Abstract: Due to increasing degradation of natural environment, the importance of environmentally responsible production and consumption, as well as green marketing and sustainable labeling has been growing. The aim of this research is to examine the influence of consumers' perception of green advertising and eco-labels on their intentions to purchase eco-labeled products. A research was carried out by using an online survey method on a convenient sample of 172 consumers in the Republic of Serbia. The results showed that, in spite of respondents reporting their environmental awareness and concern, respondents mostly did not consider the impact of their own purchasing habits on the environment. Obtained results showed the existence of a strong relationship between the respondents' pro-environmental behavior and their current purchase, green advertising receptivity, attitude towards green advertising, perception of eco-labels and purchasing intentions. Also, it was found that respondents who were more responsive to green advertising and had better attitudes towards green advertising were more likely to purchase products which are eco-labeled. On the other hand, respondents' perception of eco-labels did not strongly influence purchasing intentions towards eco-labeled products, which is a consequence of insufficient familiarity of respondents with environmental product labeling. These research findings have valuable implications for companies defining strategies to include environmental appeals in their marketing communication, as well as for public institutions in Serbia for the further planning of activities related to encouragement of environmentally friendly production and consumption.

Key words: pro-environmental behavior, green advertising, eco-labels, purchasing intention
Waris, 2018; Iraldo et al., 2020; Herman et al., 2021; Marini et al., 2021). The popularization of eco-labels and development of more transparent and coherent labeling systems can increase consumers’ willingness to choose more sustainable products (Zurga & Forte Tavčer, 2014). Various governmental and non-governmental organizations have made great efforts to make the entire labeling process more transparent by introducing and maintaining recognizable and trustworthy eco-labeling schemes (Rex & Baumann, 2007; Nadlifatin et al., 2016). This further motivates companies to constantly improve their products through technological innovations that will result in a reduced impact of those products on the environment and the recognition of these efforts by official bodies (Iraldo et al., 2020).

Even though the effectiveness of green advertising and eco-labeling is recognized, its level of influence is not the same on all markets. It might be determined by various factors, including consumers’ level of environmental awareness and concern, national regulations, purchasing power, as well as consumer characteristics. This topic has been gaining raising attention in an international literature, however there is still a lack of empirical evidence for emerging countries and the Republic of Serbia among them. Aiming to fill in this research gap, the goal of this research is to examine the influence of consumers’ perception of green advertising and eco-labels on their purchasing intentions towards green products.

GREEN ADVERTISING AND ITS INFLUENCE ON PURCHASING

In parallel with the development of green movements around the world and increasing public interest in environmental issues, companies has been using green advertising as a communication technique to inform customers about green features of their products, encourage environmentally responsible behavior and emphasize their own corporate responsibility (Schmuck, Matthes, Naderer & Beaufort, 2018; Rizwan, Mahmood, Siddiqui & Tahir, 2014; Alamsyah et al., 2020). Green advertising includes environmental and sustainability appeals in communication messaging (Alamsyah, Othman & Mohammed, 2020; Alamsyah & Othman, 2021). In this way it can help companies to create and maintain sustainable competitive advantages (Kao & Du, 2020).

Green advertising covers concepts such as: ecology, environmental sustainability and environmentally friendly production and packaging (Alamsyah & Othman, 2021). The goal of green advertising is to reach a positive impact on consumers, by making them more interested in buying products that are less harmful to the environment and thus motivate them to change their purchasing behavior (Mahmoud, 2018).

Green advertising is often used as a tool to raise consumer awareness of green products (Rizwan et al., 2014; Alamsyah et al., 2020; Alamsyah & Othman, 2021) usually by informing and educating consumers to become aware of their role in environmental preservation (Alamsyah et al., 2020). It successfully influences consumers’ individual attitudes toward green products and behavioral intentions to be environmentally responsible (Chang, 2012; Kao & Du, 2020). Therefore, the purpose of green advertising is to influence consumers’ purchasing intentions, by motivating them to purchase products that are less harmful for the environment and pointing to the positive effects of such purchasing behavior (Alamsyah et al., 2018; Rizwan et al., 2014; Uthamaaputran, Shuaib & Hamsani, 2014; Sun, Luo, Wang & Fang, 2021).

