Is Consumers' Green Purchase Behaviour Influenced by Companies' Green Marketing Communication? An empirical Analysis

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Research Article

Keywords: Green marketing communication, Green purchase behaviour, Green products, Portugal

Posted Date: May 17th, 2022

DOI: https://doi.org/10.21203/rs.3.rs-1585095/v1

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Abstract
This study aims to explore whether consumer attention → companies green communication influences their green purchase behavior. It also proposes to analyse the importance of consumer characteristics, namely gender, education, and green attitudes ∈ their attention → companies green marketing communication. An online survey was carried out on the population residing in Portugal over 18 years of age, allowing to collect 690 valid responses. Data analysis techniques were used, including descriptive analyses, parametric and non-parametric tests, linear correlation and regression analysis. The achieved results allow us to affirm that consumers are attentive to the companies’ green marketing communication. It was also identified a strong correlation between consumer attention → companies green marketing communication and green purchasing behavior. The results also confirm that individuals with higher educational levels, green attitudes and females are the most attentive to companies’ green marketing communication.

Introduction
Over the last decades, particularly since the industrial revolution, humanity’s rapidly growing consumption of natural resources is causing many environmental problems worldwide, affecting severely biodiversity and threatening human well-being (Li et al., 2019; Ramayah et al., 2010; Vlek & Steg, 2007; WWF, 2020). As individual consumers, our behaviour is not environmentally benign, being partly responsible for the severity of all these environmental problems (Stem, 2000). Nevertheless, the individuals’ growing perception that the planet is already reaching very high levels of pollution has contributed to the rise of an environmental protection “movement” (Lee, 2009), with both consumers and companies, particularly in more developed economies, being increasingly aware of the urgent need to adopt more environmentally friendly consumer behaviour and production strategies (White et al., 2019).

Purchasing green products for daily consumption is a good example of an environmentally responsible behaviour, capable of minimizing and solving many of the current environmental threats and, in recent years, it has been increasingly attracting the attention both of companies and consumers (Gonçalves et al., 2016; Nguyen et al., 2019; Sheng et al., 2019; Urban et al., 2019).

As stressed by Shamdasani et al. (1993), green products, in addition to not polluting the earth and not depleting natural resources, can also be recycled or conserved. Following this definition, in this study, the products of interest are: green cosmetic and hygiene products; green detergents and other cleaning products; clothes produced with natural and/or recycled materials; food from organic farming without using any pesticides; products made from recycled materials such as glass and paper; electrical appliances with high energy efficiency; sustainable building materials and furniture; recycled mobile phones; electric/hybrid vehicles whose use emits less carbon dioxide; and eco-hotels.

In addition to changing consumption patterns, by becoming greener, consumers also demand a more sustainable and environmentally responsible posture from companies. These do have, in fact, a key role as they develop and promote the products we consume and thus contribute to the shaping of demand and its associated environmental impacts. Over the last few decades, the role of sustainability in business has gradually increased and several companies have significantly contributed to the promotion of sustainable consumption (UNIDO, 2018).

For companies that want to assume a “greener” position, to show consumers how committed they are in contributing to a more sustainable planet, and also to gain a differentiating factor in relation to competitors, environmental responsible marketing, also known as green marketing, represents an unquestionable key tool (Papadas et al., 2017). In a research study developed by the American Marketing Association (AMA) and Fleishman-Hillard, Inc. (2009, p.1), a total of 270 communicators from different companies were interviewed and a large percentage, more specifically 43%, stated that “they will increase their focus on sustainability because it is the right thing to do, customers are asking for it, a sustainable approach supports their organizational culture and, equally important, sustainability offers a clear, distinct business advantage”. In sum, companies increasingly embrace a green marketing perspective for different reasons, namely: moral obligation, government laws, economic and noneconomic pressures from consumers, competitive pressure, cost of waste disposal, own concern about social responsibilities and environmental responsibilities, changes in consumers’ attitude or even an academic allegation that green products are profitable (Ghoshal, 2011).

