

**THE RELATIONSHIP BETWEEN ECOLOGICAL AWARENESS, PERCEIVED
EFFECTIVENESS AND WILLINGNESS TO SACRIFICE IN CONSUMER
INTENTION TO PURCHASE SUSTAINABLE FASHION**

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1. Introdução

The intensification of environmental degradation, manifested in phenomena such as climate change and global warming, has increased consumers' knowledge of sustainability and, consequently, awakened their ecological awareness (Jungetal., 2021; Yilmaz & Can, 2020). This awareness translates into the perception that consumption choices directly influence the preservation of natural resources, an essential condition for ensuring quality of life for future generations. Recent studies show that this awareness-raising process has driven academic research in various regions, including emerging economies, highlighting the spread of sustainability-oriented lifestyles (Granskoetal., 2020; Bianchi & Gonzalez, 2021).

In the fashion sector, this movement is gaining particular relevance. Criticism of the socio-environmental impact of fast fashion has elevated sustainability to a central issue on the agenda of companies, policymakers, and consumers (Olivar Aponte et al., 2024; Yan & Ha-Brookshire, 2019). The dominant clothing production model is characterized by high water consumption, intensive pesticide use, and waste generation, making it the second most polluting industry in the world (Lee, 2020;Olivar Aponte et al., 2024;). Research also points to labor violations and precarious working conditions in global supply chains (Jung & Jin, 2016). In this scenario, sustainable fashion emerges as an alternative capable of mitigating negative externalities and reconfiguring production and consumption practices (Niinimäki et al., 2020).

However, the consolidation of this market encounters a recurring paradox in the literature: although many individuals declare high ecological awareness, few actually convert this attitude into intention or purchasing behavior for sustainable products (Achabouetal., 2020; Tam & Chan, 2018). This "attitude-behavior gap" demands further explanations regarding the factors that influence the relationship between awareness and action. Roberts (1996) and Bamberg (2003) define ecological awareness as a psychological construct that guides individuals to recognize the need to adjust consumption patterns; however, empirical research shows that, in practice, this awareness does not always materialize into pro-environmental choices (Xuetal., 2020).

One variable proposed to elucidate this issue is perceived consumer effectiveness (PEC). The concept of PCE is anchored in studies of ecological behavior and represents consumers' belief in their ability to produce a positive impact through purchasing decisions (Taufique & Islam, 2021; Hanss & Doran, 2020). The higher the PCE, the greater the likelihood of the individual engaging in pro-environmental actions (Vermeir & Verbeke, 2008). Consumers who perceive influence tend to evaluate consumption alternatives carefully, valuing ecological attributes and rewarding companies that adopt sustainable practices (Roberts, 1996).

However, studies suggest that ecological awareness combined with EPC may still not be enough to overcome behavioral barriers, especially when changing habits involves sacrifices—financial, convenience, or status (Leeetal., 2009; Hutter & Hoffman, 2013). Sacrifice in consumption constitutes an exchange process in which benefits and costs are calculated by the consumer (Gomes, Farias & Silva, 2017). The willingness to sacrifice in sustainable consumption refers to the extent to which the individual accepts prioritizing environmental well-being over personal interests, assuming real or perceived costs (Davis, Lee & Coy, 2011). This willingness has been identified as key to reducing the dissonance

between stated intentions and actual behavior (Joshi & Rahman, 2015), especially in categories strongly associated with identity and personal expression, such as fashion (Banbury, Stinerock & Subrahmanyam, 2012).

Fast fashion culture, sustained by rapid production cycles, planned obsolescence, and consumer incentives, establishes internalized social norms that hinder the transition to more sustainable practices (Hutter & Hoffman, 2013). Changing this pattern requires extra efforts from consumers, who are often reluctant. In this context, sustainable fashion constitutes an alternative platform for expressing environmental values without necessarily adhering to radical anti-consumption, allowing individuals to reconcile style identity and social and environmental responsibility (Hutter & Hoffman, 2013).

It is therefore argued that consumers with high ecological awareness, high perceived effectiveness, and willingness to sacrifice tend to have greater intentions to purchase sustainable fashion. These individuals amplify the perceived benefits—reduced environmental impact, social contribution, collective well-being—and relativize the financial or subjective costs associated with sustainable products (Wuetal., 2021). Furthermore, repeating successful purchasing experiences reinforces their belief in effectiveness, creating a virtuous cycle of sustainable product consumption (Ellen, Wiener & Cobb-Walgren, 1991). In contrast, consumers less convinced of their ability to create change or averse to sacrifice may perceive the effort as disproportionate to the results, perpetuating the attitude-behavior gap (Mintonetal., 2018).

