Consumers’ Attitude Towards Eco Friendly Textile Products

Abstract
Care for the environment is directly connected to consumer behaviour. The authors summarize in their research the findings of different authors who have examined various aspects of socially responsible consumption, green consumption and ethical consumer behaviour. Their results have shown that consumers contribute to active environmental problem solving by selecting and purchasing environment-friendly textile products. Today’s consumers have started to act more ethically and responsibly when purchasing and considering the products they need. The goal of this paper is to explore Slovenian consumers’ perception of eco-friendly textile products, to investigate underlying attitudes and perceptions, and consumers’ willingness to buy eco-friendly textile products in the future. Research questions focus on knowledge about eco-friendly textile products, attitudes, perception and purchasing behaviour as it relates to eco-friendly textile products. Slovenian consumers express a positive attitude towards eco-friendly textile products. They perceive eco-friendly textile products as products with a certificate, as produced in an eco-friendly manner, as products with a higher price than conventional products and as sustainable products. The most important factor when purchasing eco-friendly textile products is the label “product with certificate” or “certified product”, as consumers buy eco-friendly textile products labelled as such. Respondents intend to purchase eco-friendly textile products in the future. The results of this research could be used in planning the further development of the eco-friendly textile products market. Overall positive attitudes toward eco-friendly textile products should be reinforced, while consumers can be influenced through targeted advertising. The results of this research can be used to plan further marketing activities.

Keywords: consumer behaviour, attitudes, perception, consumers, eco-friendly textile products, Slovenia

Izvleček
Skrb za okolje je neposredno povezana z vedenjem potrošnikov. V članku so povzete ugotovitve različnih raziskav, v katerih so avtorji raziskali vidike družbeno odgovorne porabe, okolju prijazne porabe in etičnega vedenja potrošnikov. Njihovi rezultati kažejo, da potrošniki z izbijo in nakupom okolju prijaznih tekstilnih izdelkov pripomnorejo k aktivnemu premagovanju okoljskih problemov. Današnji potrošniki so ob nakupu in razmišljanju o izdelku, ki ga potrebujejo, začeli delovati bolj etično in odgovorneje. Namen te študije je raziskati, kako slovenski potrošniki dojemajo okolju prijazne
tekstilne izdelke, proučiti njihova stališča, dojemanje in njihovo pripravljenost za nakup okolju prijaznih tekstilnih izdelkov v prihodnosti. Slovenski potrošniki izražajo pozitiven odnos do okolju prijaznih tekstilnih izdelkov. Okolju prijazne tekstilne izdelke dojema kaj izdelke s certifikatoma in okolju prijazne izdelave, kot izdelke z višjo ceno od konvencionalnih in kot trajnostne izdelke. Najpomembnejši dejavnik nakupa okolju prijaznega tekstilnega izdelka je oznaka »idelek s certifikatom« oz. »certificirani izdelek«. Potrošniki nameravajo tudi v prihodnosti kupovati okolju prijazne tekstilne izdelke. Rezultate te raziskave bi lahko uporabili za načrtovanje nadaljnega razvoja trga okolju prijaznih tekstilnih izdelkov. Splošen pozitiven odnos do okolju prijaznih tekstilnih izdelkov bi morali okrepiti, na potrošnike pa lahko vplivamo s ciljnim oglaševanjem. Rezultate raziskave lahko uporabimo za načrtovanje nadaljnje, trženjskih aktivnosti.

Ključne besede: vedenje potrošnikov, stališča, dojemanje, potrošniki, okolju prijazni tekstilni izdelki, Slovenija

1 Introduction

Understanding consumer behaviour extends to various branches of science and is a key to successful marketing. Consumer behaviour is defined as the behaviour consumers demonstrate while searching for, purchasing, using, disposing of and evaluating products, services and ideas that are expected to satisfy their needs [1]. The purchase decision-making process is defined as the comprehensive process of consumer decision making that occurs mostly at five, and occasionally, at seven consecutive levels: problem/need identification, data and information collecting, evaluation of alternatives, consumer choice and post-purchase behaviour/result. In the seven-level model, the use of purchased alternative (satisfaction or dissatisfaction with a purchased product) and disposal of unused products and their parts are added [2, 3]. Ethical or environmentally responsible purchasing is an extended purchasing process, where the consumer takes an in-depth approach to considering a purchase and collects the needed information due to a strong affiliation with ethical issues and dilemmas. Most models of ethical decision making and consumption are built on the cognitive process: (1) beliefs determine attitude, (2) attitude leads to intention and (3) intention results in behaviour. Social norms and behavioural control additionally influence intention and behaviour [4]. The most important reasons to buy ethical clothing are a consumer’s feeling that by purchasing ethical clothing they are helping to make the world a better place and solving the problems of the fashion industry. Both are based on altruistic values [5]. Consumer behaviour is, during the purchase decision making process, affected by various factors. These can be divided into several factor (influence) groups: psychological (motivation, attitude, learning and memory), social (reference groups, family, individual’s role and position, and status), personal (age and level of a family’s life cycle, occupation and financial situation, lifestyle, personality and self-image, values and beliefs), cultural (culture and social class) [6–8], economic (price-monetary and non-monetary aspect, income and quality) [9], individual differences and environmental impacts [10–14]. In the research of authors [7] and [15], we observed a classification into internal and external influence factors on purchase decision making. Among other important factors that influence the purchase decision making of environmentally conscious consumers, the following are worth mentioning: care for one’s own health, which means self-protection for such consumers, the strong identity of an environmentally conscious consumer, their self-confidence, sense of happiness and one’s own satisfaction, family, friends and peers [5].