If, on the one hand, research on green consumerism is evolving, justifying new research work that deepens knowledge in this area, green marketing is also an area for research due to its novelty and its importance for environmental sustainability. The literature highlights the need to understand and promote consumer behaviour in relation to green marketing and to identify the factors that influence green purchasing (Sharma, 2021). Therefore, in this research study, it is proposed to deepen, from the consumer’s perspective, how attentive consumers are to companies’ green marketing communication, and how this influences consumers.

green-purchased decisions. Sin et al. (1990), the economic growth of P or tugal, a country ∈ the European Economic Community (EEC) ∈ s member, Portugal has been receiving monetary funds to accompany the other EU members in the adoption of environmental protection measures. It is observed a clear increasing in the Portuguese concerns for the main environmental issues, but little is known on the consumers perceptions regarding green companies and market ∈ communication (DSouza et al., 2009). In this context, we propose to overcome this gap, by studying the Portuguese consumers’ attention → companies green marketing. To this end an online survey was carried out on the population residing in Portugal over 18 years of age, allowing to collect a total of 704 responses, of which 690 were considered valid and incorporated in the analysis.

The remainder of this paper is organized as follows. After an introduction to the theme, a second section reviews the scientific literature, explores some of the main concepts and presents the research hypotheses. The following section is devoted to the methodology, with a detailed description of the questionnaire design, data collection and sample profile. Then, the results are presented and discussed. Finally, in the last section, the main conclusions are presented along with policy and research implications.

Literature Review, Key Concepts And Research Hypotheses
Green Marketing Communication and Purchasing Behaviour

Green marketing has become one of the key developments in modern business, which is more applied in developed countries than lower and middle-income countries (Hasan et al., 2019; Kassaye, 2001). According to Stanton (1987, p.3) green marketing "seeks to bring the activities of firms into a new and more harmonious relation with the environment". The concept of green marketing incorporates a broad range of activities and trends including the modification of products, production processes, packaging and labelling, as well as advertising strategies (Polonsky, 1994; Podvorica & Ukaj, 2019). According to Cherian & Jacob (2012), companies use green marketing to increase the awareness of customers and show them that the company seeks to contribute to solving environmental problems.

Companies have been communicating the environmentally friendly characteristics of their products, leading to the growth of a significant segment of well-informed green consumers who criticise producers about the type of communication delivered (Maniatis, 2015). Communication in green marketing aims to attract consumers' attention to the company's environmental initiatives and environmental responsibility and have positive impacts on consumer behaviour and encourage the purchase of green products (Chen et al., 2006). Communication of green activities deployed by organizations includes advertising, corporate public relations, and visual identifications, such as green labels (Balmer & Greyser, 2006).

Green labels, also known as environmental labels or eco-labels, are defined by the International Organization for Standardization as symbols printed on products or their packaging to advertise environmental quality or characteristics. These labels act as a guide for consumers to choose environmentally friendly products. It is often used by companies to differentiate their products, position them and communicate the environmentally friendly message (D’Souza, 2000). Companies have different ways to convey the environmental benefits of their products, namely through general or specific product claims on product labels, for instance, “eco-friendly”, “environmentally safe”, “recyclable”, “biodegradable” and “ozone-friendly” (Morris et al., 2005). These green messages have a key role in consumers’ green purchase decisions. Chase and Smith (1992), found that purchase decisions were often influenced by environmental messages in advertising and product labelling. According to Rashid (2009), awareness of eco-label has a positive effect between the knowledge of a green product and consumers' intention to purchase. However, other studies indicate that although the functions of labels are recognized by some consumers, this does not automatically lead them to green purchasing decisions (Leire & Thidell, 2005). As stressed by D’Souza (2004), little is understood about the effect of label information on a consumer's intention and decision to purchase environmentally friendly products.