There is growing empirical evidence on the impact of green advertising on consumers’ more environmentally friendly purchase intentions (e.g. Khandelwal & Bajpai, 2011; Alamsyah et al. 2020; Kim & Cha, 2021; Nguyen-Viet, 2022; Yang, Weber & Grimm, 2022). Even though green advertising is generally considered effective with this regard, the acceptance of green advertising messages is not universal and it varies from person to person (Sun et al., 2021). In some cases, the factor that leads to low consumer response to green advertising is consumers’ unwillingness to change their established purchasing behavior and put additional efforts to find and purchase sustainable products (Rizwan et al., 2014). Also, consumers may not be equally receptive on green advertising, due to different characteristics and personal traits (e.g. Tucker, Rifon, Lee & Reece, 2012; Yu, 2020) and level of skepticism they might feel (e.g. Matthes & Wonneberger, 2014; Schmuck, Matthes & Naderer, 2018; Fernandes, Segev & Leopold, 2020). Therefore, it is very challenging for companies, to develop the most effective way to advertise green aspects of their products, due to the complexity of this issue and factors that might determine the outcome (Krstić, Kostić-Stanković & Cvijović, 2020).
CONSUMERS’ PERCEPTION OF ECO-LABELS

An eco-label is a recognition in the form of a symbol or sign for a product or service claiming that, during its life cycle, starting from the acquisition of raw materials, the production process, distribution, use and disposal, it has a relatively lower impact on the environment compared to other products of the same type (Kong, Harun, Sulong & Lily, 2014; Alamsyah et al., 2019). Eco-labels represent a voluntary approach to environmental regulation, and they are used to differentiate products based on their manufacturing in accordance with certain environmental standards and lower relative impact on the environment (Du, 2021; Nadlifatin et al., 2016; Maheshwari, 2014).

Currently, there are many different types of labels that indicate different aspects of environmental friendly performance, including organic standards, animal welfare, environmental protection of natural resources and fair trade (Shahrin et al., 2017). The ISO standard defines three types of voluntary declarations: type I, type II and type III (Rex & Baumann, 2007). In case of type I labels, independent external bodies (public institutions or private non-commercial organizations) evaluate product life cycles according to a number of criteria and those products that satisfy these criteria get the right to carry these voluntary ecological labels (ISO 14024 standard) (Iraldo et al., 2020). The universal use of eco-labels certified by recognized international bodies guarantees that the product is environmentally acceptable (Shahrin et al., 2017). Studies have shown that eco-labels certified by such bodies are considered to be more reliable, especially those certified by public authorities (Sun et al., 2021; González, 2020). Type II labels are self-declared environmental claims, expressed by manufacturers, importers or distributors on their own initiative, without evaluation by a certification body (Rex & Baumann, 2007; Žurga & Forte Tavčer, 2014; Iraldo et al., 2020). Type III claims consist of quantified product information based on life cycle impacts, presented in a form which facilitates comparison between products (Žurga & Forte Tavčer, 2014). Properly certified eco-labels can ensure that the eco-label is used only for truly environmentally friendly products (Shahrin et al., 2017), which increases consumers’ trust (Atkinson & Rosenthal, 2014).

Using eco-labels is valuable for both, customers and companies (Iraldo et al., 2020). Eco-labels bring multiple benefits for companies. In light of rising environmental concern at the global level, obtaining and promoting appropriate eco-labels represents a necessary part of marketing strategy for companies (Sun et al., 2021). Eco-labels support product differentiation and, thus, represent an important communication tool for companies (Mufidah et al., 2018). Also, eco-labels are often used in combination with other communication techniques, especially with green advertising, as they add more credibility and persuasiveness to the content of green advertisements (Bickart & Ruth, 2012; Sun et al., 2021). Using eco-labels is a key aspect of the marketing approach taken by manufacturers in creating a corporate image of a company which truly contributes to environment protection (Shahrin et al., 2017; Hameed & Waris, 2018).