Today, the common goal of a company or organization is to encourage consumers to buy through different forms of marketing communications. In order to raise consumer awareness about the environment-friendliness of products, companies evaluate their products through certificates. Ecologists observed the first signs of consumer impact on the environment sixty years ago [16]. The textile industry has a significant environmental impact in the form of water pollution, high energy consumption and high greenhouse gasses emissions. [17]. In selecting an environment-friendly product, consumers pay more attention to certificates when choosing food than a textile product [18]. Some authors [17] point out that the textile industry, which is one of the greatest threats to clean air and water, consumes an excessive amount of energy. The production of polyester and cotton, in particular, is deemed the largest pollutant of oceans, and as one of the causes of global warming and biodiversity loss. In the past few years, textile brands have been appearing that aspire to adopt sustainable behaviour, use ethical and environment-friendly product materials and have been introducing the 5R approach (Reduce, Reuse, Recycle, Redesign, Reimage)
Consumers' Attitude Towards Eco Friendly Textile Products

1.1 Eco-friendly textile products

The protection of the environment and the sustainability of consumer behaviour are the two most important reasons for the introduction of eco-labelling schemes. Eco-labelling aims to promote products with reduced environmental impacts throughout their life cycle, and functions by encouraging consumers to alter their consumption patterns and to make wiser use of resources and energy in the drive for sustainable development. Examples of eco-labels on the EU market include the “EU Flower”, the OEKO-TEX® Standard 100, The Blue Angel (Der Blaue Engel), the Mobius loop (recycling symbol), GOTS (Global Organic Textile Standard) and others [22]. Since the textile industry is a very good example of the fastest growing and most ecologically harmful industries in the world, various innovations have been implemented in order to safeguard our planet. In order to protect our environment, we must take some preventive measures and introduce technologies that can maintain the balance of our eco-system and make final products free from toxic effects. Eco-friendly clothing can be termed as clothing made of natural fibres, such as organic cotton and hemp, clothing that has been organically dyed with vegetables or any fabrics that use small amounts of water, energy and chemicals that affect the environment. Natural fibres have intrinsic properties, such as mechanical strength, low weight and are healthier to the wearer, which makes them particularly attractive [23–25]. The word “eco” is short for ecology. Ecology is the study of interactions between organisms and their environment. Therefore, “eco” friendly (or “ecology friendly”) is a term used to refer to goods and services deemed to inflict minimal damage on the environment. Environmentally (some authors also use “eco”) friendly products are market-oriented products that cause minimal environmental degradation, while their production is linked to a product development process that is structured in a way that considers the impacts on the environment throughout the product life cycle [26]. “Think globally, act locally” is the slogan of the future for the global textile industry [23, 27]. Any textile product that is produced in an eco-friendly manner and processed under eco-friendly requirements is known as an eco-friendly textile product. The terms sustainable fashion, eco-fashion and eco-tech are also used. When purchasing products bearing the sign “eco-friendly”, consumers may be sure that at least 95% of the materials used are of eco-friendly origin, that the product complies with all inspection regulations, that it is packed in biodegradable packaging, and that it includes a code and specific data regarding the inspection body. Therefore, any certified organic product should be marked with the label “eco-friendly product”.

Materials can be considered “eco-friendly” on the basis of the most various factors [23]:

- Renewability of the product
- Ecological footprint of resources – area of fertile land needed for the full growth of a product
- Determining the eco-friendliness of a product – amount of chemicals required for the production of products.

Numerous surveys show that consumers are concerned about the environment, but this does not always lead to actions, such as the purchase of environmentally responsible products [28, 29]. Previous studies have indicated that the largest proportion of participants consider clothing composition first and foremost, while only a small percentage consider eco-labels and the environmental impact. Consumers are willing to pay no more than 10% extra for a textile product with an ecological label attached. The largest...
proportion of respondents identified themselves as average eco-conscious, although they didn't show any knowledge of eco-labels. It is necessary to increase the level of awareness about sustainable materials, as well as trust in eco-labelling systems through transparent standardisation and certification systems. The popularisation of eco-labels, more transparent and coherent labelling systems and the regulation of words such as "green" and "bio" may increase consumers’ willingness to choose more sustainable alternatives and consequently pay more for sustainable products [30].

In academic literature regarding consumer preference for responsibly labelled goods, authors have paid little attention to the relevance of considering a label “certified product”. While surveying literature and previously research, it was observed that the leading countries in the textile industry are India, other Asian countries, the USA and Columbia. The most relevant research and data regarding the proposed subject have been published in these geographic regions.

The aim of this paper is to explore Slovenian consumers’ perception of eco-friendly textile products, to investigate underlying attitudes and perception, and consumers’ willingness to buy eco-friendly textile products in the future. An important aspect of the research was to determine how the label “product with certificate” or “certified product” affects consumer decisions to purchase eco-friendly textile products in the decision-making process. On the market, a “product with certificate” or “certified product” is denoted by a legally defined sign. This paper gives the latest account of consumers’ attitude towards eco-friendly textile products in Slovenia.

