RELATIONSHIPS BETWEEN CONSUMER ENGAGEMENT AND PURCHASE INTENTION OF ECOLOGICAL PRODUCTS

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ABSTRACT

Purpose: This study aims to analyze the relationship between consumer engagement with the Beta brand and the purchase intention of ecological products sold by the company.

Theoretical framework: It builds on the literature on consumer engagement and behavior and green or ecological products.

Method/design/approach: In this study, the research was characterized as quantitative, descriptive and explanatory, with data collected through a survey. The study population was made up of consumers and potential consumers of Beta Cosmetics, a company that operates in the beauty market, offering sustainable solid products. A sample composed of consumers who agreed to participate in the survey was used, totaling 107 respondents.

Results and conclusion: The results indicate that conscious participation positively affects the purchase intention of these products, and that consumers who regularly buy the products are more engaged, enthusiastic and conscious, and perceive greater value in the products. Meanwhile, consumers who rarely buy the products have high purchase intention, but are more sensitive to the price, as these products are more expensive than traditional products on the market.

Research Implications: This study has an impact on practical implications in the practice of ecological products, as it emphasizes that engagement and awareness may not lead to sales. Although consumers perceive value in ecological products, the high price plays an important role in preventing the realization of purchase intentions.

Originality/value: The paper provides evidence of the determinants of ecological products purchase intentions. It also shows that developing ideas that will educate, attract and engage consumers might strengthen their purchase intention, specially if combined with a competitive price.

Keywords: Consumer Engagement, Purchase Intention, Ecological Products.

RELACÕES ENTRE O COMPROMISSO DO CONSUMIDOR E A INTENÇÃO DE COMPRA DE Produtos Ecológicos

RESUMO

Objetivo: Este estudo visa analisar a relação entre o engajamento do consumidor com a marca Beta e a intenção de compra de produtos ecológicos vendidos pela empresa.

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1 INTRODUCTION

Studies of consumer behavior theory has shown increasingly stronger relationships between consumers and organizations, since the management of customer relationships has generated competitive advantages that help to make businesses more successful. However, actions to stimulate consumer engagement do not always have positive outcomes, as engagement is a behavior that stems from the consumer and there are no guarantees that investing in the relationship will lead to greater engagement.

Among the factors that can stimulate consumer engagement, appeals for environmental protection and sustainable forms of consumption stand out. More information about conscious consumption has reached people, raising their awareness with regard to consumption and how it impacts the environment, leading them to reflect on the degradation of nature and the damage done to the planet. In this scenario, consumers opt for products that meet their expectations and, at the same time, are environmentally responsible, safeguarding nature and human health.

With the intention aiding sustainable development, some companies have invested in manufacturing environmentally responsible products, also known as ecological products. By producing and selling such products, these organizations raise awareness of and encourage conscious consumption. These actions resonate with consumers, who identify with the ideals that companies put forward and, in some way, feel engaged with their brands. Consumers’ recognition of the actions of these organizations and the constant exchange of experiences on social media are indications that investments made in relationships with customers achieve the goal of engaging the consumer (Pereira, Moreira, Martins & Moura 2021) However, although consumers tend towards sustainable consumption, this behavior sometimes does not materialize in purchases (Tambosi, Mondini, Borges & Hein, 2015), and the popularity of a company has
no direct connection with its tangible operational results (Lee, In & Lee, 2020). This implies that the investments made, despite reaching consumers, do not lead to the financial outcomes that companies desire. Beta Cosmetics is a company dedicated solely to the production of environmentally responsible items. Its products are vegan, manufactured without toxic agents and without testing on animals, and are sold in solid state without plastic packaging. The company’s investments in the development of these products and the dissemination of conscious consumption, as well as the response of its consumers in the company’s media, characterize the empirical field for conducting this study. The aim of this research is to analyze the relationships between consumer engagement with the Beta brand and the purchase intention of the ecological products sold by the company.

2 THEORETICAL FRAMEWORK

Engagement has been studied in different academic fields, such as sociology, political science, psychology and organizational behavior (Brodie, Hollebeek, Juric & Ilic, 2011). However, it was in the field of marketing that the research focused on the relationship between consumers and companies, sparking a debate on the different concepts of engagement (Marra & Damacena, 2013). These authors synthesized the definitions of engagement by researchers in different fields of knowledge (Table 1).