There is a growing empirical evidence that using eco-labels influences consumers’ purchasing intentions (Nguyen-Viet, 2022; Cai, Xie & Aguilar, 2017; Chi, 2021; De Canio, Martinelli & Endrighi, 2021; Song, Quin & Yuan, 2019; Feuß, Fischer-Kreer, Majer, Kemper & Brettel, 2022). For consumers, eco-labels comprise important informative role, representing an obvious sign to buy green products and giving them reliable guidance for evaluating similar products of different manufacturers (Suki, Suki & Azman, 2016; Shahrin et al., 2017; Song, Qin & Qin, 2020; Sun et al., 2021; Marini et al., 2021; Alamsyah, Othman, Bakri, Udjaja & Aryanot, 2021). Through the use of eco-labels, consumers are provided with better information about the green features of products, which they can incorporate into their purchasing decisions (Rex & Baumann, 2007; González, 2020; Marini et al., 2021). The main advantage of eco-labels is their convenience, visibility and simplicity, as consumers are more likely to use environmental information attached to products and labels (Žurga & Forte Tavčer, 2014). Therefore, using eco-labels increase consumers’ environmental awareness (Shahrin et al., 2017; Marini et al., 2021; Uthamaputran et al., 2014; Iraldo et al., 2020) and encourage consumers to buy environmentally friendly products (Marini et al., 2021).

Based on a literature review and existing empirical evidence on the effects of green advertising and eco-labels on consumer attitudes and behavior, the following research questions were defined:

RQ1: Does consumers’ pro-environmental behavior affect their receptivity and attitudes towards green advertising?

RQ2: Does consumers’ pro-environmental behavior affect their ability to recognize eco-labels?
RQ3: Does consumers’ pro-environmental behavior affect their intention to buy eco-labeled products?

RQ4: Does consumers’ receptivity and attitudes towards green advertising influence their intention to purchase eco-labeled products?

RQ5: Does consumers’ perception of eco-labels influence their intention to purchase eco-labeled products?

**METHODOLOGY**

Data were collected by an online survey of a non-probability convenient sample of 172 consumers in Belgrade, in the period November to December 2022. Considering that this topic is still understudied in the national context, this research was intended to be a pilot study, aiming to provide basis for setting up a scope for larger scale study on a representative sample. The invitation to participate in the survey was posted on researchers’ social media profiles and sent to contacts via personal e-mailing lists. In order to obtain greater accuracy of data, the participation in the survey was anonymous. Obtained data were statistically analyzed in statistical software SPSS 23.0. For the purpose of data analysis, Cronbach alpha, descriptive statistics, ANOVA, correlation and regression analysis were applied.

Questionnaire was divided into seven sections. The first section contained questions related to respondents’ demographics. Other six sections were related to constructs which were the subject of the research and contained items which were evaluated on a 5-point Likert scale by the respondents (where 1 meant “I strongly disagree” and 5 “I strongly agree”). The second section was related to the Pro-environmental behavior (PEB) and contained five items defined by Kaur, Kumar, Syan & Pamar (2021). The third section of the questionnaire examined the current Green purchasing habits (GPH) and it included six claims, among which first three were adopted from Song et al. (2020) and last three obtained from Maheshwari (2014). The fourth section was entitled Green advertising receptivity (GAR), and it included four items related to respondents’ expectations from green advertising and perception of green products advertising, previously defined by Maheshwari (2014). The fifth section of the questionnaire examined the Attitudes towards green advertising (AGA), and it included four statements borrowed from Maheshwari (2014). The intent of the sixth section of the questionnaire was to examine respondents’ familiarity with eco-labels. For this purpose, respondents were offered four different eco-labels to test whether they could be recognized by respondents. Then, in the sixth section, three items related to Perception of eco-labels (PEL), as previously formulated by Kong et al. (2014), were evaluated by respondents. The last questionnaire section consisted of four claims related to Purchasing intentions towards products with eco-labels (PI), as previously defined by Sun et al. (2021). Purchasing intention in this context can be defined as a probability and willingness of a person to give advantage to eco-labeled products in relation to conventional products when purchasing. The constructs and items used in the questionnaire are presented in the Table 1.