By simultaneously investigating ecological awareness, perceived effectiveness, and willingness to sacrifice, this study contributes to clarifying how these constructs interact and influence the intention to purchase sustainable fashion products. Understanding this process enables a better understanding of consumer behavior involving activities aimed at sustainability in fashion consumption, as well as practical implications by informing marketing strategies, public policy formulation, and the design of educational initiatives aimed at accelerating the transition to more sustainable consumption patterns.

2. Theoretical Reference

2.1 Sustainable Fashion Purchase Intention

Due to the incorporation of concerns about the negative effects of their purchasing behaviors (Park & Lin, 2018; Henninger & Singh, 2017), consumers are understood as actors in the process of promoting sustainability in the fashion industry (Niinimäki et al., 2020) and its demand significantly drives industrial and market processes (Olivar Aponte et al., 2024; Binotto & Payne, 2017).

As a result, there is a growing recognition among clothing companies of consumer demand for more environmentally friendly and socially responsible production processes, which is resulting in changes, albeit on a small scale, in traditional business practices (Testa et al., 2021). However, the mass adoption of sustainable fashion is still far from ideal (Dhir et al., 2021). Therefore, it is still necessary to understand the factors that can lead to engagement in this consumption format. (Niinimäki et al., 2020).

The search for this understanding leads to exploration of the purchase intention which is defined by Shah et al., (2012) as a type of decision-making that investigates the motive behind customers' purchases of certain goods. For Ajzen (1991), purchase intention is the intensity of the inclination to actual behavior. Therefore, analyzing it involves investigating the reasons why consumers are willing to purchase certain goods (Shah et al., 2012). There may be several motivators behind this intensity (Croteau, Yan; Hyllegard, 2016). Therefore,

researchers are striving to understand them, especially with regard to the purchase of sustainable fashion (Testa et al., 2021).

Consumer purchase intention is considered an important variable in marketing research because it provides an estimate for the behavior of real purchase consumers (Zaharia et al., 2016). Related to sustainable fashion products is the likelihood of consumers giving preference to products that have sustainable characteristics over other conventional fashion products, generating positive “word of mouth” and the inclination to pay for the items (Kim, Jung; Lee, 2021).

Sustainability is one of the most discussed concepts in fashion in recent research (Rausch & Kopplin, 2021; Cherradi & Tetik, 2020; McNeill & Venter, 2019). Therefore, based on knowledge of the environmental problems caused by the fashion industry, consumers also begin to question fast *fashion with* increasing intensity and are less motivated to buy disposable fashion (Olivar Aponte et al., 2024).

In this context, sustainable fashion has been a continuing trend in the textile and apparel industry, where products are designed and produced with their environmental and social impact in mind. As a result, the demand for sustainable clothing has increased, highlighted by the shift in consumers' environmental awareness and beliefs (Khare & Sadachar, 2017). According to previous studies on the purchase intention of eco-friendly products, eco-conscious consumers exhibit significant purchase intentions (Rausch & Kopplin, 2021; Cherradi & Tetik, 2020; McNeill & Venter, 2019). These studies demonstrate the importance of investigating sustainable fashion purchase intention and its antecedents, such as environmental awareness.

2.2 Ecological awareness

Discussions about sustainability intensified in the 1970s, following a series of environmental crises that awakened the global population's focus on the future of the planet and their own existence (Seiffert, 2011). As a result, a society developed with a higher level of ecological awareness and knowledge of the impact of everyday purchasing decisions (Armenteros et al., 2020; Pekkanen et al., 2018). Ecological awareness refers to an effective consumer attribute and represents the individual's concerns, sense of responsibility, and involvement in environmental protection (Dunlap & Jones, 2002; Xiao & McCright, 2015).

