). A natural-resource-based view of the firm. *Academy of management review*, 20(4), 986-1014.
107. Hartmann, P. & Apaolaza-Ibanez, V. (2010). Beyond savanna: An evolutionary and environmental psychology approach to behavioral effects of nature scenery in green advertising. *Journal of Environmental Psychology*, 30(1), 119-128.
108. Henion, K.E. & Kinneary, T.C. (1976), *Ecological Marketing*. Chicago: American Marketing Association.
109. Herbes, C., Beuthner, C. & Ramme, I. (2018). Consumer attitudes towards biobased packaging—A cross-cultural comparative study. *Journal of cleaner production*, 194, 203-218.
110. Hill, H. & Lynchehaun, F. (2002). Organic milk: attitudes and consumption patterns. *British Food Journal*, 104(7), 526-542.
111. Hines, J. M., Hungerford, H. R. & Tomera, A. N. (1987). Analysis and synthesis of research on responsible environmental behavior: A meta-analysis. *The Journal of environmental education*, 18(2), 1-8.
112. Holzer, D. (2018, December 10). *What Does Eco-Friendly Mean?* Home Guides | SF Gate. Retrieved May 25, 2019 from <http://homeguides.sfgate.com/ecofriendly-mean-78718.html>
113. Hoogland, C. T., de Boer, J. & Boersema, J. J. (2007). Food and sustainability: Do consumers recognize, understand and value on-package information on production standards. *Appetite*, 49(1), 47-57.
114. Hughner, R. S., McDonagh, P., Prothero, A., Shultz, C. J. & Stanton, J. (2007). Who are organic food consumers? A compilation and review of why people purchase organic food. *Journal of Consumer Behaviour: An International Research Review*, 6(2-3), 94-110.
115. Hunsberger, J. (2018, August 29). *Three Sustainability Trends Reshaping the Food Packaging Industry*. Retrieved March 22, 2019 from <https://sustainablebrands.com/read/press-release/three-sustainability-trends-reshaping-the-food-packaging-industry>



116. Hustvedt, G. & Dickson, M. A. (2009). Consumer likelihood of purchasing organic cotton apparel: Influence of attitudes and self-identity. *Journal of Fashion Marketing and Management: An International Journal*, 13(1), 49-65.
117. Hutchings, J. B. (2003). Expectations and the food industry: the impact of colors and appearance. US: Springer.
118. Imiru, G. A. (2017). The Effect of Packaging Attributes on Consumer Buying Decision Behavior in Major Commercial Cities in Ethiopia. *International Journal of Marketing Studies*, 9(6), 43-54.
119. Jacoby, J. (1984). Perspectives on information overload. *Journal of consumer research*, 10(4), 432-435.
120. Joshi, Y. & Rahman, Z. (2015). Factors affecting green purchase behaviour and future research directions. *International Strategic Management Review*, 3(1/2), 128-143.
121. Kalafatis, S. P., Pollard, M., East, R. & Tsogas, M. H. (1999). Green marketing and Ajzen's theory of planned behaviour: a cross-market examination. *Journal of consumer marketing*, 16(5), 441-460.
122. Kang, J., Liu, C. & Kim, S. H. (2013). Environmentally sustainable textile and apparel consumption: the role of consumer knowledge, perceived consumer effectiveness and perceived personal relevance. *International Journal of Consumer Studies*, 37(4), 442-452.
123. Katz, B. (2018, March 16). *Study Finds Microplastics in More than 90 Percent of Tested Water Bottles*. Retrieved March 12, 2019 from <https://www.smithsonianmag.com/smart-news/study-finds-microplastics-more-90-percent-tested-water-bottles-2-180968507/>
124. Kavilanz, P. B. (2008). *The high price of going 'organic'*. Retrieved May, 06 2019 from [https://money.cnn.com/2008/04/23/news/companies/organics\\_backlash/index.htm?postversion=2008042314](https://money.cnn.com/2008/04/23/news/companies/organics_backlash/index.htm?postversion=2008042314)
125. Keller, K. L. (2009). *Strategic Brand Management* (3rd ed). US: Prentice Hall.
126. Kempton, W., Boster, J. S. & Hartley, J. A. (1996). *Environmental values in American culture*. Cambridge, MA: Mit Press.
127. Khan, M. F. (2017). Sustainable marketing-A revolution. *International Research Journal of Commerce, Arts and Science*, 8(11), 22-25.
128. Khare, V., Nema, S. & Baredar, P. (2013). Status of solar wind renewable energy in India. *Renewable and Sustainable Energy Reviews*, 27, 1-10.
129. Kim, H. S. & Damhorst, M. L. (1998). Environmental concern and apparel consumption. *Clothing and Textiles Research Journal*, 16(3), 126-133.
130. Kim, Y. & Choi, S. M. (2005). *Antecedents of green purchase behavior: An examination of collectivism, environmental concern, and PCE*. In NA - Advances in Consumer Research (pp. 592-599). Duluth, MN: Association for Consumer Research.
131. Koenig-Lewis, N., Palmer, A., Dermody, J. & Urbye, A. (2014). Consumers' evaluations of ecological packaging—Rational and emotional approaches. *Journal of environmental psychology*, 37, 94-105.

132. Kollmuss, A. & Agyeman, J. (2002). Mind the gap: why do people act environmentally and what are the barriers to pro-environmental behavior. *Environmental education research*, 8(3), 239-260.
133. Kolppo, V. (2009). *Ecodesign of hybrid paperboard tray: sustainable and eco-appearance in packaging* (graduation project). Lahti: University of Applied Sciences.
134. Kotler, P. & Keller, K L. (2005). *Marketing management* (12th ed.). Englewood Cliffs: Prentice Hall.
135. Kotler, P., Kartajaya, H. & Setiawan, I. (2010). *Marketing 3.0: From products to customers to the human spirit*. Hoboken: John Wiley & Sons.
136. Kotler, P. & Keller, K. (2011). *Marketing management* (14th ed.). Englewood Cliffs: Prentice Hall.
137. Kuhn, G. L. (1999). *Environmental labels and entry into an environmentally differentiated market under asymmetric information*. (working paper). Rostock: Universitat Rostock.
138. Labrecque, L. I., Patrick, V. M. & Milne, G. R. (2013). The marketers' prismatic palette: A review of colour research and future directions. *Psychology & Marketing*, 30(2), 187-202.
139. Lamb, C. W., Hair, J. F. & McDaniel, C. D. (2012). *Essentials of marketing*. Mason, OH: South-Western Cengage Learning.
140. Lea, E. & Worsley, T. (2005). Australians' organic food beliefs, demographics and values. *British food journal*, 107(11), 855-869.
141. Lee, K. (2011). The Green Purchase Behavior of Hong Kong Young Consumers: The Role of Peer Influence, Local Environmental Involvement, and Concrete Environmental Knowledge. *Journal of International Consumer Marketing*, 23(1), 21-44.
142. Lee, N., Choi, Y. J., Youn, C. & Lee, Y. (2012). Does green fashion retailing make consumers more eco-friendly? The influence of green fashion products and campaigns on green consciousness and behavior. *Clothing and Textiles Research Journal*, 30(1), 67-82.
143. Lee, R. M. (1993). *Doing research on sensitive topics*. London: Sage.
144. Lehtonen, M. (2004). The environmental-social interface of sustainable development: capabilities, social capital, institutions. *Ecological economics*, 49(2), 199-214.
145. Leire, C. & Thidell, Å. (2005). Product-related environmental information to guide consumer purchases—a review and analysis of research on perceptions, understanding and use among Nordic consumers. *Journal of Cleaner Production*, 13(10/11), 1061-1070.
146. Leung, S. O. (2011). A comparison of psychometric properties and normality in 4-, 5-, 6-, and 11-point Likert scales. *Journal of Social Service Research*, 37(4), 412-421.
147. Leonidou, C. N., Katsikeas, C. S. & Morgan, N. A. (2013). "Greening" the marketing mix: do firms do it and does it pay off. *Journal of the Academy of Marketing Science*, 41(2), 151-170.
148. Leonidou, C. N. & Skarmeas, D. (2017). Gray shades of green: Causes and consequences of green skepticism. *Journal of Business Ethics*, 144(2), 401-415.

149. Levin, G. (1990). Consumers turning green: JWT survey. *Advertising Age*, 61(47), 61-74.
150. Lichtenfeld, S., Elliot, A. J., Maier, M. A. & Pekrun, R. (2012). Fertile green: Green facilitates creative performance. *Personality and Social Psychology Bulletin*, 38(6), 784-797.
151. Lin, S. H. (2009). Exploratory evaluation of potential and current consumers of organic cotton in Hawaii. *Asia Pacific Journal of Marketing and Logistics*, 21(4), 489-506.
152. Lin, S. (2010). A case study in Hawaii: who will pay more for organic cotton. *International Journal of Consumer Studies*, 34(4), 481-489.
153. Lindenberg, S. & Steg, L. (2007). Normative, gain and hedonic goal frames guiding environmental behavior. *Journal of Social Issues*, 63(1), 117-137.
154. Lindh, H., Olsson, A. & Williams, H. (2016). Consumer perceptions of food packaging: contributing to or counteracting environmentally sustainable development. *Packaging Technology and Science*, 29(1), 3-23.
155. Lindh, H., Williams, H., Olsson, A. & Wikström, F. (2016). Elucidating the indirect contributions of packaging to sustainable development: A terminology of packaging functions and features. *Packaging Technology and Science*, 29(4/5), 225-246.
156. Lockie, S., Lyons, K., Lawrence, G. & Mummery, K. (2002). Eating 'green': motivations behind organic food consumption in Australia. *Sociologia ruralis*, 42(1), 23-40.
157. Lord, K. R. & Putrevu, S. (1998). Acceptance of recycling appeals: The moderating role of perceived consumer effectiveness. *Journal of Marketing Management*, 14(6), 581-590.
158. Lunde, M. B. (2018). Sustainability in marketing: a systematic review unifying 20 years of theoretical and substantive contributions (1997–2016). *AMS Review*, 8(3/4), 85-110.
159. Lynn, M. & Oldenquist, A. (1986). Egoistic and nonegoistic motives in social dilemmas. *American Psychologist*, 41(5), 529.
160. Lyon, T. P. & Maxwell, J. W. (2011). Greenwash: Corporate environmental disclosure under threat of audit. *Journal of Economics & Management Strategy*, 20(1), 3-41.
161. Madu, C. N. & Kuei, C. H. (2012). Introduction to sustainability management. In *Handbook of Sustainability Management* (pp. 1-22). Singapore: World Scientific.
162. Magnier, L. & Crié, D. (2015). Communicating packaging eco-friendliness: An exploration of consumers' perceptions of eco-designed packaging. *International Journal of Retail & Distribution Management*, 43(4/5), 350-366.
163. Magnier, L. & Schoormans, J. (2015). Consumer reactions to sustainable packaging: The interplay of visual appearance, verbal claim and environmental concern. *Journal of Environmental Psychology*, 44, 53-62.
164. Magnier, L. & Schoormans, J. (2017). How do packaging material, colour and environmental claim influence package, brand and product evaluations. *Packaging Technology and Science*, 30(11), 735-751.