For the purpose of examination of the reliability and internal consistency of claims, Cronbach’s coefficient was measured for each of the questionnaire sections (latent variables). The Cronbach’s alpha indicates how consistent were the respondents when answering the questions within a scale. This metric takes values from 0 to 1, whereas higher values indicate better internal consistency (Cronbach, 1951). It is important to observe the threshold for the interpretation of Cronbach’s alpha. Most literature suggests that acceptable internal consistency is found when the alpha is higher than 0.7 (Tavakol & Dennick, 2011). However, one should note that when interpreting the Cronbach’s alpha two aspects should be taken into account: the number of items within the scale and the sample size. A small number of items, as well as a small sample, could decrease the value of this metric (Agbo, 2010). Looking at the measured Cronbach’s alpha per scale presented in Table 2, it can be concluded that all scales except GAR have a satisfactory internal consistency with a value above 0.7. The scale which attracts attention is GAR which has internal consistency of 0.577. This value is lower than the 0.7 threshold, however, taking into account the size of the scale and sample size, the small deviation can be accepted. However, more attention will be focused on the GAR scale in the continuation of the analysis.

In order to further test the questionnaire and variables, items related to PEB, GPH, GAR, AGA, PEL and PI were subjected to factor analysis. Separate factor analyses were conducted for segments related to PEB, GPH, GAR, AGA, PEL and PI. Appropriateness of data for factor analysis was examined with Kaiser-Meyer-Olkin (KMO) measure and Bartlett’s test of Sphericity. A factor analysis was performed on items related to PEB and it revealed one factor explaining 59.75% of the total variance (KMO = 0.814; Bartlett’s test = 317.40, p < .001). Testing of items related to
GPH revealed one factor explaining 57.55% of the total variance (KMO = 0.863; Bartlett’s test = 390.68, p < .001). In case of GAR, analysis resulted in one factor explaining 57.55% of the total variance (KMO = 0.538; Bartlett’s test = 280.98, p < .001). Furthermore, a factor analysis showed one factor for items belonging to AGA, explaining 63.16% of the total variance (KMO = 0.653; Bartlett’s test = 297.80, p < .001), and one factor for items related to PEL, explaining 50.46% of the total variance (KMO = 0.783; Bartlett’s test = 187.08, p < .001). Finally, a factor analysis revealed one factor explaining 77.57% of the total variance (KMO = 0.830; Bartlett’s test = 481.37, p < .001) for items related to PI. In this phase of the research, GAR also showed weakest results among all variables, however, authors decided to keep all the variables for the purpose of further analysis considering that this was a pilot study, conducted on a limited sample of respondents.