Table 1. Definitions of Engagement

<table>
<thead>
<tr>
<th>Authors</th>
<th>Definition</th>
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<tr>
<td>Patterson, Yu &amp; Ruyter (2006)</td>
<td>The level of customers’ physical, cognitive and emotional presence in their relationship with a service company.</td>
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<td>Ilic (2008)</td>
<td>A contextual process that consists of interactions with “the object(s) of engagement” over time and can exist at different levels.</td>
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<td>Bowden (2009)</td>
<td>A psychological process that shapes the underlying mechanisms by which customer loyalty builds for new customers of a service brand, and the mechanisms by which loyalty can be maintained for repeat purchase customers of a service brand.</td>
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<td>Higgins &amp; Scholer (2009)</td>
<td>A state of being involved in, occupied with or totally absorbed in something (in other words, remaining attentive), which leads to consequences of a special attraction or repulsion force.</td>
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<td>Vivek (2009)</td>
<td>How intensely a consumer participates in and connects with the offers of an organization and/or its organized activities.</td>
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<td>Van Doorn et al. (2010)</td>
<td>Manifestation of customer behavior toward a brand or company that goes beyond purchase, resulting in motivational drivers.</td>
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<td>Brodie et al. (2011)</td>
<td>Customer engagement is a psychological state that occurs through interactivity and co-creation of customer experience with a focal agent/object (e.g., a brand) in a focal service relationship.</td>
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<td>Hollebeek (2011)</td>
<td>The level of motivation of an individual customer related to the brand and context dependent on the state of mind, characterized by specific levels of cognitive, emotional and behavioral activity in interactions with the brand.</td>
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<tr>
<td>Vivek, Beatty &amp; Morgan (2012)</td>
<td>Customer engagement is intense participation in connection with an organization’s offers or organizational activities, which both the customer and the organization can initiate.</td>
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</table>

Source: Adapted from Marra and Damacena (2013)
The characteristics of engagement, according to the authors highlighted in Table 1, seem to converge in a multidimensional concept that encompasses cognitive, behavioral and emotional involvement with a product or brand, which is revealed in individuals’ relationships with their peers and/or in their activities, manifesting more visibly on social media (Tafesse & Wien, 2018). Thus, the most concrete expressions of engagement are consumers’ contributions, which are public and voluntary, and reflect their knowledge, experience, time, network resources and social influence regarding the service of a particular brand or company (Jaakkola & Alexander, 2014; Van Doorn et al., 2010).

Marra (2013) agreed with the idea presented by Vivek (2009) that for engagement to exist it is necessary to have a closer relationship with customers that goes beyond the act of purchasing products: it is necessary to form a relationship that enables a better understanding of the consumer’s needs. Originally, when validating the sale of consumer engagement, Vivek (2009) presented three dimensions, enthusiasm, conscious participation and social interaction, which encompass interest in acquiring information, actively participating and sharing experiences, thoughts and feelings with those who have common interests.

When validating the consumer engagement scale in Brazil, Marra (2013) added two dimensions of value (extrinsic value and intrinsic value). The massive presence of companies on social media has led to the growing participation of consumers in the process of creating value for the products and services with which they engage (Büscher & Igoe, 2013). Value co-creation, therefore, is an engagement dimension, to the extent that customers’ perception of value drives them to create and disseminate brand content while consuming products and information (Lira, Silva Júnior & Costa, 2020).

Consumers now pay greater attention to products that respect sustainable principles (Luchs, Naylor, Irwin & Raghunathan, 2010, Gomes, Silva Filho & Leocádio, 2020), and this behavior is reflected in companies, such as retailers like Wal-Mart and Whole Foods, which have launched new products with consideration for green issues, through different designs, larger volumes or less packaging (Luchs et al., 2010). In keeping with this idea, Moysés Filho, Rodrigues and Moretti (2011) pointed out that the reputation of a company is directly related to how it manages its socio-environmental actions.

In recent years, people have become increasingly concerned over environmental issues. This concern stems from a long history of heedless exploitation of the natural environment with little regard for the consequences of the forms of consumption that cause phenomena such as global warming, acid rain, deforestation, ozone depletion, and water and air pollution (Gonçalves, 2007). Starting in 1960, a series of events promoted by the World Health Organization (WHO), the United Nations (UN) and other international bodies helped to further clarify environmental issues, seeking solutions to combat growing environmental degradation (Barbieri & Cajaizeira, 2016). In this respect, Gonçalves (2007) referred to the present moment as an environmental revolution, a period that follows the agricultural, industrial and technological revolutions, based on sustainable development. To protect their reputations, organizations began to treat environmental management as a competitive factor, paying attention to the conscious use of raw materials and waste reduction while promoting sustainable development, disseminating their ideals and adding value to their business (Gonçalves, 2007). More emphasis was placed on themes such as environmental marketing, sustainability, conscious consumption and sustainable consumption, and entrepreneurs discovered market segments sensitive to ecological issues (Rocha, 2011).

Braga Junior, Silva, Lopes and Gaspar (2013) believed that ecological products, also known as green or environmentally responsible products, played important roles in organizations spreading good environmental practices, as well as encouraging and living up to customers’ expectations. To these authors, this strategy has helped to gain a growing space in the market. Nevertheless, Gonçalves (2007) highlighted that a clearer popular understanding is required of the term ecological product so that the public can recognize these products and
avoid consuming products that are unethically alleged to be ecologically correct. Ecological products differ from conventional products, as they strive to meet consumer needs while reducing their environmental impact, designed to be sustainable from their conception to their disposal.