165. Magnusson, M. K., Arvola, A., Koivisto Hursti, U. K., Åberg, L. & Sjöden, P. O. (2001). Attitudes towards organic foods among Swedish consumers. *British food journal*, 103(3), 209-227.
166. Magnusson, M. K., Arvola, A., Hursti, U. K., Åberg, L. & Sjöden, P. O. (2003). Choice of organic foods is related to perceived consequences for human health and to environmentally friendly behaviour. *Appetite*, 40(2), 109-117.
167. Mahesh, N. & Ganapathi, R. (2012). Influence of consumer's socio-economic characteristics and attitude on purchase intention of green products. *International Journal of Business and Management*, 4(5), 33-37.
168. Malhotra, N. K. (2010). *Marketing research: An applied orientation* (6th ed.). Upper Saddle River: Pearson.
169. Maniatis, P. (2016). Investigating factors influencing consumer decision-making while choosing green products. *Journal of Cleaner Production*, 132, 215-228.
170. Markham, D., Khare, A. & Beckman, T. (2014). Greenwashing: a proposal to restrict its spread. *Journal of Environmental Assessment Policy and Management*, 16(04), 1450030.
171. Marshall, D., Stuart, M. & Bell, R. (2006). Examining the relationship between product package color and product selection in preschoolers. *Food quality and preference*, 17(7/8), 615-621.
172. Martinho, G., Pires, A., Portela, G. & Fonseca, M. (2015). Factors affecting consumers' choices concerning sustainable packaging during product purchase and recycling. *Resources, Conservation and Recycling*, 103, 58-68.
173. Maslow, A. H. (2013). *Toward a psychology of being*. Simon and Schuster.
174. Matthes, J. & Wonneberger, A. (2014). The skeptical green consumer revisited: Testing the relationship between green consumerism and skepticism toward advertising. *Journal of advertising*, 43(2), 115-127.
175. McCarty, J. A. & Shrum, L. J. (2001). The influence of individualism, collectivism, and locus of control on environmental beliefs and behavior. *Journal of Public Policy & Marketing*, 20(1), 93-104.
176. McEachern, M., Seaman, C., Padel, S. & Foster, C. (2005). Exploring the gap between attitudes and behaviour. *British food journal*.
177. McEachern, M. G. & Warnaby, G. (2008). Exploring the relationship between consumer knowledge and purchase behaviour of value-based labels. *International Journal of Consumer Studies*, 32(5), 414-426.
178. McEachern, M. G. & Willock, J. (2004). Producers and consumers of organic meat: A focus on attitudes and motivations. *British Food Journal*, 106(7), 534-552.
179. McNeal, J. U. & Ji, M. F. (2003). Children's visual memory of packaging. *Journal of Consumer Marketing*, 20(5), 400-427.
180. McQuarrie, E. F. & Munson, J. M. (1992). A revised product involvement inventory: Improved usability and validity. *ACR North American Advances*.
181. Meneses, G. D. (2010). Refuting fear in heuristics and in recycling promotion. *Journal of business research*, 63(2), 104-110.

182. Mishra, P. & Sharma, P. (2010). Green marketing in India: Emerging opportunities and challenges. *Journal of Engineering, Science and Management Education*, 3(1), 9-14.
183. Mishra, P. & Sharma, P. (2014). Green marketing: Challenges and opportunities for business. *BVIMR Management Edge*, 7(1), 78-86.
184. Mitchell, V. W. (1999). Consumer perceived risk: conceptualisations and models. *European Journal of marketing*, 33(1/2), 163-195.
185. Mohd Suki, N. (2013). Young consumer ecological behaviour: the effects of environmental knowledge, healthy food, and healthy way of life with the moderation of gender and age. *Management of Environmental Quality: An International Journal*, 24(6), 726-737.
186. Mohr, L. A., Eroğlu, D. & Ellen, P. S. (1998). The development and testing of a measure of skepticism toward environmental claims in marketers' communications. *Journal of consumer affairs*, 32(1), 30-55.
187. Moir, S. & Carter, K. (2012, September). Diagrammatic representations of sustainability—a review and synthesis. In Smith, S.D (Ed) *Procs 28th Annual ARCOM Conference* (pp. 1479-1489). Edinburgh, UK: Association of Researchers in Construction Management.
188. Moisander, J. (2007). Motivational complexity of green consumerism. *International Journal of Consumer Studies*, 31(4), 404-409.
189. Mondelaers, K., Verbeke, W. & Van Huylenbroeck, G. (2009). Importance of health and environment as quality traits in the buying decision of organic products. *British Food Journal*, 111(10), 1120-1139.
190. Mostafa, M. M. (2006). Antecedents of Egyptian consumers' green purchase intentions: A hierarchical multivariate regression model. *Journal of International Consumer Marketing*, 19(2), 97-126.
191. Mostafa, M. M. (2009). Shades of green: A psychographic segmentation of the green consumer in Kuwait using self-organizing maps. *Expert Systems with Applications*, 36(8), 11030-11038.
192. Myers, J. H. (1996). *Segmentation and positioning for strategic marketing decisions*. Chicago, IL: American Marketing Association.
193. Nagar, K. (2015). Modeling the effects of Green advertising on brand image: Investigating the moderating effects of product involvement using structural equation. *Journal of Global Marketing*, 28(3/5), 152-171.
194. Nair, P. B. (2015). Profiling green consumer characteristics: an eternal quandary. *Journal of Advanced Management Science*, 3(2), 174-178.
195. Narula, S. A. & Desore, A. (2016). Framing green consumer behaviour research: opportunities and challenges. *Social Responsibility Journal*, 12(1), 1-22.
196. Shaftel, H. (n.d.). *The Causes of Climate Change*. Retrieved September 18, 2018 from <https://climate.nasa.gov/causes/>
197. Naz, K. A. Y. A. & Epps, H. (2004). Relationship between color and emotion: A study of college students. *College Student J*, 38(3), 396.

198. Newton, J. D., Tsarenko, Y., Ferraro, C. & Sands, S. (2015). Environmental concern and environmental purchase intentions: The mediating role of learning strategy. *Journal of Business Research*, 68(9), 1974-1981.
199. Ng, P. F., Butt, M. M., Khong, K. W. & Ong, F. S. (2014). Antecedents of green brand equity: an integrated approach. *Journal of Business Ethics*, 121(2), 203-215.
200. Nittala, R. (2014). Green consumer behavior of the educated segment in India. *Journal of International Consumer Marketing*, 26(2), 138-152.
201. Nordin, N. & Selke, S. (2010). Social aspect of sustainable packaging. *Packaging Technology and Science*, 23(6), 317-326.
202. Nunnally, J. C. (1978). *Psychometric theory*. New York: McGraw-Hill.
203. Nuttavuthisit, K. & Thøgersen, J. (2017). The importance of consumer trust for the emergence of a market for green products: The case of organic food. *Journal of Business Ethics*, 140(2), 323-337.
204. Obermiller, C. & Spangenberg, E. R. (1998). Development of a scale to measure consumer skepticism toward advertising. *Journal of consumer psychology*, 7(2), 159-186.
205. Ogunyo, M. A. A. (2013). *An assessment of consumers' perception of eco-labels within Nairobi* (master's thesis). Nairobi: University of Nairobi.
206. Olen, M. C., Slotegraaf, R. J. & Chandukala, S. R. (2014). Green claims and message frames: how green new products change brand attitude. *Journal of Marketing*, 78(5), 119-137
207. Orzan, G., Cruceru, A., Bălăceanu, C. & Chivu, R. G. (2018). Consumers' Behavior Concerning Sustainable Packaging: An Exploratory Study on Romanian Consumers. *Sustainability*, 10(6), 1787.
208. Osterhus, T. L. (1997). Pro-social consumer influence strategies: when and how do they work?. *Journal of marketing*, 61(4), 16-29.
209. Osterlind, S. J., Tabachnick, B. G. & Fidell, L. S. (2001). *SPSS for Window Workbook to Accompany: Using Multivariate Statistics* (4th ed.). Boston: Allyn and Bacon.
210. Ottman, J. & Books, N. B. (1998). Green marketing: opportunity for innovation. *The Journal of Sustainable Product Design*, 60(7), 136-667.
211. Ozaki, R. (2011). Adopting sustainable innovation: what makes consumers sign up to green electricity?. *Business strategy and the environment*, 20(1), 1-17.
212. Packaging waste statistics. (2019, January). Retrieved March 22, 2019 from [https://ec.europa.eu/eurostat/statistics-explained/index.php/Packaging\\_waste\\_statistics](https://ec.europa.eu/eurostat/statistics-explained/index.php/Packaging_waste_statistics)
213. Padel, S. & Foster, C. (2005). Exploring the gap between attitudes and behaviour: Understanding why consumers buy or do not buy organic food. *British food journal*, 107(8), 606-625.
214. Pallant, J. (2013). *SPSS survival manual*. UK: McGraw-Hill Education.
215. Pancer, E., McShane, L. & Noseworthy, T. J. (2017). Isolated environmental cues and product efficacy penalties: The color green and eco-labels. *Journal of Business Ethics*, 143(1), 159-177.

- 216.Papadas, K. K., Avlonitis, G. J. & Carrigan, M. (2017). Green marketing orientation: Conceptualization, scale development and validation. *Journal of Business Research*, 80, 236-246.
- 217.Papadas, K. K., Avlonitis, G. J., Carrigan, M. & Piha, L. (2018). The interplay of strategic and internal green marketing orientation on competitive advantage. *Journal of Business Research*.
- 218.Pavlou, P. A. (2003). Consumer acceptance of electronic commerce: Integrating trust and risk with the technology acceptance model. *International journal of electronic commerce*, 7(3), 101-134.
- 219.Pawson, E. (2001). Sustainability and management of the environment.
- 220.Peattie, K. (1995). *Environmental marketing management: Meeting the green challenge*. Financial Times Management.
- 221.Peattie, K. (2001). Towards sustainability: The third age of green marketing. *The Marketing Review*, 2(2), 129-146.
- 222.Peter, J. P. & Ryan, M. J. (1976). An investigation of perceived risk at the brand level. *Journal of marketing research*, 13(2), 184-188.
- 223.Petty, R. E. & Cacioppo, J. T. (1984). The effects of involvement on responses to argument quantity and quality: Central and peripheral routes to persuasion. *Journal of personality and social psychology*, 46(1), 69.
- 224.Petty, R. D., Gray-Lee, J. W., Scammon, D. L. & Mayer, R. N. (1994). Review of legal standards for environmental marketing claims. *Journal of Public Policy & Marketing*, 13(1), 155-159.
- 225.Philippe, A. & Ngobo, P. V. (1999). Assessment of consumer knowledge and its consequences: A multi-component approach. *ACR North American Advances*.
- 226.Phipps, M., Ozanne, L. K., Luchs, M. G., Subrahmanyam, S., Kapitan, S., Catlin, J. R., ... & Weaver, T. (2013). Understanding the inherent complexity of sustainable consumption: A social cognitive framework. *Journal of Business Research*, 66(8), 1227-1234.
- 227.Pickett-Baker, J. & Ozaki, R. (2008). Pro-environmental products: marketing influence on consumer purchase decision. *Journal of consumer marketing*, 25(5), 281-293.
- 228.Plan B. (2017, March 14). *Plan B za Slovenijo*. Retrieved May 10, 2019 from <http://www.planbz slovenijo.si/>
- 229.Potter, S., Cabbage, M. & McCarthy, L. (2017, January 18). *NASA, NOAA Data show 2016 warmest year on record globally*. Retrieved September 11, 2018 from <https://www.nasa.gov/press-release/nasa-noaa-data-show-2016-warmest-year-on-record-globally>
- 230.Poole, J. (n.d.). *Plastic is the most environmentally-friendly packaging material, concludes new US study*. Retrieved May 25, 2019, from <https://www.packaginginsights.com/news/plastics-the-most-environmentally-friendly-packaging-material-concludes-new-us-study.html>