2 Methodology

2.1 Method

In order to gain knowledge about consumers’ perceptions of eco-friendly textile products, to understand the influencing factors in the development of the eco-friendly textile market and to determine how the label “product with certificate” or “certified product” affects consumer decisions to purchase eco-friendly textile products, a quantitative research study was carried out. Before placing the questionnaire in an online environment, we conducted a pilot test of the questionnaire with five consumers in order to identify potential ambiguities in answering the survey questions. There were no missing data in the analysis, as only completed questionnaires were used for that purpose. Since data were collected as a field intercept survey, respondents who did not complete the questionnaire were never included. Respondents were selected based on a snowball sampling method. The snowball sampling method is based on the use of networks: a few study subjects are selected to join the group and these recruit other subjects to participate in the study sample. These new subjects recruit other subjects to join the sample until the estimated number of sample subjects has been reached. The same method has also been used in other research [5, 31]. Data were collected via an online questionnaire. These individuals were given a short summary of the purpose of the study before completing the questionnaire. The final usable sample consisted of 141 consumers in Slovenia. A request for the submission of demographic information was included at the end of the questionnaire.

2.2 Questionnaire and hypotheses

The questionnaire was divided into the following thematic sections for research purposes:

- level of recognition of the term “eco-friendly textile products”,
- assessment of the purchasing behaviour of consumers with respect to “eco-friendly textile products”,
- perception of “eco-friendly textile products”,
- tendency to purchase eco-friendly textile products due to a “product with certificate” or “certified product” label,
- willingness to pay a higher price and future purchase intentions, and
- demographic data at the end of the questionnaire.

The introduction letter and draft questionnaire were developed for the purpose of the research. Instructions were provided so that the respondents would do well completing the questionnaire, and to ensure that they could progress as quickly as possible through it. Also, the definition of an “eco-friendly textile product” was presented to the respondents in the introductory part of the questionnaire. The questionnaire examined various factors and determinants that influence the attitudes, perceptions, knowledge and purchase of eco-friendly textile products in Slovenia. The data were collected in April 2020 using a structured questionnaire administered in an online survey using closed (questions with multiple choice
answers) and open questions (question without alternative answers). The questionnaire developed for the study had questions representing three different components of the study, namely, the socio-economic profile of consumers, their purchasing behaviour with regard to textile products, and their perception of various product attributes. The first component included questions related to the socio-economic information of respondents, such as gender, age, education level and region of residence. The second component related to the purchasing behaviour of consumers and consisted of questions related to consumers’ purchase frequency and their perception of eco-friendly textile products. To understand product attributes (the third component of the study), questions were asked related to various product attributes. In order to analyse the relative importance of these product attributes, consumers’ perception of attributes was graded using the Likert scale (1 = not at all important, 2 = somewhat important, 3 = important, 4 = very important and 5 = extremely important). An important element of the research focused on determining how the label “product with certificate” or “certified product” affects consumer decisions to purchase eco-friendly textile products.

The specific hypotheses tested in this study were as follows:

Previous studies have indicated that the largest proportion of participants consider clothing composition first and foremost, while only a small percentage consider eco-labels and the environmental impact. The largest proportion of respondents identified themselves as average eco-conscious, although they didn’t show any knowledge of eco-labels. Hence, we present the following hypothesis:

H1: The definition of “eco-friendly textile products” has not been clearly integrated in the perception of young consumers. Consumers are concerned about the environment, but this does not always lead to actions, such as the purchase of environmentally responsible products. Hence, we present the following hypothesis:

H2: Young consumers rarely purchase eco-friendly textile products (less than once a month).

Product attributes play a major role in the purchase choices of consumers and are crucial determinants of product success/failure and the associated marketing strategies. A product can be defined in terms of its different attributes (factors), such as social, personal, economic and environmental. Purchasing decisions for different products mainly depend on a combination of these attributes. By raising consumer awareness regarding the negative influences of conventional production, the importance of the environmental friendliness of products is increasing.

H3: The most important factor for purchasing eco-friendly textile products is the label “product with certificate” or “certified product”. Some socio-demographic characteristics and the purchasing behaviours of consumers influence their perception of eco-friendly textile products. Hence, we present the following hypothesis:

H4: Young women consider eco-friendly textile products to be of higher quality than young men do. Certificates represent one of the constituent parts of the traceability and provability of the environmental and social responsibility of a product. Certificates are an influencing factor in willingness to pay more for environment-friendly textile product. Hence, we present the following hypothesis:

H5: There is a high tendency for purchasing eco-friendly textile products due to a “product with certificate” or “certified product” label. Previous studies have indicated that consumers are willing to pay more for clothing made of organic cotton and have reached the conclusion that consumers are prepared to pay prices that are 25% higher. Also, previous studies have indicated consumers that would be willing to pay more for environmentally friendly products, provided they were certain the products are truly environmentally friendly. Hence, we present the following hypothesis:

H6: Young consumers are willing to pay a higher price for eco-friendly textile products than for conventional textile products. Consumers have started to act more ethically and responsibly when purchasing and considering the products they need. The most important reasons for purchasing ethical clothing are the consumer’s feeling that by purchasing ethical clothing they are helping to make the world a better place and solving the problems of the fashion industry. Hence, we present the following hypothesis:

H7: Young consumers intend to purchase eco-friendly textile products in the future.