Araújo (2007) defined an ecological product as one that is not toxic or does not cause pollution. It also has benefits for health and the environment, whether it is artisanal, manufactured or industrialized, and can serve any purpose, helping to advance a sustainable economic and social model. However, for a product to be deemed ecological, its production process must be environmentally appropriate, respecting certain requirements, such as the sustainable use of renewable natural raw materials through non-transgenic biotechnology, or even recycling those synthetically manufactured raw materials using clean technologies.

Dangelico and Pontrandolfo (2010) summarized the characteristics of ecological products as described by diverse authors (cf. Table 2).

Table 2. Review of the Characteristics of Ecological Products

<table>
<thead>
<tr>
<th>Authors</th>
<th>Characteristics associated with the ‘green’ nature of a product</th>
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<tr>
<td>Elkington &amp; Hailes (1988)</td>
<td>- Does not pose a risk to the consumer or third parties&lt;br&gt;- Does not significantly harm the environment during manufacture, use or disposal&lt;br&gt;- Does not cause unnecessary waste through excess packaging or very short lifecycle&lt;br&gt;- Does not cause unnecessary use of or cruelty to animals</td>
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<tr>
<td>Simon (1992)</td>
<td>- Uses minimum raw materials with high recycled content&lt;br&gt;- Manufactured with ecofriendly/non-toxic materials&lt;br&gt;- Does not involve unnecessary tests on animals&lt;br&gt;- Uses minimum or no packaging</td>
</tr>
<tr>
<td>Schmidheiny (1992)</td>
<td>- No or low levels of harmful materials&lt;br&gt;- Reduced weight and/or volume, or is a concentrated product&lt;br&gt;- Combines the functions of more than one product&lt;br&gt;- Redesign for more efficient use and reuse by the consumer&lt;br&gt;- Has a longer lifecycle&lt;br&gt;- Less or no packaging</td>
</tr>
<tr>
<td>Peattie (1995)</td>
<td>- Recyclable&lt;br&gt;- Resource-efficient&lt;br&gt;- Sustainable use of resources</td>
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<tr>
<td>Roberto (1995)</td>
<td>- Minimal non-reusable materials&lt;br&gt;- Avoids the use of toxic materials</td>
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<tr>
<td>Shrivastava &amp; Hart (1995)</td>
<td>- Low environmental impact when in use</td>
</tr>
<tr>
<td>Roy et al. (1996)</td>
<td>- Generates minimal pollution and residues&lt;br&gt;- Minimum use of materials, including packaging&lt;br&gt;- Environmental information on the product available to the consumer</td>
</tr>
<tr>
<td>Luttropp &amp; Lagerstedt (2006)</td>
<td>- Does not contain toxic substances&lt;br&gt;- Uses high-quality structural and material resources to minimize weight</td>
</tr>
<tr>
<td>Ljungberg (2007)</td>
<td>- Evaluates and minimizes environmental impact&lt;br&gt;- Increases efficiency when in use</td>
</tr>
</tbody>
</table>

Source: Adapted from Dangelico and Pontrandolfo (2010)

The authors classified the characteristics into before use, during use and after use. The first is intended to reduce the number of products with a social impact. The second is intended
to make the process more efficient in terms of the use of water and energy. Finally, the third is
intended to reduce the use of packaging, or encourage the use of biodegradable packaging. This
classification enables a consolidated definition of a green product, with ecological, political,
social responsiveness and fair-trade dimensions (Dangelico & Pontrandolfo, 2010).

The growing consumption of ecological products reflects society’s understanding of
associating environmental problems with the current consumption pattern (Afonso, 2010;
Krause, 1993; Kalafatis, Pollard & Tsogas, 1999). Afonso (2010) defined green consumers, or
ecologically conscious consumers, as people who, when consuming, choose products that do
not cause environmental damage, or have the least possible impact. The quest to better
understand the profile of green consumers and how they behave is one of the great challenges
for companies interested in the characteristics of this new class of consumer (Afonso, 2010).

The idea of environmentally responsible consumption goes beyond the relationship
between consumers and the quality of products and the way they are used, as these consumers
care about how products are manufactured and distributed (Imkamp, 2000). One of the earliest
studies on the subject, conducted in 1971, presented some of the characteristics of these
consumers. Anderson and Cunningham (1972) identified socially conscious consumers as being
concerned with the collective and the environment, and with the well-being of both, rather than
merely satisfying their individual needs. Furthermore, it was shown that these people belonged
to an above-average socioeconomic class, working in professional positions with recognition
and status (Anderson & Cunningham, 1972).