231. Prendergast, P.G. and Pitt, L. (1996), Packaging, marketing, logistics and the environment: are there trade-offs. *International Journal of Physical Distribution & Logistics Management*, 26(6), 60-72.
232. Prosperi, M. & Viscecchia, R. (2007). *Indirect Effects of Eco-labelling of agricultural products on Natural Resources*, 507-515.
233. Prothero, A. (1998). Green marketing: The 'fad' that won't slip slide away. *Journal of Marketing Management*, 14(6), 507-512.
234. Purvis, B., Mao, Y. & Robinson, D. (2018). Three pillars of sustainability: in search of conceptual origins. *Sustainability Science*, 1-15.
235. Rahbar, E. & Abdul Wahid, N. (2011). Investigation of green marketing tools' effect on consumers' purchase behavior. *Business strategy series*, 12(2), 73-83.
236. Ramayah, T. & Rahbar, E. (2013). Greening the environment through recycling: an empirical study. *Management of Environmental Quality: An International Journal*, 24(6), 782-801.
237. Ranjan, R. K. & Kushwaha, R. (2017). Impact of Green Marketing Strategies on Consumer Purchase Behaviour. *Review of Management*, 7.
238. Rashid, N. R. N. A. (2009). Awareness of eco-label in Malaysia's green marketing initiative. *International Journal of Business and Management*, 4(8), 132-141.
239. Rettie, R. & Brewer, C. (2000). The verbal and visual components of package design. *Journal of product & brand management*, 9(1), 56-70.
240. Rex, E. & Baumann, H. (2007). Beyond ecolabels: what green marketing can learn from conventional marketing. *Journal of cleaner production*, 15(6), 567-576.
241. Rita, K., Aiste, D. & Laura, N. (2009). Impact of package elements on consumer purchase. *Journal of Brand Management*, 13(2), 115-133.
242. Ritch, E. L. & Schröder, M. J. (2012). Accessing and affording sustainability: The experience of fashion consumption within young families. *International journal of consumer studies*, 36(2), 203-210.
243. Roberge, D. (2017, April 20). *How Eco-Packaging Impacts Sustainability*. Retrieved May 7, 2019, from <https://www.industrialpackaging.com/blog/how-eco-packaging-impacts-sustainability>
244. Roberts, J. A. (1996). Green consumers in the 1990s: profile and implications for advertising. *Journal of business research*, 36(3), 217-231.
245. Roberts, J. A. & Bacon, D. R. (1997). Exploring the subtle relationships between environmental concern and ecologically conscious consumer behavior. *Journal of business research*, 40(1), 79-89.
246. Rokka, J. & Uusitalo, L. (2008). Preference for green packaging in consumer product choices—Do consumer's care? *International Journal of Consumer Studies*, 32(5), 516-525.
247. Rolston, C. P. & di Benedetto, C. A. (1994). Developing a greenness scale: an exploration of behavior versus attitude. In *Winter Conferece of the American Marketing Association*.



- 248.Saeed, R., Lodhi, R.N., Rauf, A., Rana, M.I., Mahmood, Z., and Ahmed, N., 2013, Impact of Labelling on Customer Buying Behavior in Sahiwal, Pakistan. *World Applied Sciences Journal* 24(9), 1250-1254
- 249.Sammer, K. & Wüstenhagen, R. (2006). The influence of eco-labelling on consumer behaviour—Results of a discrete choice analysis for washing machines. *Business Strategy and the Environment*, 15(3), 185-199.
- 250.Saunders, M., Lewis, P. & Thornhill, A. (2009). *Research methods for business students* (5th ed.). Edinburgh gate: Pearson education.
- 251.Scammon, D. L. & Mayer, R. N. (1995). Agency review of environmental marketing claims: Case-by-case decomposition of the issues. *Journal of Advertising*, 24(2), 33-43.
- 252.Schahn, J. & Holzer, E. (1990). Studies of individual environmental concern: The role of knowledge, gender, and background variables. *Environment and behavior*, 22(6), 767-786.
- 253.Schapira, D. V., Kumar, N. B., Lyman, G. H. & McMillan, S. C. (1990). The value of current nutrition information. *Preventive Medicine*, 19(1), 45-53.
- 254.Schiffman, L. G. & Kanuk, L. L. (1997). *Consumer behavior*. Upper Saddle River, N.J: Prentice Hall.
- 255.Schoormans, J. P. & Robben, H. S. (1997). The effect of new package design on product attention, categorization and evaluation. *Journal of Economic Psychology*, 18(2/3), 271-287.
- 256.Schroeder, B. & DeNoble, A. (2014). How To Design A Triple Bottom Line Organization: A Start-Up Case Study. *Journal of Organization Design*, 3(2), 48-57.
- 257.Schwartz, J. & Miller, T. (1991). The earth's best friends. *American demographics*, 13, 26-29.
- 258.Scott, L. & Vigar-Ellis, D. (2014). Consumer understanding, perceptions and behaviours with regard to environmentally friendly packaging in a developing nation. *International journal of consumer studies*, 38(6), 642-649.
- 259.Shao, J. & Ünal, E. (2019). What do consumers value more in green purchasing? Assessing the sustainability practices from demand side of business. *Journal of Cleaner Production*, 209, 1473-1483.
- 260.Silayoi, P. & Speece, M. (2007). The importance of packaging attributes: a conjoint analysis approach. *European journal of marketing*, 41(11/12), 1495-1517.
- 261.Singh, A., Sharma, P. K. & Malviya, R. (2011). Eco friendly pharmaceutical packaging material. *World Applied Sciences Journal*, 14(11), 1703-1716.
- 262.Singh, N. (2009). Exploring socially responsible behaviour of Indian consumers: an empirical investigation. *Social Responsibility Journal*, 5(2), 200-211.
- 263.Sloveniatimes.com. (2018, October 25). *Slovenia aims to become leader in alternatives to plastics*. Retrieved March 28, 2019 from <http://www.sloveniatimes.com/slovenia-aims-to-become-leader-in-alternatives-to-plastics>
- 264.Smith, K. T. & Brower, T. R. (2012). Longitudinal study of green marketing strategies that influence Millennials. *Journal of Strategic Marketing*, 20(6), 535-551.

265. Smith, S. & Paladino, A. (2010). Eating clean and green? Investigating consumer motivations towards the purchase of organic food. *Australasian Marketing Journal (AMJ)*, 18(2), 93-104.
266. Sony, A. & Ferguson, D. (2017). Unlocking consumers' environmental value orientations and green lifestyle behaviors: A key for developing green offerings in Thailand. *Asia-Pacific Journal of Business Administration*, 9(1), 37-53.
267. Steenis, N. D., van Herpen, E., van der Lans, I. A., Ligthart, T. N. & van Trijp, H. C. (2017). Consumer response to packaging design: The role of packaging materials and graphics in sustainability perceptions and product evaluations. *Journal of cleaner production*, 162, 286-298.
268. Stern, P. C. (1992). Psychological dimensions of global environmental change. *Annual Review of Psychology*, 43, 269-302.
269. Stern, P. C., Dietz, T., Abel, T., Guagnano, G. A. & Kalof, L. (1999). A value-belief-norm theory of support for social movements: The case of environmentalism. *Human ecology review*, 81-97.
270. Stirling, A. (1999). The appraisal of sustainability: some problems and possible responses. *Local Environment*, 4(2), 111-135.
271. Tabachnick, B. G., Fidell, L. S. & Ullman, J. B. (2007). *Using multivariate statistics*. Boston, MA: Pearson.
272. Tan, B. C. (2011). The roles of knowledge, threat, and PCE on green purchase behaviour. *International Journal of Business and Management*, 6(12), 14.
273. Tang, E., Fryxell, G. E. & Chow, C. S. (2004). Visual and verbal communication in the design of eco-label for green consumer products. *Journal of International Consumer Marketing*, 16(4), 85-105.
274. Tanguay, G. A., Rajaonson, J., Lefebvre, J. F. & Lanoie, P. (2010). Measuring the sustainability of cities: An analysis of the use of local indicators. *Ecological Indicators*, 10(2), 407-418.
275. Tanner, C. & Wölfig Kast, S. (2003). Promoting sustainable consumption: Determinants of green purchases by Swiss consumers. *Psychology & Marketing*, 20(10), 883-902.
276. Thackston, K., Pham, A., Galvarino, J. & Ouzts, A. (2011). Consumer Purchasing Based on Packaging Structural Design/Product Visual Display in a Retail Environment.
277. Thøgersen, J. (1999). The ethical consumer. Moral norms and packaging choice. *Journal of Consumer Policy*, 22(4), 439-460.
278. Thøgersen, J. (2000). Psychological determinants of paying attention to eco-labels in purchase decisions: Model development and multinational validation. *Journal of Consumer Policy*, 23(3), 285-313.
279. Tsakiridou, E., Boutsouki, C., Zotos, Y. & Mattas, K. (2008). Attitudes and behaviour towards organic products: an exploratory study. *International Journal of Retail & Distribution Management*, 36(2), 158-175.

280. Tung, S. J., Shih, C. C., Wei, S. & Chen, Y. H. (2012). Attitudinal inconsistency toward organic food in relation to purchasing intention and behavior: An illustration of Taiwan consumers. *British Food Journal*, 114(7), 997-1015.
281. Turnbull, P. W., Leek, S. & Ying, G. (2000). Customer confusion: The mobile phone market. *Journal of Marketing Management*, 16(1/3), 143-163.
282. Van Birgelen, M., Semeijn, J. & Keicher, M. (2009). Packaging and proenvironmental consumption behavior: Investigating purchase and disposal decisions for beverages. *Environment and Behavior*, 41(1), 125-146.
283. Van Dam, Y. K. (1996). Environmental assessment of packaging: The consumer point of view. *Environmental management*, 20(5), 607-614.
284. Veleva, V. & Ellenbecker, M. (2001). Indicators of sustainable production: framework and methodology. *Journal of Cleaner Production*, 9(6), 519-549.
285. Velez, A. (2018, September 24). *How the most modern waste treatment centre changed Slovenia*. Retrieved March 28, 2019, from <https://www.euronews.com/2018/06/20/how-the-most-modern-waste-treatment-centre-changed-slovenia>
286. Vermeir, I. & Verbeke, W. (2005). *Sustainable food consumption, involvement, certainty and values: an application of the theory of Planned Behaviour*. Ghent: The Faculty of Economics and Business Administration.
287. Vermeir, I. & Verbeke, W. (2006). Sustainable food consumption: Exploring the consumer “attitude–behavioral intention” gap. *Journal of Agricultural and Environmental ethics*, 19(2), 169-194.
288. Vermeir, I. & Verbeke, W. (2008). Sustainable food consumption among young adults in Belgium: Theory of planned behaviour and the role of confidence and values. *Ecological economics*, 64(3), 542-553.
289. Vila, N. & Ampuero, O. (2007). The role of packaging in positioning an orange juice. *Journal of Food Products Marketing*, 13(3), 21-48.
290. Wang, P., Liu, Q. & Qi, Y. (2014). Factors influencing sustainable consumption behaviors: a survey of the rural residents in China. *Journal of Cleaner Production*, 63, 152-165.
291. Wesley, S. C., Lee, M. Y. & Kim, E. Y. (2012). The role of perceived consumer effectiveness and motivational attitude on socially responsible purchasing behavior in South Korea. *Journal of Global Marketing*, 25(1), 29-44.
292. White, K., Hardisty, D., J. & Habib, R. (2019) The Elusive Green Consumer. *Harvard business review*. Retrieved September 10, 2019 from <https://hbr.org/2019/07/the-elusive-green-consumer>
293. Whitson, D. A. & Henry, W. A. (1996). What's in a label? Environmental issues in product packaging. *Journal of Euromarketing*, 5(3), 29-42.
294. Wolsink, M. (2007). Wind power implementation: the nature of public attitudes: equity and fairness instead of ‘backyard motives’. *Renewable and sustainable energy reviews*, 11(6), 1188-1207.