Table 1. Questionnaire sections and items

<table>
<thead>
<tr>
<th>Pro-environmental behavior (PEB)</th>
<th>Source</th>
</tr>
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<tbody>
<tr>
<td>PEB 1 I consider the product’s impact on the environment while purchasing.</td>
<td>Kaur et al. (2021)</td>
</tr>
<tr>
<td>PEB 2 My purchase habits are affected by my concern for the environment.</td>
<td></td>
</tr>
<tr>
<td>PEB 3 I use only those products which do not harm the environment.</td>
<td></td>
</tr>
<tr>
<td>PEB 4 I am concerned about wasting the resources of our planet.</td>
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<tr>
<td>PEB 5 I would describe myself as environmentally responsible.</td>
<td></td>
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<tr>
<th>Green purchasing habits (GPH)</th>
<th>Source</th>
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<tbody>
<tr>
<td>GPH 1 I have switched products for ecological reasons.</td>
<td></td>
</tr>
<tr>
<td>GPH 2 When I have a choice between two equal products, I purchase the one less harmful to the environment.</td>
<td>Song et al. (2020)</td>
</tr>
<tr>
<td>GPH 3 I have avoided buying a product because it had potentially harmful environmental effects.</td>
<td>Maheshwari (2014)</td>
</tr>
<tr>
<td>GPH 4 I read labels to see if contents are environmentally safe.</td>
<td>Maheshwari (2014)</td>
</tr>
<tr>
<td>GPH 5 It is easy for me to identify products that are less damaging to the environment.</td>
<td>Maheshwari (2014)</td>
</tr>
<tr>
<td>GPH 6 I feel good about buying brands which are less damaging to the environment.</td>
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<thead>
<tr>
<th>Green advertising receptivity (GAR)</th>
<th>Source</th>
</tr>
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<tbody>
<tr>
<td>GAR 1 In the marketing communication about a product, I expect to be informed of how environmentally friendly a product is.</td>
<td>Maheshwari (2014)</td>
</tr>
<tr>
<td>GAR 2 In the marketing communication about a product, I expect to be informed of new improved formulas/design.</td>
<td>Maheshwari (2014)</td>
</tr>
<tr>
<td>GAR 3 Green products are marketed to me in a way which I never notice.</td>
<td>Maheshwari (2014)</td>
</tr>
<tr>
<td>GAR 4 Green products are marketed to me in a way which I find really engaging and relevant to my lifestyle.</td>
<td>Maheshwari (2014)</td>
</tr>
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<thead>
<tr>
<th>Attitude towards green advertising (AGA)</th>
<th>Source</th>
</tr>
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<tbody>
<tr>
<td>AGA 1 Marketers must advertise the environmental aspects of their products.</td>
<td>Song et al. (2020)</td>
</tr>
<tr>
<td>AGA 2 Green advertising is valuable in my opinion.</td>
<td>Sun et al. (2021)</td>
</tr>
<tr>
<td>AGA 3 Green advertisements are always trustworthy.</td>
<td>Kong et al. (2014)</td>
</tr>
<tr>
<td>AGA 4 For those brands that use green messages in their advertisements, I think they are good.</td>
<td>Sun et al. (2021)</td>
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<table>
<thead>
<tr>
<th>Perception of eco-labels (PEL)</th>
<th>Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>PEL 1 I am familiar with certified eco-labels (presented in the questionnaire).</td>
<td>Authors</td>
</tr>
<tr>
<td>PEL 2 The meaning of the presented certified eco-labels is well known and clear to me.</td>
<td>Authors</td>
</tr>
<tr>
<td>PEL 3 The information on eco-labels is usually easy to understand.</td>
<td>Kong et al. (2014)</td>
</tr>
<tr>
<td>PEL 4 Overall, I’m satisfied with the information currently available on the eco-label of the products I purchase.</td>
<td>Kong et al. (2014)</td>
</tr>
<tr>
<td>PEL 5 I consider what is printed on eco-labels to be accurate.</td>
<td>Kong et al. (2014)</td>
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<tr>
<th>Purchasing intentions towards products with eco-labels (PI)</th>
<th>Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>PI 1 I plan to purchase eco-labeled products in the future.</td>
<td>Sun et al. (2021)</td>
</tr>
<tr>
<td>PI 2 I am willing to purchase more eco-labeled products while shopping.</td>
<td>Sun et al. (2021)</td>
</tr>
<tr>
<td>PI 3 From now on, I plan to purchase eco-labeled products.</td>
<td>Sun et al. (2021)</td>
</tr>
<tr>
<td>PI 4 I intend to pay more for eco-labeled products.</td>
<td>Sun et al. (2021)</td>
</tr>
</tbody>
</table>
RESULTS AND DISCUSSION

Out of the total number of respondents, 55.8% were women. Majority of respondents had graduate studies (47.7%) and secondary education (35.5%), while a significantly smaller number of respondents finished master studies. Students made almost half of the sample, while 38.4% of respondents were employed. This is due to the fact that young people from 19 to 25 years of age made majority of the sample (73.8%). More than half of the respondents resided in the capital city. When asked to assess their financial stability in comparison to their peers, more than a half of the respondents declared their financial situation to be very stable or stable, while one third of them considered their financial stability to be neither stable nor unstable. The demographic characteristics of the respondents are presented in Table 3.