Consumption with a concern for environmental issues, also called green consumption,
according to Silva, Urdan, Merlo and Dias (2015), acquired the magnitude of a social
movement, seeking to counteract exaggerated and reckless consumption and engaging
increasingly more individuals to become sustainable and soften environmental impacts. This
movement raised the awareness of companies, which began to rethink their operations and
processes in order to minimize the environmental impacts of their activities.

Acquiring ecological products is seen as a complex activity, subject to a series of factors,
such as price, awareness, trust, available information, and the brand being known (Manzini,
Noci, Ostinelli & Pizzurno, 2006). The findings of Leite, Silva, Oliveira and Fontenele (2021)
indicated that environmentally responsible products positively inspire purchase intention.
People view the consumption of products that are not harmful to the environment as important,
and end up being the more likely to buy them. The notion of the role of price in the consumption
of green products has been highlighted in the literature (Gorni, Gomes & Dreher, 2012; Da
Silva & Alvim-Hannas, 2017). According to these the authors, in the process of choosing and
buying sustainable products, their higher prices can change consumers’ purchase intention,
leading them to purchase products that do not prioritize the environment.

The purchase intention of a consumer who is considered ecologically conscious,
according to Afonso (2010), is seen as a relationship between the environmental consequences
and individual attitudes at the time of purchase, with the latter weighing more heavily. Thus,
purchase intention results from the exchange between these individual and environmental
consequences. This implies that even though an individual has knowledge of environmental
issues and ecological values indicating conscious consumer behavior, it does not mean that this
consumer will inevitably act in an ecologically correct way when making a purchase (Chan,
2001). Kotler and Keller (2012) pointed out two factors that can potentially impact this
evaluation between purchase intention and purchase decision. The first is the consumer’s
susceptibility to the attitudes of others, such as individuals who publish product evaluations,
demonstrating a negative attitude towards the product. The second aspect involves unforeseen
situational factors, which are those that can arise and change a purchase intention. In other
words, the purchase intention is influenced by a perceived risk (Kotler & Keller, 2012).

In this context, some studies have explored themes related to the purchase intention of
ecological products, (Bedante, 2004; Motta & Oliveira, 2007; Monteiro, Giuliani, Socorro,
Pizzinatto & Cunha, 2012; Braga Junior et al., 2013; Braga Junior & Da Silva, 2014; Tambosi et al., 2015; Mondini, Borges, Mondini & Dreher, 2018), as presented in Table 3.

Table 3. Aims and results of studies on the Purchase Intention of Ecological Products

<table>
<thead>
<tr>
<th>Authors</th>
<th>Objectives</th>
<th>Results</th>
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</thead>
<tbody>
<tr>
<td>Bedante, 2004</td>
<td>To gauge the influence on the purchase intention of ecologically packaged products based on consumers’ environmental awareness and their attitudes to sustainable consumption.</td>
<td>The results indicated that environmental awareness has a positive influence on attitudes related to sustainable consumption and the purchase intention of ecologically packaged products.</td>
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<tr>
<td>Motta &amp; Oliveira, 2007</td>
<td>To know the importance that consumers attribute to the environmental responsibility of companies when making a purchase decision and use it as a good competitive advantage.</td>
<td>They concluded that ecological marketing by companies can be seen as a competitive advantage, and that consumers are aware of environmental issues and have a positive attitude to preserving the environment.</td>
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<tr>
<td>Monteiro et al., 2012</td>
<td>To measure the consumer’s degree of ecological awareness regarding the following factors: product; recycling and reuse; food and health; domestic habits; actions of change and energy consumption related to the environment.</td>
<td>They found that ecological awareness can be measured according to consumers’ values and beliefs, and that they prefer organizations that show concern over environmental issues.</td>
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<tr>
<td>Braga Junior et al., 2013</td>
<td>To assess whether consumers intend to purchase green retail products and analyze the influence of environmental concern on individual behavior when acquiring green retail products.</td>
<td>They demonstrated that consumers present a purchase intention for green retail products, that consumers are concerned about being politically correct, responding to surveys with a tendency for social desirability.</td>
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<tr>
<td>Braga Júnior &amp; da Silva, 2014</td>
<td>To determine whether the consumer is capable of recognizing companies’ environmental and social practices and whether their concern over the environment will result in a purchase intention followed by a purchase declaration.</td>
<td>Consumers follow their routine consumption habits, with environmental concern at the end of the day having little impact on their declared willingness to purchase green and organic retail products, but there is a close relationship between environmental concerns and purchase intention.</td>
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<tr>
<td>Tambosi et al., 2015</td>
<td>To propose a resizing of research scales on sustainable consumption, environmental awareness and the purchase intention of ecological products from the viewpoint of Brazilian university students.</td>
<td>Regarding the scale of ecological product purchase intention, the study validated the scale, indicating that items are capable of representing this intention.</td>
</tr>
<tr>
<td>Mondini et al. 2018</td>
<td>To analyze the influence of environmental awareness and sustainable consumption habits on ecological product purchase intention.</td>
<td>Consumers’ familiarity with the subject affects ecological purchase; purchase decisions are influenced by environmental awareness and sustainable consumption habits.</td>
</tr>
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Source: The authors (2022)