In addition to green labels, there is a growing trend among companies around the world to present environmental advertisements through the media. With the presentation of these green advertisements, companies show consumers that they are ecocentric and, at the same time, intend to influence the consumers’ purchase behaviour, presenting them with products that do not harm the environment and directing consumers’ attention to the positive consequences of green purchase behaviour (Rahbar & Wahid, 2011; Cherian & Jacob, 2012). According to Baldwin (1993), environmental advertisements help to form a consumer's values and translate them into the purchase of green products. As stated by Chase and Smith (1992), environmental messages in advertisements and product labelling were found to "sometimes" influence the purchasing decisions of 70% of respondents. Analysing Turkish consumers, Boztepe (2016) found that promotion activities affected green purchasing behaviours.

Green marketing is aimed at all consumers, with the aim that they become increasingly green and value the attitude of companies as environmentally friendly, choosing to decide to buy their products.

Nowadays, there are several companies in Portugal that produce, sell and/or distribute these green products, developing marketing strategies to show consumers their concern for the environment. However, the influence of these actions on the behaviour of Portuguese consumers is not known.

Hence, it is proposed to verify the following research hypothesis:

\[ H1: \text{Consumer's attention} \rightarrow \text{companies green marketing communication influences their green purchasing behaviour.} \]

Green Marketing Communication and Consumers’ Characteristics

In this subsection, we review some scientific literature that explores the importance of consumers' characteristics, in particular attitudes and education, in their attention → companies green marketing communication.

**Gender**

In the past decades, several researchers have stressed the importance and need to consider gender when studying individuals' environmental behaviour, since it may influence important issues, namely attitudes, beliefs, concerns, opinions and behaviours (Eisler et al., 2003; Xiao & McCright, 2015). For instance, Zelezny et al. (2000) conducted an international survey covering 14 countries regarding gender differences in pro-environmental attitudes and behaviours and found a significant difference between genders, concluding that women present stronger pro-environmental attitudes and behaviours than men, in addition to higher levels of socialization and social responsibility.

Regarding specifically to green purchase behaviour, several authors stress the importance and the influence of the consumers’ gender in their green purchasing decisions. For example, Urefa et al. (2008) compared Spanish men and women and observed that women are more prone to purchase green products. Lee (2009) explored gender differences in Hong Kong adolescent consumers’ green purchasing behaviour and concluded that in a total of 6010 adolescents, females scored significantly higher in green purchasing behaviour than males. In a Croatian case-study, Radman (2005) also concluded that women purchase green products more often than men. Han et al. (2011) found that women showed higher intention to use a green hotel and pay premium prices for it. In Chekima et al. (2016), the authors concluded that Malaysian highly educated women showed higher green purchase intentions.
However, several authors found that men have a higher environmental knowledge about environmental issues than women and act accordingly (Diamantopoulos et al., 2003). In Ling-Yee (1997), the author also found that men in Hong Kong are more likely to search for information on green products and to purchase such products, particularly health food products. Considering that many studies conclude that there are gender differences regarding to behaviours, or more favourable intentions for purchasing green products, it is expected that there are gender differences regarding consumers’ attention to companies’ green marketing communication.

In this context, it is proposed to verify whether:

\[ H2: \text{Consumers} \geq n \text{gender} \in \text{fluenced their attention to companies green marketing communication.} \]

**Green Attitudes**

The literature provides several definitions for environmental attitudes. Milfont & Duckitt (2010) refer to this concept as a psychological tendency expressed by evaluating the natural environment with some degree of favour or disfavour. In Gifford and Sussman (2012, p.65-66), green attitudes are defined as “concern for the environment or caring about environmental issues” (sometimes referred to as *pro-environmental attitudes*). According to Ugulu et al. (2013), it is essential to study and act on possible negative environmental attitudes, since it is observed that individuals with negative attitudes towards the environment underestimate environmental problems and tend not to adopt environmentally friendly behaviours.