Ecological awareness is based on the assumption that people perceive themselves as a central part of nature (Newton et al., 2015), and this belief in coexistence with the environment has an impact as a direct predictor of pro-environmental behaviors (Lee, Kim, Kim & Choi, 2014). In this context, researchers such as Roberts (1996) and Van Liere and Dunlap (1981) pointed out the potential relationship that could occur and studied this relationship between ecological awareness and the propensity to engage in environmentally responsible behaviors, followed by other more recent studies, such as those by Yadav and Pathak, (2017) and Trivedi, Patel and Acharya, (2018).

More specifically, Yadav and Pathak (2017) investigated the relationship between environmental awareness and the purchase of environmentally friendly products, which is a complex process in which consumers evaluate environmental attributes alongside other product attributes such as price, quality, performance, and availability. The results demonstrated that environmental awareness significantly and positively influences environmental attitudes, leading to the purchase of sustainable products (Yadav & Pathak, 2017).

Within the context of sustainable fashion consumption, Yoo (2018) investigated the influence of ecological awareness and fashion opinion leadership on the purchase intention of sustainable fashion products. The results revealed that ecological awareness positively influences the purchase intention of sustainable clothing. In the studies by Rausch & Kopplin (2021), these authors provide a holistic framework that determines the main antecedents of sustainable clothing purchase intention, with ecological awareness as one of the predictors. Therefore, the basic premises surrounding consumers' ecological awareness are that they care more about the environment, are more likely to engage in eco-conscious consumption behaviors, and are more likely to have strong purchase intentions for sustainable products (Kwong & Balaji, 2016; Park & Lin, 2018). From this perspective, it is conjectured that:

H1: Ecological awareness directly and positively influences the intention to purchase sustainable fashion.

2.3 Consumer Perceived Effectiveness

The perceived consumer effectiveness construct was first proposed by Kinnear, Taylor, and Ahmed (1974), who conceptualized EPC as a measure of the extent to which a person believes they can be effective in reducing pollution. EPC was originally considered a constituent of the attitude variable and was later shown to be a direct predictor of environmentally conscious consumer behavior (Berger & Corbin, 1992).

In a study aimed at bridging the gap between ecological awareness and environmentally sustainable behavior, Roberts (1996) identified, based on his results, that perceived consumer effectiveness is one of the crucial factors in explaining environmentally conscious consumer behavior. EPC captures stable beliefs about the effectiveness of consumer choices in general. This variable can, therefore, lead to behavioral changes in different domains.

Other studies (Ellen et al., 1991; Kang et al., 2013) have shown that EPC influences consumers' intentions to engage in sustainable consumption. In these studies, EPC represents an individual's perception of the effects or differences of their behavior on problem-solving (Ellen et al., 1991). In other words, EPC is a measure of individuals' judgments about individual consumers' ability to help minimize or reduce environmental problems (Roberts, 1996). The more consumers feel they can do something to reduce the impacts of consumption on the environment, the more they are likely to behave in a pro-environmental way (Roberts, 1996). EPC motivates consumers to reveal positive actions toward sustainable products through actual consumption behaviors (Vermeir & Verbeke, 2008).

In research (Vermeir & Verbeke, 2008; Webb et al., 2008; Teisl et al., 2008), it was observed that EPC directly affects environmentally sustainable consumption. Vermeir and Verbeke (2008) concluded that EPC is positively associated with consumers' willingness to purchase organic foods, and Webb et al. (2008) also found EPC to be a significant variable related to environmentally responsible behavior. Additionally, Teisl et al. (2008) verified the influence of EPC as a psychological characteristic that influences an individual's level of thinking about environmental information on products. They found that as consumers perceived their EPC and believed that others behaved more environmentally friendly than themselves, they accepted that product environmental information was important.

Perceived effectiveness is essential in reminding consumers to convert their positive actions into actual purchases (Ellen et al., 1991; Roberts, 1996; Vermeir & Verbeke, 2008). People with positive intentions for environmental consumption tend to support sustainable consumption behaviors more when they believe they can contribute to solving the environmental problem (Lee et al., 2014). Thus, the hypothesis is formulated:

H2a: Perceived effectiveness positively and directly influences the intention to purchase sustainable fashion.