3 METHODOLOGY

In order to analyze the relationships between consumer engagement with the Beta brand and the purchase intention of environmentally responsible products sold by the company, a quantitative study that was descriptive and explanatory in nature was conducted (Gil, 2002). The proposed cut-off for the work was a cross-sectional study that collects information from...
any sample of participants only once (Hair Jr., William, Babin & Anderson, 2009; Malhotra, 2001).

The procedure used in this research was the survey. Therefore, the data collection instrument was a structured questionnaire applied on the Google Forms platform, enabling the creation of the questionnaire and data to be exported to Microsoft Excel® spreadsheets, which were imported to SPSS® software. The questionnaire was structured into three blocks. The first was for the collection of data with sociodemographic information about the respondents, and from this information it was possible to build a profile of the research participants. The second block included the measurement items of the consumer engagement scale. The third block contained questions related to the scale of ecological product purchase intention. The respondents had to classify the items on a 5-point Likert scale, with 5 being the highest, showing to what extent they agreed with the statements in the questionnaire.

The questions related to the consumer engagement construct used in this study were adapted from Marra (2013). The author applied the scale developed by Vivek (2009) to the Brazilian context to measure the extent to which consumers engage with a brand, product, service or organizational activity. To gauge the level of purchase intention of ecological products sold by the Beta Cosmetics brand, the scale tested by Tambosi et al. (2015) was used, based on the model by Cardoso and Cairrão (2007). In addition to these research variable questions; a multiple-choice question was included for consumers to declare how often they interact with the profile and buy the company’s products. This enabled the clustering of consumers and the study of differences in means.

The study population was made up of a set of consumers and potential consumers of Beta Cosmetics, a company that has operated in the beauty industry since 2019, producing sustainable solid products. As for the participants, a non-probabilistic convenience sample was used (Oliveira, 2001), consisting of consumers who agreed to participate in the study.

The data were collected remotely. First, a search was conducted on the company’s Instagram page to identify possible customers and consumers through their comments on posts. A survey of profiles was carried out and then contact was made through direct messages, introducing the study and its goals and inviting possible participants to take part in the research, providing a link to complete the questionnaire. This approach took considerable time to obtain an adequate number of responses; Around 300 people were contacted, with only 115 agreeing to take the survey, totaling a return of approximately 38%, with 107 questionnaires being correctly completed to permit a data analysis.

The dimensionality of the study’s latent variables was calculated using Exploratory Factor Analysis, and the reliability of the constructs was estimated using Cronbach’s Alpha. Regarding the research goals, a Multiple Regression Analysis was used to test whether consumer engagement was a determining factor in the purchase intention of ecological products, and an Analysis of Variance (ANOVA) was used to test for statistically significant differences in the dimensions of consumer engagement in relation to how regularly each individual made purchases. Both descriptive statistics and hypothesis tests were conducted using SPSS® software, which enabled data analysis and the preparation of auxiliary tables and graphs.

4 RESULTS AND DISCUSSION

This study was conducted with consumers of the Beta Cosmetics brand. After the characterization of the sample, an exploratory analysis of the data was performed, and no outliers were detected. Missing values were not observed in the questions referring to the research goal. The profile of the respondents and the results of the analysis techniques used in the study will now be described. Regarding the socioeconomic characteristics of the sample, the following information was collected: gender, marital status, education and income. There

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were more female respondents (99.1%), who were mostly single (59.8%). As for education, the largest group was made up of those who had completed higher education (42.1%). Concerning income, it was noted that the largest group (42.1%) earned between 1 and 3 minimum wages, with 6.5% of the respondents declaring they had no income.

Regarding their relationship with Beta Cosmetics, 74.8% of the respondents stated that they regularly purchase the brand’s products. It was observed that most respondents formed a relationship with the company recently, as 82.3% of the sample had consumed the products for a year or less. In a multiple-choice question, it was observed that consumers claimed that they buy more than one product (n=317), suggesting that there is no consumer preference for a specific product of the brand, with shampoos and conditioners being the best-selling products.