- 295.Xue, B., Chen, X. P., Geng, Y., Guo, X. J., Lu, C. P., Zhang, Z. L. & Lu, C. Y. (2010). Survey of officials' awareness on circular economy development in China: Based on municipal and county level. *Resources, Conservation and Recycling*, 54(12), 1296-1302.
- 296.Young, S. (2008). Packaging and the environment: a cross-cultural perspective. *Design Management Review*, 19(4), 42-48.
- 297.Zabkar, V. & Hosta, M. (2013). Willingness to act and environmentally conscious consumer behaviour: can prosocial status perceptions help overcome the gap. *International Journal of Consumer Studies*, 37(3), 257-264.
- 298.Zaichkowsky, J. L. (1985). Measuring the involvement construct. *Journal of consumer research*, 12(3), 341-352.
- 299.Zekiri, J. & Hasani, V. V. (2015). The role and impact of the packaging effect on consumer buying behaviour. *Ecoforum Journal*, 4.
- 300.Zijp, M., Heijungs, R., Van der Voet, E., Van de Meent, D., Huijbregts, M., Hollander, A. & Posthuma, L. (2015). An identification key for selecting methods for sustainability assessments. *Sustainability*, 7(3), 2490-2512.

## **APPENDIXES**



## **Appendix 1: Povzetek (Summary in the Slovene language)**

Poraba potrošniškega blaga se je v zadnjem desetletju znatno povečala. To je vodilo k zmanjšanju naravnih virov (Chen & Chai, 2010). Države po vsem svetu so se zavedle pomembnosti te grožnje in so začele uvajati okoljevarstvene ukrepe. Rezultat tega je bil pojav "trajnostnega razvoja", ki prek eko-inovacij in zelene potrošnje spodbuja zmanjševanje negativnega vpliva na okolje. Eko-inovacije so usmerjene v ustvarjanje blaga in storitev z vključevanjem trajnostnih okoljskih praks (Veleva & Ellenbecker, 2001). Zelena potrošnja se nanaša na uporabo takih izdelkov. Njen cilj je potrošnja izdelkov in storitev, pri katerih potrošniki morajo upoštevati okoljski vpliv nakupa, uporabe in odlaganja izdelkov ter uporabe različnih zelenih storitev (Moisander, 2007).

Dejavnike, ki se upoštevajo v nakupovalnih navadah potrošnikov, lahko razdelimo v dve skupini: na tiste, ki jih lastniki blagovnih znamk lahko nadzirajo, in tiste, ki jih ne morejo. Dejavniki, ki jih je mogoče nadzorovati, so štiri P-ji: izdelek, cena, prostor in tržno komuniciranje (angl. 4Ps, product, price, place, promotion), medtem ko družbenoekonomskih, kulturnih, geografskih in psiholoških dejavnikov ni mogoče nadzorovati (Vila & Ampuero, 2007).

Odpadna embalaža je resen problem, s katerim se sooča svet, od proizvodnje naprej, kjer so potrebne surovine, voda in energija, do uporabe in odlaganja. Zakonodaja o recikliranju je delno prispevala k rešitvi tega problema, saj je EU dosegla približno 65% stopnjo recikliranja odpadne embalaže (Herbes, Beuthner & Ramme, 2018). Sorazmerno malo pa je znanega o učinku ekološke embalaže na nakupovalne navade slovenskih potrošnikov. Namen te raziskave je opozoriti na izdelke v ekološki embalaži kot zeleni tržni praksi in ugotoviti njihov vpliv na nakupovalne navade potrošnikov. Cilj raziskave je tudi prepoznati dojemanje teh praks in stališče do njih med slovenskimi potrošniki. Prav tako bo študija obogatila akademsko znanje na tem področju in bo lahko koristna za tržnike. Pojasnjuje namreč dejavnike, ki spodbujajo zeleno vedenje in tako vplivajo na odnos potrošnikov do okolja in njihove dolgoročne navade.

Embalaža je komunikacijsko orodje med podjetji in potrošniki. Njen namen je, da pritegne pozornost potrošnika. Splošno dojemanje embalaže s strani potrošnikov je njihov pogled na embalažo kot vsoto oblike, velikosti, barve, materialov in oznak z informacijami (Draskovic, Temperley & Pavicic, 2009). Embalaža je pomembna za uspeh izdelka. Ima močan vpliv na proces odločanja pri potrošnikih, saj embalaža prispeva tretjino k njihovemu splošnemu dojemanju izdelka (Herbes et al., 2018). Embalaža ima lahko logistično ali trženjsko vlogo. Prva, logistična funkcija, je povezana z zaščito izdelka med dostavo. Trženjski vidik pa je povezan z vlogo, ki jo ima embalaža pri komuniciranju s potrošniki. Služi kot orodje za promocijo izdelka in ob nakupu zagotavlja informacije o izdelku (Prendergast & Pitt, 1996). Lamb, Hair in McDaniel (2012) v svoji knjigi "Essentials of marketing" pojasnjujejo, da ima embalaža pri trženju štiri funkcije: zaščita izdelka, tržno komuniciranje, pomoč potrošnikom pri uporabi in lažje recikliranje.

Raziskava je pokazala, da elementi dizajna (barva, oblika, materiali) vplivajo na oceno potrošnikov (Schoormans & Robben, 1997; Magnier & Schoormans, 2017). Da bi jo kupili, mora biti embalaža deklarirana kot trajnostna, saj tako vzbuja pozitivno stališče (Carrus, Passafaro & Bonnes, 2008; Koenig-Lewis et al., 2014; Meneses, 2010). V tej magistrski nalogi so bile preverjene naslednje značilnosti embalaže: material in barva embalaže ter okoljske zahteve;

- Na presojo potrošnikov, ali je embalaža trajnostna, imajo prevladujoč vpliv dejavniki, povezani z materialom (Lindh, Olsson & Williams, 2016). Kot nadomestilo za plastiko se pojavljajo inovativni, trajnostni materiali, preference potrošnikov pa se v različnih delih sveta razlikujejo (Hunsberger, 2018).
- Da bi pritegnila pozornost potrošnikov, poslala sporočilo in poudarila različna razpoloženja, podjetja uporabljajo različne barve embalaže. Podjetja uporabljajo barvo za razlikovanje svojih izdelkov od konkurenčnih (Zekiri & Hasani, 2015). Različne barve nosijo različne simbolne pomene, zato imajo potrošniki v zvezi z barvo embalaže določena pričakovanja (Keller, 2009).
- Elementi podatkov o embalaži so slikovni ali tekstovni z jasnim opisom okoljskih zahtev (Magnier & Schoormans, 2017). Označevanje je zunanji dejavnik in potrošniku daje informacije o kategoriji in sestavinah izdelka ter navodila v zvezi z njim (Zekiri & Hasani, 2015).

Okolju prijazno vedenje je poznano tudi kot ekološko prijazno oziroma družbeno odgovorno vedenje, potrošniki pa kot zeleni, družbeno ozavešeni potrošniki (Singh, 2009). Obstoječa literatura o zelenem trženju uporablja različne spremenljivke za opis zelenega potrošnika, oceno geografskih, kulturnih in osebnostnih meril ter družbenodemografskih značilnosti (Nair, 2015). Številne študije se pri segmentaciji in ciljnem izboru zelenih potrošnikov osredotočajo na družbenodemografske značilnosti. Glavni razlog za to je, da so te informacije lahko dosegljive in jih je lahko primerjati z drugimi spremenljivkami, te vrste meril segmentacije pa je sorazmerno enostavno uporabljati (Myers, 1996). Vendar ima uporaba demografskih značilnosti za proces segmentacije potrošnikov omejeno vrednost. Zato se številni raziskovalci pri določanju zelenih segmentov usmerjajo v študij psihografskih značilnosti (skrb za okolje ali zaznana učinkovitost potrošnika). Te značilnosti pojasnjujejo razlike med segmenti potrošnikov bolje kot demografske značilnosti (Apaydin & Szczeponiak, 2017). Pričujoča raziskava zajema naslednje psihografske značilnosti potrošnikov: skrb za okolje, znanje o okolju, zaznana učinkovitost potrošnika (perceived consumer effectiveness - PCE), zaznana osebna primernost.

- Skrb za okolje se obravnava kot "ocena ali stališče do dejstev in lastnega vedenja ali vedenja drugih, ki ima posledice za okolje" (Fransson & Gärling, 1999, str. 370).
- Znanje o okolju je pomemben dejavnik, ki je prisoten v vseh fazah procesa potrošnikovega sprejemanja odločitev. Potrošnike vodi k trajnostni potrošnji, lahko pa tudi prispeva k stalnim spremembam njihovih stališč in vedenja (Bator & Cialdini, 2000).



- Zaznana učinkovitost potrošnika je definirana kot "področno specifično prepričanje, da prizadevanje posameznika lahko prispeva k rešitvi problema" (Ellen, Wiener & Cobb-Walgren, 1991, str. 103).
- Zaznana osebna primernost (Perceived Personal Relevance - PPR) je opisana kot prepričanje posameznika, da je določeno vedenje povezano z njegovim/njenim osebnim življenjskim slogom in samopodobo (Celsi, Chow, Olson & Walker, 1992). Na potrošniške vzorce potrošnikov vpliva njihovo zaznavanje in lastno vrednotenje sebe. Posamezniki kupujejo izdelke, ki so skladni z njihovo identiteto, družbenim položajem in vrednotami (Belk, 1988).

Pri preverjanju hipoteze raziskave so bili kot ločeni dejavniki vključeni tudi skepticizem potrošnikov ter cena izdelka in denarne ovire.

- Skepticizem potrošnikov ali "težnja k dvomu o oglaševalskih trditvah" je zelo privlačna tema akademskih raziskav (Obermiller & Spangenberg, 1998, str. 160). Skepticizem do okoljskih trditev in negativen odziv potrošnikov na zeleno trženje sta posledica napačnih, neutemeljenih ali pretiranih trditev (Mostafa, 2009).
- Potrošniki vidijo cenovne/denarne ovire kot enega najpomembnejših dejavnikov vpliva na nakupovalne navade (Magnusson, Arvola, Koivisto Hursti, Åberg & Sjödén, 2001). Podjetja na zelene izdelke običajno zaračunajo pribitek, potrošniki pa so občutljivi za cene.

Na osnovi pregledane literature so bile oblikovane hipoteze raziskave. Glavne hipoteze se nanašajo na pregledane teme: značilnosti embalaže, značilnosti potrošnikov in ovire za nakup izdelkov v ekološko prijazni embalaži.