In the next stage of data analysis, the methods of descriptive statistics were applied in order to calculate the mean and standard deviation of respondents' answers on a Likert scale and determine which claims respondents agreed to the most. As presented in Table 4, in case of construct PEB, the first three claims had the minimum average mean value, which indicates that respondents did not often consider the impact of their own purchasing habits on the environment. The statement “I am concerned about wasting the resources of our planet” (PEB 4) had the highest average mean value, followed by the statement: “I would describe myself as environmentally responsible” (PEB 5). The results of this segment of the survey showed that, in spite of respondents had been concerned about the pollution and wasting of the planet’s resources, they mostly did not consider the impact of their own purchasing habits on the environment. These results coincide with the results of previous research that indicated a gap between belief and action, and that an individual concerned about the environment does not necessarily behave in an environmentally friendly way (Fowler & Close, 2012; Maheshwari, 2014). This may indicate that the respondents are still not sufficiently informed about the way in which their daily purchasing and consumption habits affect the environment.

When it comes to set of claims related to Green purchasing habits (GPH), the respondents generally agreed with the statement “I feel good when I buy..."
brands which are less damaging to the environment” (GPH 6), which they attached highest value to. What can be also noticed from the results is that the respondents rarely read labels when purchasing to ensure that the product was really safe for the environment (GPH 4), and it was not easy for them to identify products that were less harmful to the environment (GPH 5). They, however, were willing to purchase less harmful products when they had a choice between two products with similar features (GPH 2).

As for respondents’ receptivity to green advertising (GAR), their answers were generally neutral, slightly more leaning towards agreement with the claims. What can be extracted is the mean value of the statement GAR 4, which gained lowest score, showing that respondents generally did not agree that advertising of green products have been attractive and relevant for them so far. The results show that the majority of respondents did not think that green products have been advertised to them in an adequate way, which was relevant to their lifestyle. Thus, even if there were some efforts by companies to develop and raise awareness among consumers about green products, they were not executed in the adequate way, since most of the respondents did not make the effort to read the label on the product to make sure that it is really safe for the environment. In addition, it can be concluded that the characteristics of green products were not communicated well enough to consumers, since majority of respondents stated that it was not easy for them to identify those products when they find themselves shopping. These results confirm earlier research which has highlighted that consumers who are poorly informed about green products could be encouraged to buy green products if they are promoted in a proper way (e.g. Rizwan et al., 2014; Chen & Chiu, 2016; Ryoo et al. 2017).

The fourth group of claims related to respondents’ attitudes towards green advertising. As presented in the Table 3, respondents recognized and acknowledged the importance of green advertising (AGA 1 and AGA 2). So, respondents believed that it is very important to advertise green products, and most of them believe that it is a necessity for companies to do so. However, they valued claim related to trustfulness of advertisements less, neither agreeing nor disagreeing with the claim (AGA 3). Similar situation was with the claim related to the good intentions of advertised brands (AGA 4). This might indicate certain ambivalence of respondents related to trustworthiness of green advertising, which was also noted in the literature (e.g. Chang, 2011; do Paço & Reis, 2012; Fernandes et al., 2020).

The mean values of the fifth group of claims (Perception of eco-labels - PEL), which examined how well respondents were familiar with eco-labels showed a low level of respondents’ familiarity. In this questionnaire section, the respondents were asked to mark eco-labels which they recognize, out of the four labels offered: Serbian eco-label (environmentally friendly), EU Eco label (eco flower), The Universal Recycling Symbol (Möbius strip), FSC label for sustainable forestry (for wood and paper products). Serbian eco-label was recognized by 38.3% of respondents, EU Eco label was recognized by 15.7%, The Universal Recycling Symbol was recognized by 95.9% and FSC by 46.5%. It can be concluded that respondents recognized best the well-known environmental labels such as the universal recycling symbol and FSC. Less than half of the respondents recognized the Serbian eco-label, and a very small number of respondents, recognized the European Union environmental label. It is in contrast with previous research, stating that EU Eco label is the most famous and effective label, widely recognized by consumers (Žurga & Forte Tavčer, 2014). Also, consumers were not certain regarding their understanding of what each of the eco-labels represent. Therefore, the results clearly indicate an insufficient knowledge of respondents about eco-labels in general. In addition, the lowest mean value was attached to the claim “I am satisfied with the information currently available on the eco-labels of the product” (PEL 4), which clearly indicates that they considered eco-labels as insufficiently informative. The obtained results coincide with the results of previous research, which showed that the majority of consumers cannot easily notice green products since green labels often fail to make an impression on them (Mahmoud, 2018). Customers can often be confused by a large number of different labels (Alamsyah, Aryanto, Utama, Marita & Othman, 2020) due to different terminology and concepts used, text and appearance of labels, as well as size of labels (Uthamaputran et al., 2014). Therefore, researchers have suggested that all information on labels must be clear, concise and understandable to consumers, so they more clearly point out to the environmental benefits of labeled products (Uthamaputran et al., 2014). Therefore, consumers’ difficulties in interpretation of labels must be resolved in order to enable better understanding of their content. This indicates that in the future, relevant governmental and non-governmental organizations in Serbia should work on the promo-
tion of eco-labels in the domestic market, so that consumers become more familiar with the concept.