Measurements of the descriptive statistics of the items of the Consumer Engagement scale were calculated so that trends and statistical dispersion between the responses of consumers surveyed in the present sample could be perceived, thereby leading to conclusions about each item. In order to deal with the consumer engagement variable and attest to the adequacy of the sample, Exploratory Factor Analysis (EFA) was used. The Kaiser-Meyer-Olkin (KMO), Bartlett’s Sphericity test and the diagonal of the anti-image matrix, whose values were above acceptable, showed that the data were suitable for factor analysis. After analyzing the commonalities and factor loadings, the CE01 and CE12 variables were excluded from the factor analysis, the former for presenting a cross loading, and the latter for presenting low commonality. After these variables were removed, the measurements of adequacy remained acceptable (KMO = 0.857; Bartlett’s sphericity test significance = 0.000). Based on the results of the factor analysis, the data showed that the consumer engagement scale variable was made up of 4 factors, as shown in Table 4, which also shows the means and reliability measurements of the Consumer Engagement dimensions.

<table>
<thead>
<tr>
<th>Table 4 – Results of the EFA for Consumer Engagement</th>
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<td><strong>Factor</strong></td>
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<td>Enthusiasm (Ent)</td>
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<td>Conscious Participation (ConP)</td>
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<td>Social Interaction (SocI)</td>
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<td>Value (Val)</td>
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Source: The authors (2022)

The first consumer engagement dimension had a mean of 4.231 and the calculated Cronbach’s Alpha was 0.708, a value considered acceptable, indicating its reliability. The factor was named **Enthusiasm**, composed of 4 items: “I am very interested in the product” (CE05); “I enjoy using the product” (CE08); “I am passionate about the product” (CE09); and “My days would not be the same” (CE13). These items are related to a feeling of excitement on the part of consumers, showing that they are more likely to explore and try the product.
The second factor had a mean of 3.928 and an estimated Cronbach’s alpha of 0.852, indicating good reliability. This dimension was named **Conscious Participation** and had 3 items: “Information or novelty attracts my attention” (CE02); “I like to learn more about the product” (CE06); and “I pay attention to issues about the product” (CE10). This factor is related to the consumer observing not only the product itself, but also its scope of action, and interacting more with it.

The third factor also included 3 items, with a mean of 2.567. The estimated Cronbach’s alpha was 0.700, indicating good reliability. This factor was named **Social Interaction**, and comprised 3 items: “I like to use it when people close to me also use it” (CE03); “It is more pleasant when people around me use it” (CE07); and “I like to use what is recommended by friends” (CE14).

With a mean of 4.544, and Cronbach’s Alpha of 0.797, the fourth and final factor is made up of 4 items: “This product meets my needs” (CE04); “The product gives me advantages” (CE11); “The product gives me benefits” (CE15); and “Using the product is rewarding” (CE16). This factor was named **Value** and refers to the perception of value created by consumers.

Based on the analysis, the results of the consumer engagement construct confirmed the reliability of the construct. The dimensions of the present study confirmed the separation of the two dimensions of enthusiasm and conscious participation, which had been merged by Marra (2013) in the validation of the scale applied to the Brazilian context. It was observed that, within the dimensions of consumer engagement, social interaction presented below-average values and was the dimension that contributed least to the idea of engagement. These values may be a result of the type of product featured in the present study, since personal care products are recurring purchase products with low involvement (MOTTA, 2019).

Regarding the items in the Ecological Product Purchase Intention (EPPI) construct, the indicator on the role of price (EPPI01) had the lowest mean (3.168) and the highest standard deviation (1.014). The others had means with very close values and above 4. These values suggest that all the respondents had high ecological product purchase intention, and that in relation to the item on the role of price, this may be one of the factors that affect the purchase intention of these products.

To test the adequacy of the sample, the KMO and Bartlett’s Sphericity tests were used. Although the KMO index showed acceptable adequacy for ecological product purchase intention, the factor analysis (0.686), significance of Bartlett’s sphericity test (sig.= 0.000) and MSA indicators (values between 0.651 and 0.763), the items that make up the construct allow us to state that the indicators form a one-dimensional construct.

As with the findings of Tambosi et al (2015), the indicator (EPPI01) was removed from the dimension due to low correlation with the other items in the construct. The data indicated that the Ecological Product Purchase Intention dimension was one-dimensional, with a mean value of 4.546 and Cronbach’s alpha estimated at 0.655. Its only dimension comprises 5 items: “I prioritize the purchase of products in biodegradable packaging” (EPPI02); “I would buy a product in an alternative recyclable packaging” (EPPI03); “I am willing to buy products in larger packaging” (EPPI04); “I would buy a product in non-traditional packaging” (EPPI05); and “I would buy a product with less attractive packaging” (EPPI06). The results of the EFA of the EPPI construct, with its means and reliability, are shown in Table 5.
With the dimensionality of the constructs delimited, the analysis of the relationships between the research variables continued to establish a linear relationship between ecological product purchase intention, which is the dependent variable, with the dimensions of Consumer Engagement as independent variables (enthusiasm, conscious participation, social interaction and value). The adopted model had the form of the following equation:

$$\text{EPPI}_i = \beta_1 + \beta_2 \text{Enti} + \beta_3 \text{ConPi} + \beta_4 \text{SocIi} + \beta_5 \text{Vali} + \varepsilon_i$$

where: $\beta_n =$ coefficients of regression; EPPI = Ecological Product Purchase Intention; Ent = Enthusiasm; ConP = Conscious Participation.; SocI = Social Interaction; Val = Value and $\varepsilon_i =$ Regression Error.