Podatke smo zbrali prek spletne ankete, ki je bila razposlana prek platform družbenih medijev in pošte, anketiranci pa so bili usmerjeni na spletni vprašalnik. Vabila za sodelovanje na prostovoljni osnovi so bila najprej poslana prijateljem in kolegom na univerzi, ki smo jih prijazno prosili, da vabilo preusmerijo čim več ljudem. To je ustvarilo učinek "snežne kepe" (Saunders, Lewis & Thornhill, 2009). Zbrane podatke smo naložili in analizirali z uporabo IBM-ove statistične programske opreme SPSS. Za splošno razumevanje podatkov smo pregledali osnovno opisno statistiko ali frekvenčno porazdelitev. Za analizo podatkov in preverjanje hipotez so bile uporabljene še naslednje metode: frekvenčna porazdelitev, preizkus zanesljivosti, enosmerna ANOVA, enovzorčni t-test, linearna regresijska analiza, factorska analiza in hi-kvadrat test ujemanja.

Raziskava je dala odgovor na njeno glavno vprašanje, ki je: kakšen je vpliv značilnosti ekološke embalaže in dojemanja zelenih praks s strani potrošnikov na njihove nakupovalne navade? Analiza omogoča oblikovanje sklepa, glavne ugotovitve pa so predstavljene v nadaljevanju.

Na osnovi raziskanih elementov oblike embalaže lahko sklepamo, da slovenski potrošniki embalažo iz papirja in naravnega rastlinskega škroba rjave in zelene barve dojemajo kot

ekološko najprijaznejšo embalažo. Lahko sklepamo, da so slovenski potrošniki nadpovprečno okoljsko ozaveščeni, saj ob nakupu upoštevajo količino embalaže izdelka in tudi poiščejo več informacij o embalaži (ekološke oznake), še posebej potrošniki z višjo ravno skrbi za okolje. Ugotovljena je bila tudi pozitivna povezava med pozornostjo, ki je med nakupom izdelkov namenjena okoljskim zahtevam (ekološke oznake), in nakupovalnimi navadami potrošnikov glede ekološke embalaže izdelkov. Ugotovljene so bile zanemarljive ravni skepticizma potrošnikov, kar potrjuje zaupanje v ekološke oznake. Nadalje, negativna povezava med skepticizmom in nakupovalnimi navadami glede izdelkov v ekološki embalaži je bila statistično nepomembna.

Kar se tiče cenovnih/denarnih ovir pri nakupu izdelkov, podatki kažejo, da dosednji ukrepi niso dosegli zadovoljive ravni spodbujanja trajnostne potrošnje in da te ovire omejujejo rast zelenega potrošništva. Za potrošnike bo cena vedno pomembna, saj vedno iščejo cenovno sprejemljive izbire. Rast trga in širok nabor razpoložljivih izdelkov prav tako povečujeta občutljivost potrošnika za ceno.

Ključni dejavniki, ki vplivajo na navade pri nakupu izdelkov v ekološki embalaži, so bile psihografske značilnosti potrošnikov: skrb za okolje, znanje o okolju, zaznana učinkovitost potrošnika in zaznana osebna primernost. Vsi ti dejavniki so se izkazali kot statistično visoko pomembni, kar pojasni visoke ravni skupne variance predlaganega modela. Psihografija je v splošnem boljša metoda segmentiranja potrošnikov kot demografija, saj na potrošnjo močno vplivajo osebnost, življenjski slog in družbene prakse (Briceno & Stagl, 2006). Vendar so se nekateri demografski dejavniki v našem modelu izkazali kot statistično pomembni in lahko ugotovimo, da so najbolj trajnostno usmerjeni potrošniki ženske, navada nakupa izdelkov v ekološki embalaži pa narašča s starostjo.

Z odgovorom na teh pet predlaganih hipotez smo odgovorili na vprašanja raziskave, navedena v uvodnem delu. Na koncu lahko ugotovimo, da je za preoblikovanje netrajnostne potrošnje v trajnostno potrebno sodelovanje vseh vpletenih deležnikov: potrošnikov, podjetij in državne regulative (Gandenberger, Garrelts & Wehlau, 2011). Uveljavitev prostovoljne osvojitve zelenih nakupovalnih navad je potencialno učinkovito gospodarsko orodje za ohranitev naravnih virov (Prosperi & Viscecchia, 2007).

## **Appendix 2: Research questionnaire on English language.**

Dear colleagues / friends,

This questionnaire is part of a master's thesis research project to understand people's views about Eco friendly packaged products. The questionnaire should take you approximately four minutes to complete. All responses are anonymous and the information you provide will be treated in the strictest confidence. I hope that you will find completing the questionnaire enjoyable.

Thank you for your help,

Simona Stojanova.

### **The effect of Eco packaging on consumer buying behaviour**

#### **Welcome to the survey!**

To continue, please click the button below.

---

Q1: How do you understand the term “environmentally friendly packaging”? You can choose more than one answer.

- Packaging which is non-harmful for the environment
- Packaging which is biodegradable
- Packaging which is recyclable
- Packaging with friendly manufacturing process
- Packaging which is reusable
- Packaging which is organic
- Packaging which is green
- Minimal packaging

Q2: When you are shopping, how often do you pay attention to the amount of wrapping or packaging used on products before you decide to buy something?

- Always
- About  $\frac{3}{4}$  of the time
- About  $\frac{1}{2}$  of the time
- About  $\frac{1}{4}$  of the time
- Never

Q3: When you are choosing a product, how often do you pay attention to any environmental labelling before deciding to buy?

- Always
- About  $\frac{3}{4}$  of the time
- About  $\frac{1}{2}$  of the time
- About  $\frac{1}{4}$  of the time
- Never

Q4: In your opinion, what type of material have a packaging which is Eco friendly?

- Paper
- Cardboard
- Glass
- Plastics
- Biodegradable plastics
- Plant starch material
- Aluminum
- Steel
- Wood

Q5: When you think of an Eco friendly packaged product, what colour is it?

- Aluminum
- White
- Blue
- Black
- Grey
- Green
- Pink
- Purple
- Silver
- Golden
- Red
- Yellow
- Orange
- Brown

Q6: Please express your level of environmental concern:

	Very Unconcerned (1)	Unconcerned (2)	Concerned (3)	Very concerned (4)
How concerned are you about the environment when making purchases?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
How concerned are you about air pollution?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
How concerned are you about water pollution?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
How concerned are you about land use?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Q7: Please indicate the level to which you agree with each statement:

	Fully disagree (1)	Disagree (2)	Neither agree nor disagree (3)	Agree (4)	Fully agree (5)
I make a special effort to buy paper and plastic products that are made from recycled materials.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I have switched products for ecological reasons.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
When I have a choice between two equal products, I buy the one less harmful to other people and the environment.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I make a special effort to buy household chemicals such as detergents and cleaning solutions that are environmentally friendly.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I have avoided buying a product because it had potentially harmful environmental effects.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Q8: Please indicate the level to which you agree with each statement:

	Fully disagree (1)	Disagree (2)	Neither agree nor disagree (3)	Agree (4)	Fully agree (5)
It is worth it for an individual consumer to make efforts to preserve and improve the environment.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
When I buy products, I tend to try to consider how my use of them will affect the environment.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Since each individual can have any effect upon environmental problems, what I do can make meaningful difference.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
By purchasing Eco friendly packaged products, each consumer's behaviour can have a positive effect on the environment and society.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Q9: Please indicate the level to which you agree with each statement:

	Fully disagree (1)	Disagree (2)	Neither agree nor disagree (3)	Agree (4)	Fully agree (5)
The purchase and/or use of Eco friendly packaged products let others see me as I ideally would like them to see me.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The purchase and use of Eco friendly packaged products helps me to attain the type of life I strive for.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I can make connections or associations between the purchase and use of Eco friendly packaged products and other experiences and/or behaviours in my life.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The purchase and use of Eco friendly packaged products is of personal importance to me.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The purchase and use of Eco friendly packaged products helps me to express who I am.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Q10: Please indicate the level to which you agree with each statement:

	Fully disagree (1)	Disagree (2)	Neither agree nor disagree (3)	Agree (4)	Fully agree (5)
I know that I buy products with packages that are environmentally safe.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I know more about Eco packaging than the average person.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I know how to select products and packages that reduce the amount of waste ending up in landfills.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I understand the environmental phrases and symbols on product package.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I am very knowledgeable about environmental issues.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Q11: Please indicate the level to which you agree with each statement:

	Fully disagree (1)	Disagree (2)	Neither agree nor disagree (3)	Agree (4)	Fully agree (5)
Most environmental claims made on package labels are true.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Because environmental claims are exaggerated, consumers would be better off if such claims on package labels were eliminated.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Most environmental claims on package labels are intended to mislead rather than to inform consumers.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I do not believe most environmental claims made on package labels are true.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Q12: Please indicate the level to which you agree with each statement:

	Fully disagree (1)	Disagree (2)	Neither agree nor disagree (3)	Agree (4)	Fully agree (5)
I cannot afford to pay more for eco packaged products.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Eco packaged products are still too expensive.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
People should buy eco packaged products, even though they are more expensive.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

**Something more about you:**

Q13: What is your age?

\_\_\_\_\_

Q14: Please indicate your gender:

- Male
- Female

Q15: What is the highest level of your education?

- Elementary school
- High school
- Associate degree
- Bachelor's degree
- Master's degree
- Doctor of science



Q16: Generally, how would you rate your living standard?

- Much above the average
- Above the average
- Average
- Below average
- Quite below the average

Q17: What is your employment status?

- Employed
- Unemployed
- Student
- Retired
- Other, \_\_\_\_\_ .

---

**Thank you for your participation!**

### **Appendix 3: Research questionnaire on Slovene language.**

Dragi kolegi / prijatelji,

Ta vprašalnik je del raziskave v okviru magistrske naloge o odnosu ljudi do okolju prijaznih izdelkov. Vprašalnik vam bo vzel približno štiri minute vašega časa. Vsi odgovori so anonimni in informacije, ki jih posredujete, bodo obravnavane v najstrožjem zaupanju. Upam, da vam bo izpolnjevanje vprašalnika zanimivo.

Hvala za vašo pomoč,

Simona Stojanova.

### **Vpliv ekološkega pakiranja na nakupno vedenje porabnikov**

#### **Dobrodošli v vprašalniku!**

Kliknite spodnji gumb za nadaljevanje.

---

V1: Kako razumete izraz 'okolju prijazna embalaža'? Možnih je več odgovorov.

- Embalaža, ki ni škodljiva za okolje
- Biorazgradljiva embalaža
- Embalaža, ki jo je mogoče reciklirati
- Embalaža s prijazen postopek izdelave
- Embalaža za ponovno uporabo
- Ekološka embalaža
- Zelena embalaža
- Minimalna embalaža

V2: Ko nakupujete, kako pogosto ste pozorni na količino embalaže, ki se uporablja na izdelkih, preden se odločite za nakup?

- Vedno
- V  $\frac{3}{4}$  primerov
- V  $\frac{1}{2}$  primerov
- V  $\frac{1}{4}$  primerov
- Nikoli

V3: Ko izbirate izdelek, kako pogosto ste pozorni na okoljsko označevanje, preden se odločite za nakup?

- Vedno
- V  $\frac{3}{4}$  primerov
- V  $\frac{1}{2}$  primerov
- V  $\frac{1}{4}$  primerov
- Nikoli

V4: Iz kakšnega materiala je po vašem mnenju embalaža izdelka, ki je prijazen do okolja?