Regarding particularly to green purchase behaviour, several authors proposed to explore the relationship between individuals’ attitudes, intentions and actual green purchase (e.g., Anvar & Venter, 2014; Arvola et al., 2008; Barr et al., 2005; Tan & Lau, 2011). Mainieri et al. (1997) underline that green purchase behaviour is significantly related to specific environmental attitudes, but not to the general environmental concern or attitude. Chan (2001), on the other hand, reports that consumers’ green purchase attitude is significantly related to their green purchase intention. Nevertheless, a considerable number of studies observed a weak correlation between the expressed positive attitude of consumers toward the particularly green purchase and their actual purchase behaviour, known as the attitude–behaviour gap (e.g., Tanner & Kast, 2003; Vermeir & Verbeke, 2008; Wheale & Hinton, 2007). Some theories justify this gap with the existence of contextual factors that strongly affect the attitude–behaviour relation (e.g., Guagnano et al., 1995; Olander & Thøgersen, 1995; Phipps et al., 2013).

In this context, the next research hypothesis is proposed:

\[ H3: \text{Consumer green attitude} \in \text{fluenced their attention to companies green marketing communication.} \]

**Environmental Education**

One of the most effective tools to raise individuals’ awareness of the need to protect the environment is through environmental education: it helps people become aware of the consequences of their actions, provides information to help solve environmental problems, and develops the human capacity needed to solve and prevent environmental aggressions (Salequezzaman & Stocker, 2001). Environmental education involves the interchange of knowledge to build values, attitudes and skills that prepare individuals to collaboratively undertake positive environmental action (Ardoin et al., 2020). However, to be effective, education cannot be a unidirectional transfer of information; it must rather be a collective construction that includes the social reality and the traditional knowledge of local communities (Freire, 1996). Lozano (2006) found that individual’s environmental concerns and behaviour increase with higher education. According to Schlegelmilch et al. (1996), highly educated individuals seem to possess a higher level of environmental knowledge and are motivated to engage in environmentally responsible behaviours. In this context, it is expected that these individuals are more attentive to the companies’ green marketing communication and so it is proposed the following research hypothesis:

\[ H4: \text{Consumer education} \subseteq \text{level} \in \text{fluenced their attention to companies green marketing communication.} \]

**Research Methodology**

**Questionnaire Design and Survey Procedures**

After an extensive literature review on consumers’ green purchasing behaviour, a significant set of questions was selected in order to gather essential information on respondents:

- **Behaviour:** "This provisional question was selected to the "there is a loud" technique, available ≤ qualitative research → ol, who ongoing thinking process as they answer our questions (Ericsson & Simon, 1984; Gilhooly & Green, 1996; Someren et al., 1994). This procedure took place in Coimbra on February 28, 2021, and counted with the participation of ten individuals, whose testimonies allowed us to build the final and definitive version of the questionnaire, with the reformulation of some questions, making them simpler and clearer, and with the elimination of some questions, since most participants have complained about the high number of questions.

The questionnaire is composed by two main sections: the first includes several questions to gather information on respondents’ demographic characteristics, namely ≥, gender, education, and occupation; and the second included several questions on key issues green purchasing behaviour, namely attitude, green purchase behaviour and attention to companies’ environmental marketing. Based on an extensive literature review (e.g., Cardoso & Van Schoor, 2017; Janmaimool & Khajohnmanee, 2019; Joshi & Rahman, 2019; Paço et al., 2019), a selection of several statements (see appendix) was presented to respondents who were asked to rate their agreement using a five-point Likert scale (1 - strongly disagree, 2 - disagree, 3 - neither agree nor disagree, 4 - agree, 5 - strongly agree).
Data Collection and Statistics Analysis