2.3 Sample description

The sample consisted of 141 respondents, 72% of who were women and 28% of whom were men. At 70%, the age group from 18 to 35 years accounted for the highest proportion of respondents, followed by the age group from 36 to 55 years at 28% and the age
group above 55 at 2%. Most respondents completed secondary school (38%), 35% had a higher education (1st level), 23% had a master’s degree (2nd level), 4% completed primary school and 4% had a doctorate. Most of respondents (34%) came from Ljubljana, 33% came from the Maribor-Murska Sobota region, 13% came from the Celje and Trbovlje region, 9% came from the Nova Gorica and Koper region, 6% came from Novo Mesto and 6% came from Kranj (Figure 1).

![Figure 1: Region of residence of respondents](image)

In methodological terms, the main research is defined as quantitative research based on a large statistical population and a large number of statistic subjects included in a statistical sample. In this way, the method of data processing was justified by the employment of statistical methods providing exact conclusions. Research validity was justified by the fact that the research was carried out in a stable economic environment. Research implementation was limited in time, which mainly eliminated the influence of unforeseen events on the research results. Research reliability was justified by the fact that identical results would be obtained by repeating the research under the same conditions and in the same economic environment. The reliability of the measurement tool used for quantitative research was tested using the Cronbach Alpha test. Generalisation: results are used within the field of textile products for comparability purposes, while the specificities of textile products and the textile industry must be taken into account.

2.4 Data analyses

The answers were processed, graphically presented and interpreted by using the Statistical Package for Social Sciences (SPSS). The data obtained from the questionnaire were analysed using univariate analysis in order to verify distributions of frequencies and to detect possible errors that occurred during the research and/or data entering. The results and individual variables were compared and displayed. The level of comparison was set at, $\alpha = 0.05$. The data collected from the questionnaire were put through a validity assessment (Kaiser-Mayer-Olkin measure - KMO = 0.892; Bartlett’s test sign = 0.000). The reliability of the measurement tool relates primarily to the accuracy of results. Reliability indicates the accuracy, trust ability, stability and repeatability of test results [31‒33]. Cronbach’s alpha coefficient of reliability was used in this study. Cronbach’s alpha coefficient method is a method used to determine the reliability of a test based on internal consistency. The reliability analysis of the research yielded a Cronbach’s Alpha value of 0.85 and a significance level of 0.000, which means that the reliability of the questionnaire is acceptable. The hypotheses are presented and tested in next chapter.

3 Results and discussion

3.1 Level of recognition of the term “eco-friendly textile products”

Eco-friendly is a word interpreted by individuals in a variety of ways and contexts. The term has many different meanings and interpretations and is often associated and sometimes confused with terms such as “green”, “ecological”, “environmental”, “natural” and “sustainable” [34]. For example, what is eco-friendly to one consumer may not be eco-friendly to another. Moreover, the interpretations of the term of producers and regulators may differ from those of the consumers [34, 35].

The definition of “eco-friendly textile products” is not yet clearly established on the textile market and in the perception of consumers. Data from quantitative research have shown that knowledge and recognition of eco-friendly textile products is not high. Some 57% of respondents have clearly integrated the definition of eco-friendly products into their thinking. Respondents defined eco-friendly products as textile products with little negative influence on the environment and people’s health. The term is broad
and includes not only ecologically produced raw materials, but also production methods with little negative effect on the environment. Environment-friendly products are also those that are biodegradable and can be recycled. They are environmentally friendly, i.e. their production consumes less input material and energy per production/service unit, do not contain hazardous substances and do not produce hazardous waste. They consume less energy during their operation/use, enable reuse or are recycled. They are safe to use and are the least harmful to the environment over their lifetime.

Based on the obtained results, hypothesis 1 that “the definition of eco-friendly textile products has not been clearly integrated in the perception of young consumers” was confirmed. The conclusion that can be drawn from these facts is that better knowledge could be achieved through constant the education of young consumers. This means that there is a need in Slovenia to continuously inform young consumers about the meaning of eco-friendly products and the meaning of product labelling. Institutions of public importance and manufacturers should consider this obligation. It is in the best interest of all subjects involved in the production, research and consumption of textile products to raise quality to a higher level in Slovenia. According to [36], information regarding eco-friendly products is an important factor, representing the only instrument that consumers have to differentiate between the attributes of eco-friendly products and those of conventional products, and to form positive attitudes and high-quality perceptions of these products. Knowledge about eco-friendly products is not only determined by socio-demographic variables (education level, income, values and lifestyle), but is also affected by information provided by public administration, the mass media, environmental associations and shopping sites.

### 3.2 Consumers’ perception of eco-friendly textile products

Prepared attributes of eco-friendly textile products were included in the questionnaire in order to help consumers express their points of view regarding such products. Characteristics of eco-friendly textile products were prepared based on the results of existing research by [10, 34, 37] and others. Respondents expressed their opinions by marking the appropriate answer (1 = strongly disagree and 5 = strongly agree). Average evaluations of recounted characteristics were calculated based on obtained evaluations, and the overall view of Slovenian consumers regarding eco-friendly textile products was determined accordingly (Figure 2).

Research shows that consumers perceive eco-friendly textile products as products labelled with certificates, such as “certified products” (AM = 4.1; SD = 1.1), as products that have been produced in an environmentally friendly manner (AM = 3.8; SD = 1.3), as products with a higher price than conventional products (AM = 3.5; SD = 1.3), as sustainable (AM = 3.2; SD = 1.3), as products that manifest a modern design (AM = 3.0; SD = 1.3), as aesthetically friendly (AM = 3.0; SD = 1.1), as of high quality

![Figure 2: Average mean values (AM) consumers’ perception of eco-friendly textile products](image-url)
(AM = 3.0; SD = 1.1) and products with pleasant texture (AM = 3.0; SD = 1.1) (Figure 2).