- Papir
- Karton
- Steklo
- Plastika
- Biorazgradljiva plastika
- Rastlinski škrobni material
- Aluminij
- Jeklo
- Les

V5: Ko pomislite na izdelek z okolju prijazno embalažo, kakšne barve je?

- Bela
- Modra
- Črna
- Siva
- Zelena
- Roza
- Vijolična
- Srebrna
- Zlata
- Rdeča
- Rumena
- Oranžna
- Rjava

V6: Prosimo, izrazite kako zaskrbljeni ste za okolje:

	Sploh nisem zaskrbljen/a (1)	Nisem pretirano zaskrbljen/a (2)	Nekoliko sem zaskrbljen/a (3)	Zelo sem zaskrbljen/a (4)
Kako zaskrbljeni ste zaradi okolja ko nakupujete?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Kako zaskrbljeni ste zaradi onesnaženosti zraka?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Kako zaskrbljeni ste zaradi onesnaženja vode?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Kako zaskrbljeni ste zaradi rabe tal?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

V7: V kolikšni meri se strinjate z naslednjimi trditvami?

	Sploh se ne strinjam (1)	Ne strinjam se (2)	Niti se strinjam, niti se ne strinjam (3)	Strinjam se (4)	Popolnoma se strinjam (5)
Posebej si prizadevam za nakup papirnih in plastičnih izdelkov, ki so izdelani iz recikliranih materialov.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Iz ekoloških razlogov sem zamenjal/a izdelke.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Ko imam izbiro med dvema enakima izdelkoma, kupim manj škodljivega za druge ljudi in okolje.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Posebej si prizadevam za nakup gospodinjskih kemikalij, kot so detergenti in čistilna sredstva, ki so okolju prijazni.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Izognil/a sem se nakupu izdelka, ker je imel potencialno škodljive vplive na okolje.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

V8: V kolikšni meri se strinjate z naslednjimi trditvami?

	Sploh se ne strinjam (1)	Ne strinjam se (2)	Niti se strinjam, niti se ne strinjam (3)	Strinjam se (4)	Popolnoma se strinjam (5)
Vredno si je prizadevati za ohranitev in izboljšanje okolja.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Ko kupujem izdelke, skušam razmisliti, kako bo njihova uporaba vplivala na okolje.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Ker ima lahko vsak posameznik vpliv na okoljske probleme, lahko s svojimi dejanji naredim pomembno razliko.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Z nakupom okolju prijaznih pakiranih izdelkov lahko vsak potrošnik pozitivno vpliva na okolje in družbo.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

V9: V kolikšni meri se strinjate z naslednjimi trditvami?

	Sploh se ne strinjam (1)	Ne strinjam se (2)	Niti se strinjam, niti se ne strinjam (3)	Strinjam se (4)	Popolnoma se strinjam (5)
Nakup in / ali uporaba izdelki z okolju prijazno embalažo omogoča drugim, da me vidijo v idealni podobi.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Nakup in uporaba izdelki z okolju prijazno embalažo mi pomaga doseči tip življenja, za katerim stremim.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Lahko vzpostavim povezavo med nakupom in uporabo izdelki z okolju prijazno embalažo ter drugimi zkušnjami in / ali izkušnjami v svojem življenju.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Nakup in uporaba izdelki z okolju prijazno embalažo mi osebno veliko pomeni.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Nakup in uporaba izdelki z okolju prijazno embalažo mi pomaga izraziti, kdo sem.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

V10: V kolikšni meri se strinjate z naslednjimi trditvami?

	Sploh se ne strinjam (1)	Ne strinjam se (2)	Niti se strinjam, niti se ne strinjam (3)	Strinjam se (4)	Popolnoma se strinjam (5)
Vem, da je mebalaža izdelkov, ki jih kupujem, okolju prijazna.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Vem več o izdelki z okolju prijazno embalažo kot povprečna oseba.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Znam izbirati izdelke in embalažo, ki zmanjšujejo količino odpadkov, ki konča na odlagališčih.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Razumem okoljske fraze in simbole na embalaži izdelka.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Zelo dobro poznam okoljska vprašanja.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

V11: V kolikšni meri se strinjate z naslednjimi trditvami?

	Sploh se ne strinjam (1)	Ne strinjam se (2)	Niti se strinjam, niti se ne strinjam (3)	Strinjam se (4)	Popolnoma se strinjam (5)
Večina izjav o okolju na etiketah embalaže je resnična.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Ker so okoljske trditve pretirane, bi bilo za potrošnike bolje, če bi bile takšne trditve na etiketah embalaže odpravljene.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Večina okoljskih trditev na etiketah embalaže je namenjena zavajanju in ne obveščanju potrošnikov.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Ne verjamem, da je večina okoljskih trditev na etiketah embalaže resnična.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

V12: V kolikšni meri se strinjate z naslednjimi trditvami?

	Sploh se ne strinjam (1)	Ne strinjam se (2)	Niti se strinjam, niti se ne strinjam (3)	Strinjam se (4)	Popolnoma se strinjam (5)
Ne morem si privoščiti, da bi plačal več za izdelke z okolju prijazno embalažo.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Izdelki z okolju prijazno embalažo so še vedno predragi.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Ljudje bi morali kupovati ekološko pakirane izdelke, čeprav so dražji.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

**Nekaj več informacij o tebi:**

V13: Koliko si star/a?

\_\_\_\_\_

V14: Prosimo, navedite spol:

- Moški
- Ženske

V15: Katera je vaša najvišja stopnja izobrazbe?

- Osnovna šola
- Srednja šola
- Višješolski program
- Univerzitetni program
- Magisterij
- Doktorat

V16: Kako bi na splošno ocenili svoj življenjski standard?

- Precej nad povprečjem
- Nad povprečjem
- Povprečen
- Pod povprečjem
- Precej pod povprečjem

V17: Kakšen je vaš zaposlitveni status?

- Zaposlen
- Brezposeln
- Študent
- Upokojen
- Drugo, \_\_\_\_\_ .

---

**Hvala za sodelovanje!**



## Appendix 4: SPSS analysis output tables

### 4.1 Consumer demographic characteristics

Table 1: Gender of respondents

Gender of respondents					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Male	82	23.8	23.8	23.8
	Female	262	76.2	76.2	100.0
	Total	344	100.0	100.0	

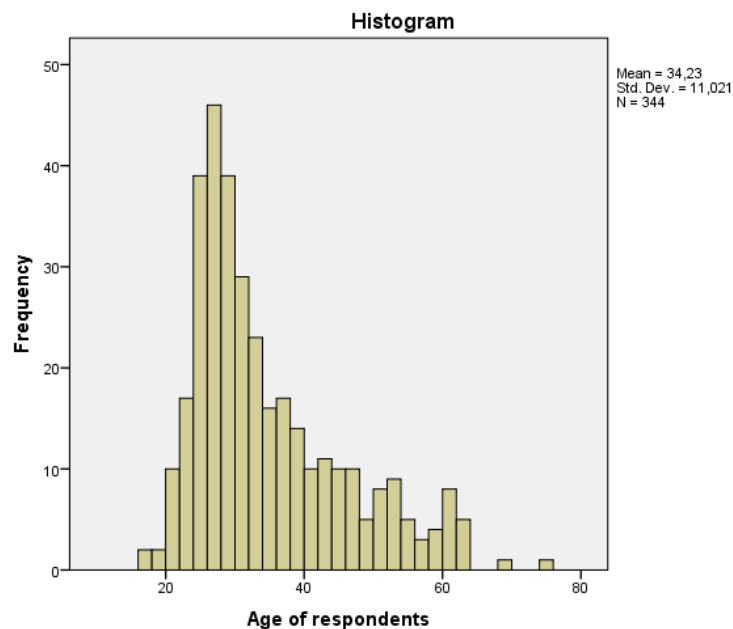
Source: Own work.

Table 2: Age of respondents

Age of respondents					
	N	Minimum	Maximum	Mean	Std. Deviation
Age of respondents	344	17	75	34.23	11.021
Valid N (listwise)	344				

Source: Own work.

Figure 1: Age of respondents



Source: IBM SPSS Statistics.

Table 3: Education level of respondents

Education level of respondents					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Elementary school	3	.9	.9	.9
	High school	67	19.5	19.5	20.3
	Bachelor's Degree	136	39.5	39.5	59.9
	Master's Degree	78	22.7	22.7	82.6
	Doctor of Science	8	2.3	2.3	84.9
	Associate degree	52	15.1	15.1	100.0
	Total	344	100.0	100.0	

Source: IBM SPSS Statistics.

Table 4: Perceived living standard

Perceived living standard					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Much above the average	8	2.3	2.3	2.3
	Above the average	84	24.4	24.4	26.7
	Average	217	63.1	63.1	89.8
	Below the average	33	9.6	9.6	99.4
	Quite below the average	2	.6	.6	100.0
	Total	344	100.0	100.0	

Source: IBM SPSS Statistics.

#### 4.2 Descriptive statistics

Table 5: Consumer understanding of the term “Environmentally friendly packaging”

\$Term_ Understanding Frequencies				
		Responses		Percent of Cases
		N	Percent	
Understanding of term Environmental frie <sup>a</sup>	Packaging which is non-harmful for the environment	237	19.2%	68.9%
	Packaging which is biodegradable	244	19.8%	70.9%
	Packaging which is recyclable	205	16.6%	59.6%
	Packaging with friendly manufacturing process	148	12.0%	43.0%
	Packaging which is reusable	156	12.6%	45.3%

Table continues

Table 5: Consumer understanding of the term “Environmentally friendly packaging”  
(cont.)

	Packaging which is organic	95	7.7%	27.6%
	Packaging which is green	52	4.2%	15.1%
	Minimal packaging	98	7.9%	28.5%
Total		1235	100.0%	359.0%
a. Dichotomy group tabulated at value 1.				

Source: IBM SPSS Statistics.

Table 6: Paying attention to amount of packaging

<b>When you are shopping, how often do you pay attention to the amount of wrapping or packaging used on products before you decide to buy something?</b>					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Always	55	16.0	16.0	16.0
	About $\frac{3}{4}$ of the time	101	29.4	29.4	45.3
	About $\frac{1}{2}$ of the time	68	19.8	19.8	65.1
	About $\frac{1}{4}$ of the time	65	18.9	18.9	84.0
	Never	55	16.0	16.0	100.0
	Total	344	100.0	100.0	

Source: IBM SPSS Statistics.

Table 7: Paying attention to eco-labelling on product packaging

<b>When you are choosing a product, how often do you pay attention to any environmental labelling before deciding to buy?</b>					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Always	31	9.0	9.0	9.0
	About $\frac{3}{4}$ of the time	74	21.5	21.5	30.5
	About $\frac{1}{2}$ of the time	91	26.5	26.5	57.0
	About $\frac{1}{4}$ of the time	84	24.4	24.4	81.4
	Never	64	18.6	18.6	100.0
	Total	344	100.0	100.0	

Source: IBM SPSS Statistics.

### 4.3 Analysis of packaging style elements material and colour

#### 4.3.1 Chi-square test for goodness of fit - packaging material

Table 8: H1.a – Chi-Square Test Statistics

Test Statistics	
	In your opinion. what type of material have a packaging which is Eco friendly?
Chi-Square	253.297 <sup>a</sup>
df	8
Asymp. Sig.	.000
a. 0 cells (.0%) have expected frequencies less than 5. The minimum expected cell frequency is 38.2.	