The questionnaire was distributed online over a month, from 1 to 31 March of 2021, allowing to collect a total of 704 responses, of which 690 were considered valid and incorporated in the analysis. The survey data were collected in order to fulfil all the requirements of conducting a valid analysis, which, according to some authors (e.g., Kline, 2011; Solomon, 1995), requires a sample size greater than 100 and with 10 answers for each item analysed. Our sample, with 690 valid responses, clearly meets the priori conditions. The decision to collect data online was due to several reasons, of which we highlight that the majority of the residents in Portugal were confined in their residences during the month of March as a measure to combat the spread of the virus covid-19, being, therefore more than a choice, an imposition. In addition, the use of the internet presents several advantages over other methods, namely face-to-face and telephone interviews, allowing the collection of a large number of responses in a short period of time and at insignificant costs. It should also be noted that comparative experimental studies have shown that the differences in the results of studies conducted through direct or telephone interviews or through the internet were insignificant (Albaum et al., 2002; Chatt & Dennis, 2005; Osterveld & Willems, 2003). After collection, the data was statistically analysed using the statistical software IBM SPSS version 27.

To analyse the research hypotheses of this study, various statistical methodologies were applied. Descriptive statistics were used to explore the variable green purchasing communication. A simple regression model was obtained to analyse the impact of the green marketing communication on the green purchase behaviour. To study the influence of gender and education on attention to companies greenmarket ∈ gocommunication, ∈ an ∈ ∆ allway, parametric and non – parametric tests were applied. F ∈ ally, αµ ≤ ip ≤ regress characteristics, in particular gender, attitudes, and education, on their attention to companies’ green marketing communication.

Sample Profile

All respondents participated in this study voluntarily and are 18 or over, assuming that they have income and are buyers who are independent in making purchasing decisions. The respondents sociodemographicprofile ≤ ispresented ∈ Tab ≤ 1. As canbe seen, 66.2% of the respondents are female ≤ ; 61.8% area ≥ dbetween18 and s degree or Ph.D.

Table 1 Respondents’ demographic profile

<table>
<thead>
<tr>
<th>Gender</th>
<th>Absolute Values</th>
<th>Percentage Values (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td>233</td>
<td>33.8</td>
</tr>
<tr>
<td>Female</td>
<td>457</td>
<td>66.2</td>
</tr>
<tr>
<td>Missing</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Total</td>
<td>690</td>
<td>100</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Age</th>
<th>Absolute Values</th>
<th>Percentage Values (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>18-21</td>
<td>289</td>
<td>41.9</td>
</tr>
<tr>
<td>22-31</td>
<td>137</td>
<td>19.9</td>
</tr>
<tr>
<td>32-51</td>
<td>177</td>
<td>25.7</td>
</tr>
<tr>
<td>52-77</td>
<td>75</td>
<td>10.9</td>
</tr>
<tr>
<td>Missing</td>
<td>12</td>
<td>1.7</td>
</tr>
<tr>
<td>Total</td>
<td>690</td>
<td>100</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>School level</th>
<th>Absolute Values</th>
<th>Percentage Values (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Until Secondary</td>
<td>359</td>
<td>52.0</td>
</tr>
<tr>
<td>Graduate</td>
<td>231</td>
<td>33.5</td>
</tr>
<tr>
<td>Master &amp; PhD</td>
<td>100</td>
<td>14.5</td>
</tr>
<tr>
<td>Missing</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Total</td>
<td>690</td>
<td>100</td>
</tr>
</tbody>
</table>

Source: Authors’ own elaboration

Findings And Discussion

This research focuses on the attention to companies greenmarket ∈ gocommunication(latentvariab ≤ with7items) and ∈ therelationshipofthisvariab ≤ withcon∑ers green purchasing behaviour (latent variable with 9 items), consumers’ green attitudes (latent variable with 3 items) as well as with gender and education level. Cronbach’s alpha was used to assess the internal reliability of the latent variables. The resulting values are 0.924 for attitude, 0.925 for behaviour and 0.915 for the attention, therefore all the variables present very good reliability.
In one of the questionnaire’s sections, respondents were presented with different statements (see appendix) regarding their attention towards companies’ green marketing communication and were asked to express their degree of agreement. The results are presented in Figure 1 and allow us to conclude that a large percentage of respondents assumes paying attention to advertising messages on environmental protection; appreciating brands or companies that have environmental certifications and labels; responding favourably to brands that use messages about environmental protection in their advertising; preferring products from companies that adopt a responsible attitude towards the environment, to the detriment of others; and supporting ways of promoting products through environmentally friendly instruments. We highlight the high number of respondents that agree (30.9%) and strongly agrees (51.5%) that it is important that companies provide/disclose more information about the environmental characteristics of their products and production methods. On the other hand, a considerable number of respondents (50.7%) assume not paying close attention to product labels and tags with all the information about their environmental impacts.