Some socio-demographic characteristics and purchasing behaviours of consumers influence their perception of eco-friendly textile products. Our research showed that female consumers perceive eco-friendly textile products to be of higher quality (AM = 3.23; SD = 0.91) than men do (AM = 2.30; SD = 1.09). T-test and Levene’s test results indicated equal variances between both male and female consumer groups (F = 1.057; p = 0.000). Significant differences could be observed. Women considered eco-friendly textile products to be of higher quality than men did. Based on the obtained results, hypothesis 4 that “young women consider eco-friendly textile products to be of higher than young men do” was confirmed.

3.3 Consumers’ purchasing behaviour with respect to eco-friendly textile products

The purchasing behaviour of consumers was assessed on the basis of purchasing frequency and preferred market place (Table 1).

Table 1: Consumers’ purchasing behaviour with respect to eco-friendly textile products

| Frequency of purchase | Percent of respondents (%) |
|-----------------------|----------------------------|
| Weekly                | 3                          |
| Twice a month         | 6                          |
| Monthly               | 21                         |
| Rarely                | 72                         |

Source: Author’s own source.

The results indicate that about 72% of respondents rarely purchase eco-friendly textile products (less than once a month). Based on the presented results, hypothesis 2 that “young consumers rarely purchase eco-friendly textile products (less than once a month)” was confirmed.

Based on the Likert scale, we examined the importance of various product attributes to respondents in purchasing decisions. Using the Likert scale of 1 = not at all important, 2 = somewhat important, 3 = important, 4 = very important and 5 = extremely important, they defined their affinity for given attributes.

The results showed (Figure 3) that the most important attributes for a consumer’s selection are a “product with certificate” or “certified product” label (AM = 3.7; SD = 1.4) and price (AM = 3.7; SD = 1.2). Ranking third and fourth in terms of importance were design (AM = 3.5; SD = 1.4) and style (AM = 3.5; SD = 1.4). They were followed by: aesthetically friendly (AM = 3.4; SD = 1.4), colour (AM = 3.4; SD = 1.4), texture value (AM = 3.3; SD = 1.3), appearance of high quality (AM = 3.3; SD = 1.3), brand (AM = 3.0; SD = 1.3) and environmentally friendly production (AM = 2.8; SD = 1.2). Based on the presented results, hypothesis 3 that “the most important factor for purchasing eco-friendly textile products is the label “product with certificate” or “certified product” was confirmed. Fibre content has an important impact on how the texture feels to the skin.
3.4 Attitude towards a label “product with certificate” or “certified product” label

An important element of this research was dedicated to determining the importance of the “product with certificate” or “certified product” label in the decision-making process. Respondents expressed their opinions by marking the appropriate answer (1 = strongly disagree and 5 = strongly agree). The results show that consumers interviewed decided that the label “product with certificate” or “certified product” is the most important factor in decisions to purchase eco-friendly textile products (AM = 3.5, SD = 1.4). Consumers always buy eco-friendly textile products with a “product with certificate” or “certified product” label (AM = 3.3; SD = 1.4) (Table 2). We can thus confirm there is a significant tendency to purchase eco-friendly textile products with a “product with certificate” or “certified product” label. Based on the obtained results, hypothesis 5 that “there is a high tendency for purchasing eco-friendly textile products due to a “product with certificate” or “certified product” label” was confirmed.

Special attention will be paid to comparing the influence of the “certified product” labelling/feature with the influences of other researched factors on consumers’ decisions to purchase environmentally friendly textile products. Should it be demonstrated that a “certified product” label bears at least as strong a statistically typical influence on consumers’ purchasing decisions as other influential factors, the research results will contribute positively to the more responsible focus of corporate management on the environment, and to the more efficient management of the online marketing elements of environmentally friendly products in marketing departments. An additional challenge in the process of forming and implementing a marketing communications strategy, together with raising consumer awareness, will be emphasizing the importance of the quality or integrity of products, since the “certified product” label enters the purchase decision-making process during the phase of collecting information regarding an environmentally friendly textile product, while the consumer considers such information when evaluating alternatives, and even makes a decision about the final purchase on the basis of that information.

3.5 Willingness to pay a higher prices and future buying intentions

Respondents were asked to indicate if they were willing to pay a higher price for eco-friendly textile products than for conventional textile products, and how much extra they were willing to pay. A total of 4% of respondents would definitely be reluctant to pay more money and 16% did not know whether they would pay premium prices for eco-friendly textile products. Most consumers (53%) were willing to pay a premium price, paying 11-20% more, 24% would pay 21-30% more, 6% would pay 31-50% more, and 1% of respondents were willing to pay 51-100% more for eco-friendly textile products (Figure 4). Based on the presented results, hypothesis 6 that “young consumers’ are willing to pay a higher price for eco-friendly textile products than for conventional textile products” was confirmed.

Authors [10] have investigated whether consumers are willing to pay more for clothing made of organic cotton, and have come to the conclusion that consumers are prepared to pay a 25% higher price. Research regarding the attitude of Europeans to the formation of a single market for organic products has shown that more than three-thirds of respondents would be willing to pay more for environmentally friendly products, provided that they were certain the products are truly environmentally friendly (77%). On the other hand, just over a half of Europeans (55%) feel they are adequately informed about the environmental impact of purchased and used products [38]. Author [11] points out that consumers perceive the price for ethical and environmentally responsible textile as too high and disproportionate to conventional products. Authors [12] have researched consumer decisions to purchase environmentally friendly fashion accessories.