Source: IBM SPSS Statistics.

Table 9: H1.a – Chi-Square - Frequencies

In your opinion, what type of material have a packaging which is Eco friendly?			
	Observed N	Expected N	Residual
Paper	85	38.2	46.8
Cardboard	35	38.2	-3.2)
Glass	73	38.2	34.8
Plastics	1	38.2	-37.2)
Biodegradable plastics	32	38.2	-6.2)
Plant starch material	85	38.2	46.8
Aluminum	4	38.2	-34.2)
Steel	1	38.2	-37.2)
Wood	28	38.2	-10.2)
Total	344		

Source: IBM SPSS Statistics.

#### 4.3.2 Chi-square test for goodness of fit - packaging colour

Table 10: H1.b - Chi-Square Test Statistics

Test Statistics	
	When you think of an Eco friendly packaged product, what colour is it?
Chi-Square	874.192 <sup>a</sup>
df	8

Table continues

Table 10: H1.b - Chi-Square Test Statistics (cont.)

Asymp. Sig.	.000
a. 0 cells (.0%) have expected frequencies less than 5. The minimum expected cell frequency is 38.2.	

Source: IBM SPSS Statistics.

Table 11: H1.b - Chi-Square - Frequencies

When you think of an Eco friendly packaged product, what colour is it?			
	Observed N	Expected N	Residual
White	37	38.2	-1.2)
Blue	1	38.2	-37.2)
Black	1	38.2	-37.2)
Grey	12	38.2	-26.2)
Green	104	38.2	65.8
Pink	2	38.2	-36.2)
Red	1	38.2	-37.2)
Yellow	1	38.2	-37.2)
Brown	185	38.2	146.8
Total	344		

Source: IBM SPSS Statistics.

#### 4.4 Analysis of the influence of eco-friendly claims on consumer buying behaviour

##### 4.4.1 ANOVA Test for analyzing consumers' buying behaviour, based on attention to eco-labels

Table 12: H2.a - Levene's test for homogeneity of variance

Test of Homogeneity of Variances			
Buying Behaviour - 5 groups			
Levene Statistic	df1	df2	Sig.
10.829	4	339	.000

Source: IBM SPSS Statistics.

Table 13: H2.a - Test of equality of means

Robust Tests of Equality of Means				
Buying Behavior - 5 groups				
	Statistic <sup>a</sup>	df1	df2	Sig.
Welch	52.286	4	146.179	.000
Brown-Forsythe	50.849	4	259.820	.000

a. Asymptotically F distributed.

Source: IBM SPSS Statistics.

To better interpret the results, it is best to examine differences among specific means using post-hoc analysis. Tukey's HSD test can be used to clarify which groups among the sample have significant differences (Beck, 2018). Post-hoc comparisons using the Tukey HSD test provided following mean score differences:

- The group of "Always" (M=4.87, SD=0.341) was significantly different from group "About ½ of the time" (M=4.30, SD=0.527), also with the group "About ¼ of the time" (M=3.90, SD=0.651), and group "Never" (M=3.30, SD=0.867).
- Group "About ¾ of the time" (M=4.53, SD=0.646) was different from group "About ¼ of the time" and group "Never".
- Group "About ½ of the time" with groups "About ¼ of the time" and "Never".
- Group "About ¼ of the time" with group "Never".
- Group "Never" was statistically significant from all other groups of people with different levels of paying attention to environmentally friendly claims during their buying behaviour.

#### 4.4.2 Chi-square test of independence for analyzing consumer attention to eco-labels, based on their environmental concern

Table 14: H2.b – Pearson Chi-Square Tests

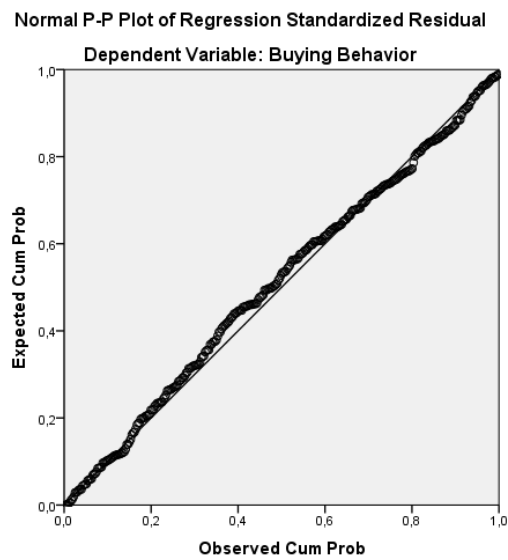
Chi-Square Tests			
	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	16.684 <sup>a</sup>	2	.000
Likelihood Ratio	17.750	2	.000
Linear-by-Linear Association	12.567	1	.000
N of Valid Cases	344		

a. 0 cells (.0%) have expected count less than 5. The minimum expected count is 5.56.

Source: IBM SPSS statistics.

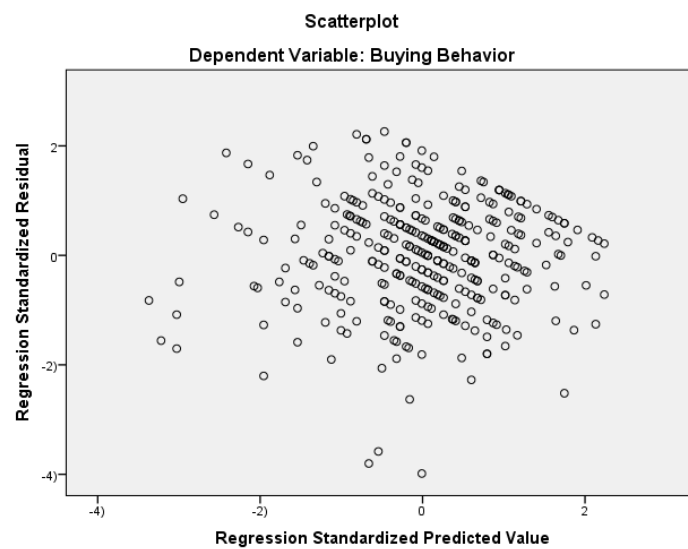
## 4.5 Regression analysis for consumer barriers of buying eco packaged products

Figure 2: H3 Normal Probability Plot - Assumption of linearity



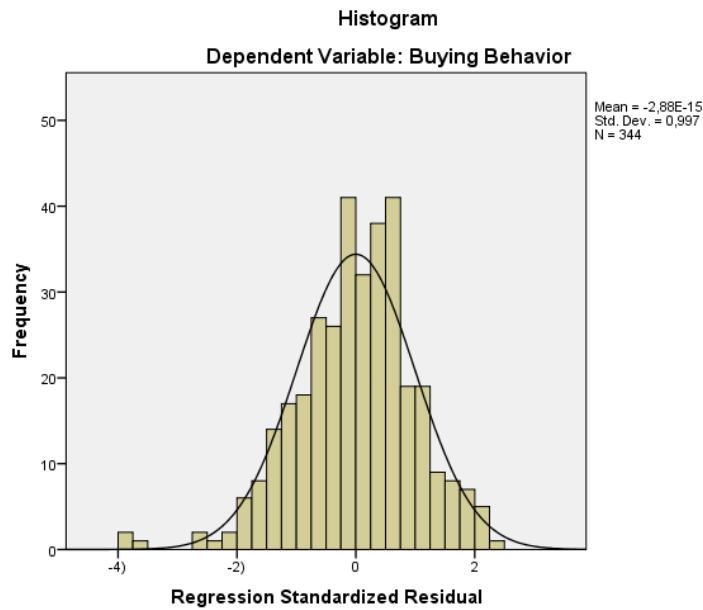
Source: IBM SPSS Statistics.

Figure 3: H3 Scatterplot - assumption of homoscedasticity



Source: IBM SPSS Statistics.

Figure 4: H3 Histogram - assumption of normality



Source: IBM SPSS Statistics.

Table 15: H3 – Regression Model Summary

Model Summary <sup>b</sup>				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.604 <sup>a</sup>	.365	.361	.64409
a. Predictors: (Constant), Environmental Knowledge, Price/Monetray Barriers				
b. Dependent Variable: Buying Behaviour				

Source: IBM SPSS Statistics.

Table 16: H3 - Regression Analysis – Null model testing

ANOVA <sup>a</sup>						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	81.390	2	40.695	98.096	.000 <sup>b</sup>
	Residual	141.462	341	.415		
	Total	222.852	343			
a. Dependent Variable: Buying Behaviour						
b. Predictors: (Constant), Environmental Knowledge, Price/Monetray Barriers						

Source: IBM SPSS Statistics.



Table 17: H3. - Regression Analysis - Coefficients

Coefficients <sup>a</sup>								
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	1.915	.257		7.448	.000		
	Price/Monetray Barriers	-.109)	.056	-.085)	-1.964)	<b>.050</b>	.985	1.015
	Environmmetal Knowledge	.652	.048	.588	13.530	<b>.000</b>	.985	1.015

a. Dependent Variable: Buying Behaviour

Source: IBM SPSS Statistics.

#### 4.6 Analysis of consumer scepticism

##### 4.6.1 One sample t-test for consumer's scepticism toward eco-labels on packaging.

Table 18: H4.a - One sample statistics

One-Sample Statistics				
	N	Mean	Std. Deviation	Std. Error Mean
Consumer_Scepticism_Average	344	2.7842	.62977	.03395

Source: IBM SPSS Statistics.

Table 19: H4.a - One sample test

One-Sample Test						
	Test Value = 3					
	t	df	Sig. (2-tailed)	Mean Difference	95% Confidence Interval of the Difference	
					Lower	Upper
Consumer_Scepticism_Average	-6.357)	343	.000	-.21584)	-.2826)	-.1491)

Source: IBM SPSS Statistics.

#### 4.6.2 Regression analysis for consumer scepticism towards eco-labels

Table 20: H4.b - Regression Model Summary

Model Summary <sup>b</sup>									
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.044 <sup>a</sup>	.002	-.001	.80645	.002	.657	1	342	.418
a. Predictors: (Constant), Consumer Scepticism									
b. Dependent Variable: Buying Behaviour									

Source: IBM SPSS Statistics.

Table 21: H4.b - Regression analysis – Null model testing

ANOVA <sup>a</sup>						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	.427	1	.427	.657	.418 <sup>b</sup>
	Residual	222.425	342	.650		
	Total	222.852	343			
a. Dependent Variable: Buying Behaviour						
b. Predictors: (Constant), Consumer Scepticism						

Source: IBM SPSS Statistics.

Table 22: H4.b - Regression Analysis – Coefficients

Coefficients <sup>a</sup>											
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Correlations			Collinearity Statistics	
		B	Std. Error	Beta			Zero-order	Partial	Part	Tolerance	VIF
		1	(Constant)	3.928			.197		19.904	.000	
	Consumer Scepticism	-.056	.069	-.044	-.810	.418	-.044	-.044	-.044	1.000	1.000
a. Dependent Variable: Buying Behaviour											

Source: IBM SPSS Statistics.