The last group of claims examined the future intentions of respondents in terms of purchasing products with eco-labels in future (Purchasing intentions towards products with eco-labels - PI). Respondents expressed somewhat positive opinion on these claims, even though not strongly agreeing with proposed claims. In general, they expressed readiness to buy more products with eco-labels in their next purchases, as the claim “I am willing to purchase more eco-labeled products while shopping” (PI 2) gained highest mean value of answers.

In the further data analysis, the correlation analysis was applied in order to examine whether there is a correlation between following six variables: PEB, GPH, GAR, AGA, PEL and PI. Correlation matrix is presented in the Table 5.

Based on the results presented in Table 5, it could be concluded that there is a strong correlation (0.5 ≤ r) between PEB and GPH (r = .789, p < .001), PEB and GAR (r = 0.541, p < .001), PEB and PI (r = 0.594, p < .001). Therefore, obtained results showed the existence of a strong relationship between the respondents’ proenvironmental behavior and their current purchase, future purchase intention and advertising expectations. Also, a strong correlation was established between GPH and GAR (r = 0.625, p < .001) and GPH and PI (r = 0.596, p < .001). It can be concluded that the more environmentally aware the respondents are,
they are more interested in ecological issues in advertising, behave in an environmentally responsible way, and the more often they decide to buy environmentally friendly products. Additionally, a strong correlation was found between GAR and AGA (r = 0.573, p < .001), GAR and PI (r = 0.586, p < .001), as well as AGA and PI (r = 0.667, p < .001). This indicates that respondents who were more responsive to green advertising and had better attitudes towards green advertising were more likely to purchase products which are eco-labeled. A moderate correlation (0.3 < | r | < 0.5) was observed between the following variables: PEB and AGA (r = 0.439, p < .001), PEB and PEL (r = 0.347, p < .001), GPH and AGA (r = 0.467, p < .001) and PEL and PI (r = 0.377). Weak correlation (r<0.3) was found between GPH and PEL, PEL and GAR, PEL and AGA. This shows that respondents’ perception of eco-labels did not strongly influence purchasing intentions towards eco-labeled products.

In order to further examine the impact of PEB on GPH, GAR, AGA, PEL and PI, a regression analysis was applied (Table 6). Also, it was used to examine whether AGA influences GAR, and whether PEL influences PI. Regression results establish a significant positive linear relationship between PEB and GPH (R² = 0.622, t=16.740, p < 0.05). It indicates that 62.2% of the variability of the dependent variable GPH is explained by the independent variable – PEB. PEB was found out to be in a statistically significant relationship with GAR (R² = 0.292, t=8.381, p < 0.05), and also AGA (R² = 0.193, t=6.373, p < 0.05). PEB also predicts PEL (R² = 0.121, t=4.831, p < 0.05) as well as PI (R² = 0.352, t=9.616, p < 0.05). These results clearly point that pro-environmental behavior predicts: green purchasing habits, green advertising receptivity, attitude towards green advertising, perception of eco-labels and purchasing intentions towards products with eco-labels.

Additionally, it was found out that there is a significant positive linear relationship between attitude toward green advertising (AGA) and green advertising receptivity (GAR) (R = 0.573, R² = 0.329, t=9.112, p < 0.05). Finally, it was determined that familiarity with environmental labels (PEL) predicted purchase intentions towards products containing eco-labels (PI) (R = 0.377, R² = 0.142, t=5.306, p < 0.05).