Table 2: Attitude towards a “product with certificate” or “certified product” label

| Eco-friendly textile products | N  | AM | SD  |
|------------------------------|----|----|-----|
| A “product with certificate” or “certified product” label is the most important factor in purchasing decisions. | 141 | 3.5 | 1.4 |
| I always buy eco-friendly textile products with a “product with certificate” or “certified product” label. | 141 | 3.3 | 1.4 |

N = Number, AM = Average Mean, SD = Standard deviation
They argue that consumers are willing to pay more for an environmentally friendly fashion accessory. Authors [39] concluded that mothers were willing to purchase eco-friendly clothing for their children, but were reluctant to pay more for it. Author [40] found a weak correlation between educational level and willingness to pay a price premium for ethically produced clothing (p = 0.004), and concluded that demographics were poor predictors of consumers’ willingness to pay a price premium. Authors [41] and [42] found no significant effect of gender, age, education level, income, or ethnicity on willingness to pay a price premium for eco-friendly cotton. Future purchasing intentions were measured using the five-point Likert scale, with 1 meaning “strongly disagree” with eco-friendly textile products and 5 meaning “strongly agree” with the intention of future purchases. About 60% of the respondents (AM = 3.7; SD = 1.1) intend to purchase eco-friendly textile products in the future. Based on the obtained results, hypothesis 7 that “consumers intend to purchase eco-friendly textile products in the future” was confirmed.

In a period of saturated markets, companies are becoming increasingly aware of the importance of familiarity with the characteristics of consumers, their motives for the purchase of a certain product and their opinions regarding products. Companies pay more attention to market and consumer research, which is considered to be one of the most important factors in determining market success [43].

### Figure 4: Willingness to pay a higher price for eco-friendly textile products

![Chart showing willingness to pay various price increments for eco-friendly textile products.](image)

4 Conclusion

Today’s consumers are increasingly aware of environmental and social issues, and are looking for responsible products [44] that are more durable, fairer and produced from recycled materials [45]. We often talk about “socially and environmentally responsible consumption” defined as a consumption pattern that takes into account the needs of current generations without compromising those of future generations [46, 47]. The aim of this paper was to provide a better understanding of consumers’ awareness, attitude and perception of eco-friendly textile products, i.e. to gain insight into consumers’ preferences, motives, attitudes and interest to buy eco-friendly textile products in Slovenia.

Based on the research results, the following conclusions can be drawn:

- The definition of “eco-friendly” has not been clearly established on the textile market and in the perception of consumers. A total of 57% of respondents have clearly integrated the definition of eco-friendly. This means that there is a need in Slovenia to continuously inform consumers about the importance of eco-friendly products and product labelling.
- Factors that explain consumers’ perception of eco-friendly textile products include products that bear a label such as “certified product”, products produced in an environmentally friendly manner, products with a higher price than conventional products, sustainable products, products...
that manifest a modern design, products that are aesthetically friendly, high-quality products and products with a pleasant texture.

- About 72% of respondents rarely purchase eco-friendly textile products (less than once a month).
- The most important factor in purchasing eco-friendly textile products is a “product with certificate” or “certified product” label (56%; AM = 3.7).
- The results show that there is a significant tendency to purchase eco-friendly textile products with a “product with certificate” or “certified product” label. Consumers always buy eco-friendly textile products with a “product with certificate” or “certified product” label.
- Consumers are willing to pay a higher price for eco-friendly textile products than for conventional textile products.
- More than 60% of respondents intend to purchase eco-friendly textile products in the future.

This paper gives the latest insight into purchasing behaviour and attitudes towards eco-friendly textile products in Slovenia. According to the research results, an important task for producers will be to increase consumers’ knowledge of what an eco-friendly product is and how to differentiate it in the marketplace. Therefore, knowing how consumers perceive eco-friendly textile products by understanding the reasons for buying them would probably help the marketers of eco-friendly textile products create an appropriate communication message. The enhancement of consumers’ knowledge can be achieved through constant, consistent, meaningful, planned and proactive communication, which always includes both information and education [48], which in turn can influence consumer decisions in the purchasing process. The results of the research could be used for planning further marketing activities. These results are particularly useful for product marketing and future product development in the eco-friendly textile sector, as they provide guidelines on how to address and satisfy the needs of existing eco-friendly consumers more successfully and, if possible, adapt to eco-friendly consumers in order to attract new segments and a new generation of consumers on the textile market.