To investigate the influence of the consumers’ attention → companies’ green marketing communication on their green purchasing behaviour, a simple regression model was performed. The results are presented in Table 2.

Table 2 Simple regression results

<table>
<thead>
<tr>
<th>Coefficients</th>
<th>t-statistics</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Constant</td>
<td>10.102</td>
<td>10.159</td>
</tr>
<tr>
<td>Attention</td>
<td>0.821</td>
<td>22.890</td>
</tr>
</tbody>
</table>

Dependent variable: Green purchasing behaviour

***Significant at 1% level

Source: Authors’ own elaboration

The variable consumers’ attention to the model (t(640) = 0.821, p-value = 0.000), this is variation in the green purchasing behaviour. The coefficient of determination is $R^2 = 0.45$, and the model is globally relevant (F(1, 640) = 523.974, p-value = 0.000). Therefore, the results suggest that H2 is validated.

To analyse the research hypothesis H3: Consumers’ gender → attention to companies’ green marketing communication, a parametric test to compare two means was applied. The test results shown in Table 3, more specifically, $t(661) = 5.010$ and p-value = 0.000, indicate the existence of significant differences considering the gender. The results allow us to conclude that women are significantly more attentive to companies’ green marketing communication (Female mean = 27.85, SD = 5.43) than men are (Male mean = 25.59, SD = 5.61). Then H3 is validated.

Table 3 Results of the t-test for the mean difference of consumers’ attention → companies’ green marketing communication, exploring gender differences

<table>
<thead>
<tr>
<th>Levene’s Test for Equality of Variances</th>
<th>t-test for Equality of Means</th>
</tr>
</thead>
<tbody>
<tr>
<td>F</td>
<td>p-value</td>
</tr>
<tr>
<td>Attention to companies’ green marketing communication</td>
<td>Equal variance assumed</td>
</tr>
<tr>
<td>Equal variance not assumed</td>
<td></td>
</tr>
</tbody>
</table>

***Significant at 1% level

Source: Authors’ own elaboration

To compare the attention to companies’ green marketing communication ($p$-value = 0.014 < 0.05), supporting H5: Consumers’ education ≤ vel ∈ influence their attention → companies’ green marketing communication.

Table 4 Results of the Kruskal-Wallis test to compare consumers’ attention → companies’ green marketing communication, exploring education level
these authors, these risks have restricted the purchase of green products in some countries. Thus, marketing professionals must consider the benefits, but also

and enabling interaction with consumers (Isenmann et al., 2007). However, Sharma (2021) highlights the risks associated with this channel. According to

information to be conveyed in many ways (text, images, moving images, sound, interaction), and it can be strategic by making information more appealing

consider this aspect in their communication strategies. A key element in these strategies is, for example, defining the most appropriate communication

characteristics of products and their production methods. Consumers consider this issue very important (Statement 7, in appendix), so companies should

consumers. Hence, it may be concluded that some are more active than others, even when companies’ green marketing communication is directed, in particular, to information that companies provide about their products and the processes used in their production. Consumers consider this issue very important (Statement 7, in appendix), so companies should consider this aspect in their communication strategies. A key element in these strategies is, for example, defining the most appropriate communication channels. One of the channels is the internet, either through social networks or corporate websites, as these media have many advantages: they allow information to be conveyed in many ways (text, images, moving images, sound, interaction), and it can be strategic by making information more appealing and enabling interaction with consumers (Isenmann et al., 2007). However, Sharma (2021) highlights the risks associated with this channel. According to these authors, these risks have restricted the purchase of green products in some countries. Thus, marketing professionals must consider the benefits, but also the risks associated with the use of these means. It would be expected, as stressed in other studies (e.g., Rahman et al., 2017), that labels and packaging