The assumptions of linearity, normality of the residues, absence of multicollinearity and homoscedasticity were observed for the performance of the regression. The linearity analysis was performed through the linear correlation of the independent variables with the dependent variable (Table 6).

### Table 6 – Correlation between EPPI and the dependent variables

<table>
<thead>
<tr>
<th>Correlation</th>
<th>Ent</th>
<th>ConP</th>
<th>SocI</th>
<th>Val</th>
</tr>
</thead>
<tbody>
<tr>
<td>EPPI</td>
<td>0.176*</td>
<td>.358***</td>
<td>0.134</td>
<td>0.185*</td>
</tr>
</tbody>
</table>

*** Significant at the level of 0.01/ ** Significant at the level of 0.05 / * Significant at the level of 0.10 (2 extremities).

**Source:** The authors (2022)

The multiple linear regression was estimated employing the backward method, using all the independent variables. However, the Ent, SocI and Val variables were removed because they had low significance for the model. This exclusion is consistent with the correlation results, as only the ConP variable showed a significant correlation at a significance level below 0.05, with a value equal to 0.358, considered low to moderate. Visual analysis of the residuals indicated that there were no anomalies in the residuals of the estimated model in terms of normality and homoscedasticity. An analysis of the Variance Inflation Factor (VIF) test indicated the absence of multicollinearity. Observing the assumptions for the regression analysis, the analysis of the coefficients continued. The results of the multiple regression analysis are shown in Table 7.

### Table 7 – Results of the Multiple Regression Analysis

<table>
<thead>
<tr>
<th>Variable</th>
<th>Coefficients</th>
<th>Std Error</th>
<th>t Statistic</th>
<th>p-value</th>
<th>VIF Test</th>
</tr>
</thead>
<tbody>
<tr>
<td>Constant</td>
<td>3.713</td>
<td>.217</td>
<td>17.103</td>
<td>.000</td>
<td>1.000</td>
</tr>
<tr>
<td>ConP</td>
<td>.212</td>
<td>.054</td>
<td>3.931</td>
<td>.000</td>
<td>1.000</td>
</tr>
</tbody>
</table>

**Source:** The authors (2022)
The model obtained an $R^2$ of 0.128, indicating that the existence of other factors influenced purchase intention that were not considered in this study. The Durbin-Watson statistic indicated that there were no autocorrelation problems in the residuals, which was to be expected as no time series was involved. As for the “F” statistic, it was confirmed that at least one explanatory variable was significant and capable of explaining the ecological product purpose intention behavior. Only the ConP variable was included in the model, presenting a positive coefficient of regression equal to 0.212.

The analysis of the dependent variable revealed that the EPPI did not vary greatly, as the responses were convergent. The respondents showed high purchase intention, even with different levels of engagement. This implies that the variation in the variables of enthusiasm, social interaction and value have no explanatory power regarding the variation in purchase intention, since the people surveyed always had high ecological product purchase intention.

There was a difference between purchase intention and actual purchase. Through the declaration of how regularly they bought Beta Cosmetics products, it was possible to analyze the consumers’ dimensions of engagement and ecological product purchase intention in terms of regular purchases. Thus, analysis of variance (ANOVA) tests were performed to gauge the existence of statistically significant differences between the means of enthusiasm, conscious participation, social interaction, value, ecological product purchase intention and role of price at the time of purchase in relation to the purchase frequency of products between those who never buy the products and those that rarely or regularly buy them. None of the respondents claimed to have never bought the products. Therefore, the respondents were divided into two groups. The results of the estimates for the test are shown in Table 8.