**CONCLUSION**

In accordance with existing empirical results, the subject of this paper was an examination of the influence of consumers’ perception of environmental labeling and advertising on their purchase intentions in the Republic of Serbia. The results obtained from this research confirm that respondents demonstrate a willingness to buy products that are less harmful to the environment, despite that majority of them do not currently behave in an environmentally friendly. This clearly indicates a lack of awareness on the role of individuals in environment preservation.
As the level of environmental conscience, responsible behavior and consumer expectations varies in different markets, companies should strategically choose and plan their marketing approach, communication tools and message content that meets their needs best. If companies decide to use the eco-label as marketing communication tool, it can result in differentiation and better positioning on the market. Companies should also work on transparent labeling of their green products, so that consumers can notice more easily products which contribute to environment protection. Inadequate communication of green products, either through green advertising or eco-labeling can lead to skepticism, ambivalence and lack of adequate consumers’ responses. The results of this research indicate that research participants do not consider current green advertising and eco-labeling to be properly conducted by companies, which further points out the need for improvement in the practice. The results also indicate a low awareness among respondents about the existence of eco-labels in Serbia. Therefore, it is necessary for public authorities and non-governmental institutions in Serbia to work more on increasing consumer awareness of green products and ecological labels in the future.

The main limitation of this research comes from the characteristics of the sample of the respondents as young people, aged from 19 to 25 years of age, living in the capital city, made up majority of the sample. Also, a small sample of respondents represents significant limitation, therefore, results could not be observed in a generalized sense and solely refer to participants in this research. A suggestion for further research would be to expand the sample of respondents, so that it includes other age groups and respondents from smaller communities, so results could be observed based on the sociodemographic characteristics of the respondents. Since this is a pilot study conducted on a small sample, it should be used as a basis for further, upgraded research, providing potential for more advanced analysis, such as structural equation modeling. Another proposal for further research is to use this study as a basis for creating more specialized research, focused on specific industries, product categories or certain types of green advertising appeals.

References


Consumers’ Perception of Green Advertising and Eco-Labels: The Effect on Purchasing Intentions


Apstrakt

Percepcija zelenog oglašavanja i eko-oznaka od strane potrošača: Uticaj na kupovne namere

Tijana Kolović, Tamara Vlastelica, Jelena Krstić

Usled sve veće degradacije prirodne sredine raste značaj ekološki odgovorne proizvodnje i potrošnje, kao i zelenog marketinga i zelenog označavanja. Cilj ovog istraživanja je ispitivanje uticaja percepcije zelenog oglašavanja i eko-oznaka od strane potrošača na njihove namere da kupe proizvode sa eko-oznakama. Istraživanje je sprovedeno metodom onlajn anketiranja na uzorku od 172 potrošača u Republici Srbiji. Rezultati su pokazali da, uprkos tome što su ispitanici iskazali svoju ekološku svest i zabrinutost za očuvanje okruženja, uglavnom nisu razmatrali uticaj sopstvenih kupovnih navika na životnu sredinu. Dobijeni rezultati su pokazali postojanje jake veze između proekološkog ponašanja ispitanika i njihove trenutne kupovine, receptivnosti zelenog oglašavanja, stavova prema zelenom oglašavanju, percepcije eko-oznaka i kupovnih namera. Takođe, utvrđeno je da su ispitanici koji su bolje reagovali na zeleno oglašavanje i imali bolji stav prema zelenom oglašavanju češće kupovali proizvode koji imaju eko-oznaku. S druge strane, percepcija ispitanika o ekološkim oznakama nije snažno uticala na namere kupovine proizvoda sa eko-oznakama, što je posledica nedovoljne upućenosti ispitanika u ekološko obeležavanje proizvoda. Rezultati istraživanja imaju dragocene implikacije za prvenstveno za kompanije, u kontekstu definisanja strategija marketinške komunikacije koje uključuju ekološke apele, kao i za javne institucije u Srbiji u smislu planiranja aktivnosti koje se odnose na podsticanje ekološki prihvatljive proizvodnje i potrošnje.

Ključne reči: proekološko ponašanje, zeleno oglašavanje, eko-oznake, kupovne namere