### Table 5 Results of the multiple comparisons to the different groups of consumers

<table>
<thead>
<tr>
<th>Comparison group</th>
<th>Reference group</th>
<th>Mann-Whitney U-test</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Until Secondary</td>
<td>Graduate</td>
<td>-1.738</td>
<td>0.082*</td>
</tr>
<tr>
<td></td>
<td>Master &amp; Ph.D.</td>
<td>-2.758</td>
<td>0.006***</td>
</tr>
<tr>
<td>Graduate</td>
<td>Master &amp; Ph.D.</td>
<td>-1.367</td>
<td>0.172</td>
</tr>
</tbody>
</table>

*Difference is significant at the 10% level; ***Difference is significant at the 1% level

Source: Authors' own elaboration

Table 5 shows the differences between 2 pairs of groups. They were found significant differences, at the 1% level of significance (p-value < 0.01), in consumers’ attention to companies’ green marketing communication between two groups, the consumers with secondary school or less and consumers with a master’s degree or Ph.D. At the 10% level of significance, we found significant differences between consumers with secondary school or less and graduate consumers.

### Table 6 Multiple regression results

<table>
<thead>
<tr>
<th></th>
<th>Coefficients</th>
<th>t-statistics</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Constant</td>
<td>-0.215</td>
<td>-3.214</td>
<td>0.001***</td>
</tr>
<tr>
<td>Gender</td>
<td>0.198</td>
<td>2.640</td>
<td>0.008***</td>
</tr>
<tr>
<td>Attitudes</td>
<td>0.442</td>
<td>12.487</td>
<td>0.000***</td>
</tr>
<tr>
<td>Graduate</td>
<td>0.145</td>
<td>1.891</td>
<td>0.059</td>
</tr>
<tr>
<td>Master &amp; PhD</td>
<td>0.208</td>
<td>2.025</td>
<td>0.043**</td>
</tr>
</tbody>
</table>

Dependent variable: Attention to companies’ green marketing communication

***Significant at 1% level; **Significant at 5% level; *Significant at 10% level

Source: Authors’ own elaboration

Consumers’ attention to companies’ green marketing communication is directed, in particular, to information that companies provide about the characteristics of products and their production methods. Consumers consider this issue very important (Statement 7, in appendix), so companies should consider this aspect in their communication strategies. A key element in these strategies is, for example, defining the most appropriate communication channels. One of the channels is the internet, either through social networks or corporate websites, as these media have many advantages: they allow information to be conveyed in many ways (text, images, moving images, sound, interaction), and it can be strategic by making information more appealing and enabling interaction with consumers (Isenmann et al., 2007). However, Sharma (2021) highlights the risks associated with this channel. According to these authors, these risks have restricted the purchase of green products in some countries. Thus, marketing professionals must consider the benefits, but also the risks associated with the use of these means. It would be expected, as stressed in other studies (e.g., Rahman et al., 2017), that labels and packaging
would have another prominence and would be considered important for consumers as green marketing tools with the potential to influence consumer’s behaviour. However, in this study, respondents attach little importance to this issue (Statement 4, in the appendix). This could be related to the fact that consumers may have some distrust of labels. Labels, seals and certificates are sometimes used only to attract consumers, often with misleading claims of environmental benefits associated with a product, also known as greenwashing (Shahrin et al., 2017). Furthermore, no eco-label is recognized as credible and constitutes an international standard, which can also contribute to this distrust (Rahman et al., 2017).