References

1. SCHIFFMAN, L.G., WISNBLIT, J.L. Consumer behavior. Harlow: Pearson Education, 2015.
2. PETER, J.P., OLSON, J.C. Consumer behavior and marketing strategy. Boston: McGraw-Hill, 2004.
3. SOLOMON, M.R., BAMOSSY, G. ASKEGAARD, S., HOGG, M.K. Consumer behaviour: a European perspective. Harlow: Pearson Education, 2010.
4. CARRINGTON, M.J., NEVILLE, B.A., WHITWELL, G.J. Why ethical consumers don’t walk their talk: towards a framework for understanding the gap between the ethical purchase intentions and actual buying behaviour of ethically minded consumers. Journal of Business Ethics, 2010, 97(1), 139–158, doi: 10.1007/s10551-010-0501-6.
5. ZALOKAR, A. Etično odločanje slovenskih po rabnikov pri nakupu oblačil: magistrska naloga. Ekonomska fakulteta, Univerza v Ljubljani, 2017.
6. BLACKWELL, Roger D., MINIARD, Paul W., ENGEL, James F. Consumer Behavior. South-Western College Publishing, 2005.
7. AZEVEDO, S., PEREIRA, M., FERREIRA, J., PEDROSO, V. Consumer buying behavior in fashion retailing: empirical evidencies: MPRA Paper 11908. Munich : University Library, 2008.
8. KYUNG HOON, K., KO, E.J., HOOLEY, G.J., LEE, N.J., LEE, D.H., JUNG, H.S., JEON, B.J., MOON, H. et al. Brand equity and purchase intention in fashion products: a cross-cultural study in Asia and Europe. Journal of Global Academy of Marketing Science, 2008, 18(4), 247–278.
9. CROMMENTUIJN-MARSH, P., ECKERT, C., POTTER, S. Consumer behavior towards sustainability within fashion. In KEER2010: the proceedings of the Kansei Engineering and Emotion Research international conference 2010: March 2-4, 2010, Arts et Métiers ParisTech, Paris, pp. 956–965, https://www.keer.org/keer2010/images/KEER2010_Proceedings.pdf.
10. ELLIS, Joan L., McCracken, Vicki A., SKUZA, Nathan. Insights into willingness to pay for organic cotton apparel. Journal of Fashion Marketing and Management, 2012, 16(3), 290–305, doi: 10.1108/13612021211246053.
11. NIINIMÄKI, K. Ethical foundations in sustainable. Textiles and Clothing Sustainability, 2015, 1(3), 1–11, doi: 10.1186/s40689-015-0002-1.
12. ROTHENBERG, L., MATTHEWS, D. Consumer decision making when purchasing eco-friend-
ly apparel. *International Journal of Retail & Distribution Management*, 2017, **45**(4), 404–418, doi: 10.1108/IJRD-M-06-2016-0099.

13. NASSIVERA, F., TROIANO, S., MARANGON, F., SILLANI, S., MARKOVA NENCHEVA, I. Willingness to pay for organic cotton. *British Food Journal*, 2017, **119**(8), 1815–1825, doi: 10.1108/BJF-12-2016-0583.

14. RAHNAMA, H., RAJAPOUR, S. Identifying effective factors on consumers choice behavior toward green products: the case of Tehran, the capital of Iran. *Environmental Science and Pollution Research International*, 2017, **24**(1), 911–925, doi: 10.1007/s11356-016-7791-x.

15. TAUFIQUE, Khan Md Raziuddin, SIWAR, Chamhuri, TALIB, Basri, SARAH Farah Hasan, CHAMHURI, Norshamilza. Synthesis of construct for modeling consumers’ understanding and perception of eco-labels. *Sustainability*, 2014, **6**(4), 2176–2200, doi: 10.3390/su6042176.

16. D’SOUZA, C., TAGHIAN, M., LAMB, P., PERETIATKO. R. Green decisions: demographics and consumer understanding of environmental labels. *International Journal of Consumer Studies*, 2007, **31**(4), 371–376, doi: 10.1111/j.1470-6431.2006.00567.x.

17. ZHANG, Y., KANG, H., HOU, H., SHAO, S., SUN, X., QIN, C., ZHANG, S. Improved design for textile production process based on life cycle assessment. *Clean Technologies and Environmental Policy* 2018, **20**(6), 1355–1365, doi: 10.1007/s10098-018-1572-9.

18. KIM, H.S, DAMHORST, M.L. Environmental concern and apparel consumption. *Clothing and Textiles Research Journal*, 1998, **16**(3), 126–133, doi: 10.1177/0887302X9801600303.

19. CHOI, T.M., LI, Y. Sustainability in fashion business operation. *Sustainability*, 2015, **7**(11), 15400–15406, doi: 10.3390/su71115400.

20. ŽERDIN, T. Odnos potrošnikov do ekoloških oznak na izdelkih: magistrska naloga. Fakulteta za družbene vede, Univerza v Ljubljani, 2015.

21. NAM, C., DONG H., LEE, Y.A. Factors influencing consumers’ purchase intention of green sportswear. *Fashion and Textiles*, 2017, **4**(2), 1–17, doi: 10.1186/s40691-017-0091-3.

22. ŽURGA, Z., FORTE TAVČER, P. Zelene potrošništvo in upoštevanje ekoloških oznak pri nakupu tekstilij. *Tekstilec*, 2013, **56**(2), 100–110.

23. SUPARNA, M.G., ANTONY, R. Eco-friendly textiles. *International Journal of Science Technology and Management*, 2016, **5**(11), 67–73.

24. KUMARI, P., SINGH, S.S.J, ROSE, N.M. Eco-textiles: for sustainable development. *International Journal of Scientific & Engineering Research*, 2013, **4**(4), 1379–1390.

25. BENITTA, C. P., KAVITHA S. Go-green textiles for environment. *Advanced Engineering and Applied Sciences: an International Journal*, 2014, **4**(3), 26–28.

26. COOPER-ORDOÑEZ, R.E., ALTIMIRAS-MARTIN, A., FILHO, W.L. Environmental friendly products and sustainable development. In *Encyclopedia of sustainability in higher education*. Edited by Leal Filho W. Cham : Springer, 2019, doi: 10.1007/978-3-319-63951-2_131-1.