### Table 8 – ANOVA of CE and its dimensions; EPPI and Role of Price (EPPI01)

<table>
<thead>
<tr>
<th>Variable</th>
<th>Group Description</th>
<th>Mean</th>
<th>Deviation</th>
<th>F Test</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ent</td>
<td>Interacts with the profile and buys regularly</td>
<td>4.3656</td>
<td>.43564</td>
<td>18.554</td>
<td>.000</td>
</tr>
<tr>
<td></td>
<td>Interacts with the profile and rarely buys</td>
<td>3.8333</td>
<td>.81748</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ConP</td>
<td>Interacts with the profile and buys regularly</td>
<td>4.0292</td>
<td>.88302</td>
<td>4.177</td>
<td>.043</td>
</tr>
<tr>
<td></td>
<td>Interacts with the profile and rarely buys</td>
<td>3.6296</td>
<td>.86397</td>
<td></td>
<td></td>
</tr>
<tr>
<td>SocI</td>
<td>Interacts with the profile and buys regularly</td>
<td>2.6042</td>
<td>1.04753</td>
<td>.421</td>
<td>.518</td>
</tr>
<tr>
<td></td>
<td>Interacts with the profile and rarely buys</td>
<td>2.4568</td>
<td>.93438</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Val</td>
<td>Interacts with the profile and buys regularly</td>
<td>4.6344</td>
<td>.46549</td>
<td>9.657</td>
<td>.002</td>
</tr>
<tr>
<td></td>
<td>Interacts with the profile and rarely buys</td>
<td>4.2778</td>
<td>.64425</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CE</td>
<td>Interacts with the profile and buys regularly</td>
<td>3.90835</td>
<td>.56790</td>
<td>8.006</td>
<td>.006</td>
</tr>
<tr>
<td></td>
<td>Interacts with the profile and rarely buys</td>
<td>3.549375</td>
<td>.57634</td>
<td></td>
<td></td>
</tr>
<tr>
<td>EPPI</td>
<td>Interacts with the profile and buys regularly</td>
<td>4.5650</td>
<td>.52941</td>
<td>.418</td>
<td>.519</td>
</tr>
<tr>
<td></td>
<td>Interacts with the profile and rarely buys</td>
<td>4.4889</td>
<td>.52721</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Price</td>
<td>Interacts with the profile and buys regularly</td>
<td>3.04</td>
<td>.999</td>
<td>5.493</td>
<td>.021</td>
</tr>
<tr>
<td></td>
<td>Interacts with the profile and rarely buys</td>
<td>3.56</td>
<td>.974</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Source:** The authors (2022)

The results show that there was evidence of differences between the means of the Enthusiasm (Ent), Conscious Participation (ConP), Value (Val), and Role of Price (EPPI1) variables regarding purchase frequency, with significance below 0.05. However, with regard to the Social Interaction (SocI) and Ecological Product Purchase Intention (EPPI) variables, no statistically significant difference between the groups was identified.

The means per group of the dimensions of engagement, ecological product purchase intention and the role of price are shown in Figure 1. In blue are the values related to consumers who interact with the company’s profile on Instagram and regularly buy the products, and highlighted in orange are the values related to consumers who interact with the company’s Instagram profile but rarely buy products.
It was observed that the means for Enthusiasm (Ent), Conscious Participation (ConP), Value (Val) and the Consumer Engagement (CE) structure of consumers who regularly purchase products is statistically higher than the means of those who rarely buy products. This indicates that regular Beta Cosmetics consumers are more engaged than casual buyers.

It is important to note that there was no statistical difference in EPPI between the two groups of consumers: both regular consumers and occasional buyers had high purchase intention for the products. The second largest difference between the two groups was precisely about the role of price in EPPI. For the group that rarely buys branded products, the role of price was more relevant than for the group that regularly buys the brand’s products. Since both groups showed high purchase intention, the data suggest that price was a factor that could prevent the purchase of the brand’s products.

The determining role of price for Beta Cosmetics consumers identified in this study converges with research on ecological products and cosmetic products. In addition to the sensitivity to the price of ecological products already discussed in other works on environmentally responsible products (Gorni, Gomes, Wojahn & Padilha, 2016; Da Silva & Alvim-Hannas, 2017), Tamashiro, Melo and Silveira (2011) highlighted that what consumers value most when purchasing personal hygiene products, toiletries and cosmetics is the price.

5 FINAL CONSIDERATIONS

The aim of the present study was to analyze the relationship between consumer engagement and the purchase intention of ecological products sold by the Beta Cosmetics brand. The results showed that there is a relationship between consumer engagement and the purchase intention of ecological products. An analysis of the causality between the consumer engagement dimensions and purchase intention of ecological products showed that conscious participation has a positive effect on the purchase intention of these products.

The results also indicated that consumers who regularly buy the products are more engaged, showing more enthusiasm, conscious participation and perceiving more value in the
products. Meanwhile, consumers who rarely buy them have high purchase intention, but are more sensitive to the products’ high prices compared with traditional products on the market.

In this respect, the present study makes theoretical contributions by analyzing the behavior of consumers in terms of their engagement and purchase intention of ecological products produced by a brand of personal care products. It is noteworthy that gaining a greater understanding of these factors by measuring them aids the development of measures that can help companies with problems in this regard. Therefore, it should be possible to develop ideas that will attract and engage consumers, strengthening their purchase intention.

A limitation of the study was the difficulty involved in contacting consumers to invite them to participate in the research, with social media being the most viable option to find Beta Cosmetics consumers. The research procedure could be applied to other companies and other sectors to analyze the variations resulting from changes in context, in addition to conducting more detailed studies. This would enable the identification of other variables for the constructs.

REFERENCES


Relationships Between Consumer Engagement and Purchase Intention of Ecological Products