The results of this study reveal that consumers with more pro-environmental attitudes are also more receptive to companies’ communication regarding environmental issues. In a situation where consumers are more concerned about the environment, green marketing has proven to be effective as the message targets individuals already concerned with environmental issues (Zabkar & Hosta, 2013). Although communication may be particularly important to raise consumers environmental awareness, it has been shown that consumers are more likely to trust companies that provide environmental information and evidence (Ramayah et al., 2010; Sheng et al., 2019; Urban et al., 2019). As a result, for the last years, consumers are expressing a growing interest in purchasing green products. On the other hand, companies, academics, and researchers are revealing a growing interest in exploring the marketing impact in the promotion of a more balanced environment (Bhattacharya, 2011; Chamorro & Bañegil, 2006). Marketing elements, namely product, price, distribution, and marketing communication can be designed and applied in ways that are less harmful to the natural environment (Leonidou et al., 2013).

Conclusions And Future Research

Green purchase is an environmentally responsible behaviour characterized by advocating nature and protecting the environment. It is considered an effective way to solve environmental problems and has attracted companies’ and consumers’ attention in recent years (Gonçalves et al., 2016; Nguyen et al., 2019; Ramayah et al., 2010; Sheng et al., 2019; Urban et al., 2019). As a result, for the last years, consumers are expressing a growing interest in purchasing green products. On the other hand, companies, academics, and researchers are revealing a growing interest in exploring the marketing impact in the promotion of a more balanced environment (Bhattacharya, 2011; Chamorro & Bañegil, 2006). Marketing elements, namely product, price, distribution, and marketing communication can be designed and applied in ways that are less harmful to the natural environment (Leonidou et al., 2013).

This study proposed to deepen the research on consumers’ attention to companies’ green marketing communication and how this is determinant to consumers green purchase behaviour. As stressed by Bai et al. (2016), con  锛� ersdoreactd ⇐ erently → greenmarket ∈ goomunication. Ourre’s attention to companies greenmarket ∈ goomunication and their green purchase behaviour. M or cover, rest also proved that greenmarket ∈ goomunication. The findings reinforce the argument that companies benefit from communicating with their stakeholders about their commitment to sustainability and disseminating information on the integration of these concerns into their policies, business practices and their products (Hamzah & Abdullah, 2018; Siao et al., 2016). In addition to gaining the support of these stakeholders, communication not only contributes to increase transparency, enhance reputation and legitimacy (Raghupathi & Raghupathi, 2019), but also seems to influence behaviour in relation to purchases of green products, translating into economic benefits.

This research can be further expanded, deepened, and improved in the future, with the inclusion of more variables, extended to other countries with different degrees of development and from different continents, and that addresses the behaviour of both companies and consumers towards specific green products. For example, it would be interesting to verify whether the results obtained in this study are similar for durable products such as household appliances and non-durable products such as clothing, or services such as eco-hotels. Another aspect to be analysed may be whether the market channels (online vs. offline) influence consumers’ choice in relation to the purchase of green products.

Declarations

Funding declaration

The authors received no financial support for this research.

Declaration of competing interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper. All authors approved this declaration.

Author contributions statement

Elisabete Correia and Sara Sousa wrote the main manuscript text.

Manuela Larguinho and Clara Viseu performed the statistical analysis and wrote the results.

All authors reviewed the manuscript.

References


Figures
Consumers' reaction to companies' green marketing communication

Source: Authors' own elaboration.

Note: See Table 7, in the appendix. Statements: 1: I tend to pay attention to advertising messages that talk about environmental protection; 2: I appreciate brands/companies that have environmental certifications and labels; 3: I respond favourably to brands that use messages about environmental protection in their advertising; 4: I pay close attention to product labels and tags with all the information about their environmental impacts; 5: When purchasing, I prefer products from companies that adopt a responsible attitude towards the environment, to the detriment of others; 6: I support ways of promoting products through environmentally friendly instruments; 7: I consider it important that companies provide/disclose more information about the environmental characteristics of their products and production methods.

Supplementary Files

This is a list of supplementary files associated with this preprint. Click to download.

- Appendix.docx