## 4.7 Analysis of consumer psychographic characteristics' influence on buying behaviour

### 4.7.1 Factor analysis summary

Table 23: H5 – Factor Analysis summary

Scale	KMO index	Bartlett's test significance	Number of components extracted	Total variance explained
Environmental Concern	0.816	0.000	1	70.258%
Environmental Knowledge	0.809	0.000	1	57.709%
Perceived Consumer Effectiveness	0.687	0.000	1	57.386%
Perceived Personal Relevance	0.808	0.000	1	58.765%
Consumer Buying Behaviour	0.861	0.000	1	61.485%

Source: Own work

### 4.7.2 Regression analysis for consumers' psychographic characteristics influence on buying behaviour

Table 24: H5 – Regression Model Summary

Model Summary <sup>b</sup>									
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.784 <sup>a</sup>	.614	.610	.62479	.614	134.917	4	339	.000
a. Predictors: (Constant), FAC_Perceived_Personal_Relevance, FAC_Environmental_Knowledge, FAC_Environmental_Concern, FAC_Perceived_Consumer_Effectiveness									
b. Dependent Variable: FAC_Buying_Behaviour									

Source: IBM SPSS Statistics.

Table 25: H5 - Regression Model - Null model testing

ANOVA <sup>a</sup>						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	210.667	4	52.667	134.917	.000 <sup>b</sup>
	Residual	132.333	339	.390		
	Total	343.000	343			
a. Dependent Variable: FAC_Buying_Behaviour						

Table continues

Table 25: H5 - Regression Model - Null model testing (cont.)

b. Predictors: (Constant), FAC\_Perceived\_Personal\_Relevance, FAC\_Environmental\_Knowledge, FAC\_Environmental\_Concern, FAC\_Perceived\_Consumer\_Effectiveness

Source: IBM SPSS Statistics.

Table 26: H5 – Regression Analysis - Coefficients

Coefficients <sup>a</sup>											
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Correlations			Collinearity Statistics	
		B	Std. Error	Beta			Zero-order	Partial	Part	Tolerance	VIF
1	(Constant)	6.498E-17	.034		.000	1.000					
	FAC_Environmental_Concern	.220	.042	.220	5.191	.000	.597	.271	.175	.631	1.584
	FAC_Environmental_Knowledge	.302	.040	.302	7.485	.000	.598	.377	.252	.701	1.427
	FAC_Perceived_Consumer_Effectiveness	.300	.046	.300	6.577	.000	.641	.336	.222	.546	1.832
	FAC_Perceived_Personal_Relevance	.171	.049	.171	3.463	.001	.643	.185	.117	.467	2.139

a. Dependent Variable: FAC\_Buying\_Behaviour

Source: IBM SPSS Statistics.

## 4.8 Analysis of the influence of demographic characteristics on main concepts

### 4.8.1 Regression analysis for the influence of demographic characteristics on buying behaviour

Table 27: Regression model summary

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.382 <sup>a</sup>	.146	.134	.75028
a. Predictors: (Constant), Perceived living standard, Age, Employment status, Gender, Education level				

Source: IBM SPSS Statistics.

Table 28: Regression analysis – Null model testing

ANOVA <sup>a</sup>						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	32.586	5	6.517	11.578	.000 <sup>b</sup>
	Residual	190.266	338	.563		
	Total	222.852	343			
a. Dependent Variable: Buying Behaviour						
b. Predictors: (Constant), Perceived living standard, Age, Employment status, Gender, Education level						

Source: IBM SPSS Statistics.

Table 29: Regression analysis - coefficients

Coefficients <sup>a</sup>						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	3.453	.268		12.893	.000
	Age	.024	.004	.322	6.383	<b>.000</b>
	Gender	-.234)	.096	-.124)	-2.443)	<b>.015</b>
	Education level	-.080)	.032	-.128)	-2.505)	<b>.013</b>
	Employment status	.066	.036	.094	1.840	.067
	Perceived living standard	-.092)	.063	-.075)	-1.466)	.144

a. Dependent Variable: Buying Behaviour

Source: IBM SPSS Statistics.

#### 4.8.2 Regression analysis for the influence of demographic characteristics on environmental concern

Table 30: Regression model summary

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.292 <sup>a</sup>	.085	.072	.63472

a. Predictors: (Constant), Perceived living standard, Age, Employment status, Gender, Education level

Source: IBM SPSS Statistics.

Table 31: Regression analysis – Null model testing

ANOVA <sup>a</sup>						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	12.727	5	2.545	6.318	.000 <sup>b</sup>
	Residual	136.168	338	.403		

Table continues

Table 31: Regression analysis – Null model testing (cont.)

Total	148.895	343			
a. Dependent Variable: Environmental Concern					
b. Predictors: (Constant), Perceived living standard, Age, Employment status, Gender, Education level					

Source: IBM SPSS Statistics.

Table 32: Regression analysis - coefficients

Coefficients <sup>a</sup>						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	3.092	.227		13.646	.000
	Age	.014	.003	.231	4.419	<b>.000</b>
	Gender	-.244)	.081	-.158)	-3.007)	<b>.003</b>
	Education level	-.040)	.027	-.078)	-1.479)	.140
	Employment status	-.027)	.030	-.046)	-.883)	.378
	Perceived living standard	.000	.053	.000	-.005)	.996
a. Dependent Variable: Environmental Concern						

Source: IBM SPSS Statistics.

#### 4.8.3 Regression analysis for the influence of demographic characteristics on environmental knowledge

Table 33: Regression model summary

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.284 <sup>a</sup>	.081	.067	.70249
a. Predictors: (Constant), Perceived living standard, Age, Employment status, Gender, Education level				

Source: IBM SPSS Statistics.

Table 34: Regression analysis – Null model testing

ANOVA <sup>a</sup>						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	14.616	5	2.923	5.924	.000 <sup>b</sup>
	Residual	166.799	338	.493		
	Total	181.415	343			
a. Dependent Variable: Environmnetal Knowledge						
b. Predictors: (Constant), Perceived living standard, Age, Employment status, Gender, Education level						

Source: IBM SPSS Statistics.

Table 35: Regression analysis - coefficients

Coefficients <sup>a</sup>						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	3.013	.251		12.015	.000
	Age	.018	.003	.273	5.213	<b>.000</b>
	Gender	.039	.090	.023	.435	.664
	Education level	-.041)	.030	-.073)	-1.368)	.172
	Employment status	.020	.033	.032	.609	.543
	Perceived living standard	-.052)	.059	-.046)	-.879)	.380
a. Dependent Variable: Environmnetal Knowledge						

Source: IBM SPSS Statistics.

#### 4.8.4 Regression analysis for the influence of demographic characteristics on perceived consumer effectiveness

Table 36: Regression model summary

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.368 <sup>a</sup>	.135	.123	.59895
a. Predictors: (Constant), Perceived living standard, Age, Employment status, Gender, Education level				

Source: IBM SPSS Statistics.



Table 37: Regression analysis – Null model testing

ANOVA <sup>a</sup>						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	18.977	5	3.795	10.580	.000 <sup>b</sup>
	Residual	121.255	338	.359		
	Total	140.232	343			
a. Dependent Variable: Perceived Consumer Effectiveness						
b. Predictors: (Constant), Perceived living standard, Age, Employment status, Gender, Education level						

Source: IBM SPSS Statistics.

Table 38: Regression analysis - coefficients

Coefficients <sup>a</sup>						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	3.950	.214		18.473	.000
	Age	.015	.003	.267	5.261	.000
	Gender	-.325)	.077	-.217)	-4.243)	.000
	Education level	-.042)	.026	-.084)	-1.629)	.104
	Employment status	.048	.028	.086	1.685	.093
	Perceived living standard	-.036)	.050	-.037)	-.725)	.469
a. Dependent Variable: Perceived Consumer Effectiveness						

Source: IBM SPSS Statistics.

#### 4.8.5 Regression analysis for the influence of demographic characteristics on perceived personal relevance

Table 39: Regression model summary

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.323 <sup>a</sup>	.104	.091	.747
a. Predictors: (Constant), Perceived living standard, Age, Employment status, Gender, Education level				

Source: IBM SPSS Statistics.

Table 40: Regression analysis – Null model testing

ANOVA <sup>a</sup>						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	21.889	5	4.378	7.849	.000 <sup>b</sup>
	Residual	188.519	338	.558		
	Total	210.408	343			
a. Dependent Variable: Perceived Personal Relevance						
b. Predictors: (Constant), Perceived living standard, Age, Employment status, Gender, Education level						

Source: IBM SPSS Statistics.

Table 41: Regression analysis - coefficients

Coefficients <sup>a</sup>					
Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		

Table continues

Table 41: Regression analysis – coefficients (cont.)

1	(Constant)	2.909	.267		10.912	.000
	Age	.019	.004	.274	5.300	<b>.000</b>
	Gender	-.196)	.095	-.107)	-2.053)	<b>.041</b>
	Education level	-.044)	.032	-.072)	-1.364)	.174
	Employment status	.072	.035	.106	2.025	.054
	Perceived living standard	-.041)	.063	-.034)	-.656)	.512
a. Dependent Variable: Perceived Personal Relevance						

Source: IBM SPSS Statistics.

#### 4.8.6 Regression analysis for the influence of demographic characteristics on consumer scepticism

Table 42: Regression model summary

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.181 <sup>a</sup>	.033	.018	.62393
a. Predictors: (Constant), Perceived living standard, Age, Employment status, Gender, Education level				

Source: IBM SPSS Statistics.

Table 43: Regression analysis – Null model testing

ANOVA <sup>a</sup>						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	4.458	5	.892	2.291	.046 <sup>b</sup>
	Residual	131.578	338	.389		

Table 43: Regression analysis – Null model testing (cont.)

	Total	136.036	343			
a. Dependent Variable: Consumer Scepicism						
b. Predictors: (Constant), Perceived living standard, Age, Employment status, Gender, Education level						

Source: IBM SPSS Statistics.

Table 44: Regression analysis - coefficients

Coefficients <sup>a</sup>						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	3.013	.223		13.527	.000
	Age	-.009)	.003	-.149)	-2.776)	<b>.006</b>
	Gender	.142	.080	.096	1.781	.076
	Education level	.001	.027	.002	.030	.976
	Employment status	-.002)	.030	-.004)	-.074)	.941
	Perceived living standard	.011	.052	.011	.203	.840
a. Dependent Variable: Consumer Scepicism						

Source: IBM SPSS Statistics.

#### 4.8.7 Regression analysis for the influence of demographic characteristics on price/monetary barriers

Table 45: Regression model summary

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.267 <sup>a</sup>	.071	.058	.61189

Table continues

Table 45: Regression model summary (cont.)

a. Predictors: (Constant), Perceived living standard, Age, Employment status, Gender, Education level
---

Source: IBM SPSS Statistics.

Table 46: Regression analysis – Null model testing

ANOVA <sup>a</sup>						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	9.737	5	1.947	5.201	.000 <sup>b</sup>
	Residual	126.551	338	.374		
Total		136.288	343			
a. Dependent Variable: Price/Monetray Barriers						
b. Predictors: (Constant), Perceived living standard, Age, Employment status, Gender, Education level						

Source: IBM SPSS Statistics.

Table 47: Regression analysis - coefficients

Coefficients <sup>a</sup>						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	3.025	.218		13.851	.000
	Age	-.009	.003	-.162	-3.073	.002
	Gender	-.138	.078	-.093	-1.759	.080
	Education level	.001	.026	.002	.039	.969
	Employment status	.049	.029	.090	1.695	.091
	Perceived living standard	.150	.051	.155	2.931	.004
a. Dependent Variable: Price/Monetray Barriers						

Source: IBM SPSS Statistics.