27. DEO, H.T. Eco friendly textile production. *Indian Journal of Fibre & Textile Research*, 2001, **26**(1-2), 61–73.

28. CONNELL, Kim Y. Hiller. Internal and external barriers to eco-conscious apparel acquisition. *International Journal of Consumer Studies*, 2010, **34**(3), 279–286, doi: 10.1111/j.1470-6431.2010.00865.x.

29. BROSDAHL, Deborah J.C., CARPENTER, Jason M. Consumer knowledge of the environmental impacts of textile and apparel production, concern for the environment, and environmentally friendly consumption behavior. *Journal of Textile and Apparel Technology and Management*, 2010, **6**(4), 1–9.

30. ŽURGA, Z., FORTE-TAVČER, P. Apparel purchasing with consideration of eco-labels among Slovenian consumers. *fibres & Textiles in Eastern Europe*, 2014, **5**(107), 20–27.

31. VUKASOVIĆ, T., STANTON, J. L. Going local: exploring millennials preferences for locally sourced and produced fresh poultry in a developing economy. *World’s Poultry Science Journal*. 2017, **73**(4), 757–766, doi: 10.1017/S0043933917000770.

32. HINTON, P.R., McMURRAY, I., BROWNLOW, C. SPSS explained. New York : Routledge, 2014.

33. VUKASOVIĆ, T. Attitude towards organic meat: an empirical investigation on West Balkans Countries (WBC) consumers. *World’s Poultry Science Journal*, 2013, **69**(3), 527–539, doi: 10.1017/S004393391300055X.
34. VUKASOVIĆ, Tina. Attitudes towards organic fruits and vegetables. *Agricultural Economics Review*, 2015, **16**(1), 20–34.
35. AARSET, B., BECKMANN, S., BIGNE, E., BEVERIDGE, M., BJORNDAL, T., BUNTING, J., MCDONAGH, P., MARIOJOULS, C., MUIR, J., PROTHERO, A., REISCH, L., SMITH, A., TVETERAS, R., YOUNG, J. The European consumers’ understanding and perceptions of the organic food regime: the case of aquaculture. *British Food Journal*, 2004, **106**(2), 93–105, doi: 10.1108/00070700410516784.
36. GRACIA, A., De MAGISTRIS, T. Organic food product purchase behaviour: a pilot study for urban consumers in the South of Italy. *Spanish Journal of Agricultural Research*, 2007, **5**(4), 439–451.
37. Organic clothing: the fiber of organics [online]. Organic Consumer Association [accessed 20.2.2020]. Available on World Wide Web: <https://www.organicconsumers.org/news/organic-clothing-fiber-organics>.
38. Tri četrte evropskih potrošnikov je za okolju prijazne izdelke pripravljenih plačati več [online]. ZPS [accessed 2.4.2019]. Available on World Wide Web: <https://www.zps.si/index.php/okolje/trajnostna-potronja/6371-tri-etrte-evropskih-potronikov-je-za-okolju-prijazne-izdelke-pripravljenih-plaati-ve>.
39. GAM, H.J., CAO, H., FARR, C. AND KANG, M. Quest for the eco-apparel market: a study of mothers’ willingness to purchase organic cotton clothing for their children. *International Journal of Consumer Studies*, 2010, **34**(6), 648–656, doi: 10.1111/j.1470-6431.2010.00898.x.
40. MCGOLDRICK, P.J., FREESTONE, O.M. Ethical product premiums: antecedents and extent of consumers’ willingness to pay. *The International Review of Retail, Distribution, and Consumer Research*, 2008, **18**(2), 185–201, doi: 10.1080/09593960701868431.
41. WANG, C. Consumer behavior and willingness to pay for organic products: master thesis. San Jose : State University, 2007, doi: 10.31979/etd.t7gm-bjvf.
42. LIN, Shu-Hwa. A case study in Hawaii: who will pay more for organic cotton? *International Journal of Consumer Studies*, 2010, **34**(4), 481–489, doi: 10.1111/j.1470-6431.2010.00899.x.
43. VUKASOVIĆ, T. Consumer perception of poultry meat and the importance of country of origin in a purchase making process. *World’s Poultry Science Journal*, 2009, **65**(1), 65–74, doi: 10.1017/S0043933909000051.
44. CHEN, Y.S., CHANG, C.H. Greenwash and green trust: the mediation effects of green consumer confusion and green perceived risk. *Journal of Business Ethics*, 2013, **114**(3), 489–500, doi: 10.1007/s10551-012-1360-0.
45. LOZANO, J., BLANCO, E., REY-MAQUIEIRA, J. Can ecolabels survive in the long run? The role of initial conditions. *Ecological Economics*, 2010, **69**(2010), 2525–2534, doi: 10.1016/j.ecolecon.2010.07.029.
46. HEISKANEN, E., PANTZAR, M. Toward sustainable consumption: two new perspectives. *Journal of Consumer Policy*, 1997, **20**(4), 409–442, doi: 10.1023/A:1006862631698.
47. DEKHILI, S., ACHABOU, M.A. Eco-labelling brand strategy: independent certification versus self-declaration. *European Business Review*, 2014, **26**(4), 305–329.
48. OKAY, A., AŞANIN GOLE, P., OKAY, A. Turkish and Slovenian health ministries’ use of Twitter: a comparative analysis. *Corporate Communications: an International Journal*, 2021, **26**(1), 176–191, doi: 10.1108/CCIJ-01-2020-0019.