Since EPC is a direct predictor of environmentally conscious consumer behavior (Vermeir & Verbeke, 2008), the literature also points out that environmentally conscious individuals are more likely to believe that their individual action can make a difference (Lee et al., 2014) and given that in certain contexts concern for environmental issues, that is, ecological awareness, is insufficient to stimulate individual consumer action that results in intentions to purchase sustainable products (Achabou et al., 2020; Kautish & Dash, 2017), it is possible to assume that EPC can exert a positive influence on ecological awareness. Previous research showed that consumers show more concern for the environment when they perceive that individuals can be effective in reducing environmental problems. Consequently, it is hypothesized that:

H2b: EPC positively and directly influences ecological awareness.

Perceived consumer effectiveness is important to encourage consumers to stimulate their positive intentions towards the environment (Roberts, 1996), among these intentions is the willingness to sacrifice.

2.4 Willingness to Sacrifice

The concept of sacrifice originated in religious studies and was later explored in various disciplines such as anthropology, sociology, psychology, and economics (Poorthuis et al., 2016). In the field of marketing, sacrifice began to be addressed in the 1980s, notably in the work of Dodds and Monroe (1985), who associated it with perceived price as the monetary cost necessary to acquire a good. From this point on, sacrifice also began to be understood as a rational choice, where the consumer forgoes a certain value (time, money, effort) in exchange for another that satisfies their needs.

Zeithaml (1988) expanded this conception by including non-monetary costs, such as time and effort, which are often more significant than monetary costs (Wang et al., 2004). Other studies have contributed by including emotional and learning costs (Beldona & Kher, 2014; Kumar & Reinartz, 2016), indicating that sacrifice can involve multiple dimensions: time, energy, effort, maintenance, and risk of failure (Koch & Sauerbronn, 2018; Bolton, Warlop & Alba, 2003; Ravald & Grönroos, 1996).

In this context, two widely accepted concepts emerge: sacrifice as a gift—the renunciation of immediate self-interest for the sake of relationships—and sacrifice as a rational choice—an economic trade-off (Silva & Farias, 2020). More recently, the approach to sacrifice as a transformative and relational act has gained prominence, especially with the contribution of Matear (2014), who understands it as a behavior that strengthens bonds between consumers and brands. This perspective presents sacrifice as a form of communion, expressing belonging and identification with a group or collective cause.

The willingness to sacrifice, in turn, refers to an individual's willingness to engage in behavior that entails personal losses for the benefit of a greater cause, such as environmental preservation. Loureiro (2011) emphasizes that focusing only on the negative aspects of sacrifice ignores its transformative potential. Although traditionally associated with losses, sacrifice can also represent a manifestation of affection and loyalty to a brand or consumption style (Loureiro, Dong-Mo & Breazeale, 2018), being voluntary and oriented toward symbolic or relational rewards (Silva & Farias, 2020).

Specifically, willingness to make environmental sacrifice refers to the degree to which an individual is willing to prioritize ecological well-being over immediate personal interests (Coy et al., 2013; Davis et al., 2011). This willingness reveals environmental commitment and directly influences the reduction of perceived barriers to sustainable behavior (Chen & Zheng, 2016). In this sense, it is a relevant psychological factor that affects pro-environmental consumption intentions (Han & Hyun, 2017; Rahman & Reynolds, 2016).

Empirical studies reinforce this relationship, as Rahman and Reynolds (2016) found that willingness to sacrifice significantly influences the intention to stay in eco-friendly hotels. Similarly, Han and Hyun (2017) demonstrated that, in museums, the greater the willingness to sacrifice, the greater the visitors' intention to adopt environmentally responsible behaviors.

Therefore, willingness to sacrifice, when understood as a voluntary expression of commitment to socio-environmental causes, can play an important role in sustainable consumption intentions. In the fashion context, this construct is particularly relevant, as sustainable products often require consumers to sacrifice convenience, status, or price in favor of ecological attributes. Thus, consumers willing to sacrifice tend to exhibit more favorable attitudes toward sustainable fashion. Therefore, the following hypothesis is derived:

H3: The willingness to sacrifice has a positive and direct impact on the intention to purchase sustainable fashion.

The sense of loss is considered one of the principles that most characterizes sacrifice (Gomes et al., 2017; Silva; Farias, 2020). According to the authors, before making a sacrifice, individuals likely go through the mental process of analyzing personal motives or evaluating the likely outcome of the act. In this context, the EPC, which is the individual's perception of the effects or differences of their behavior in solving environmental problems, can influence this process of analyzing the willingness to sacrifice as an act that will have greater benefits, such as contributing to solving the environmental problem through the purchase of sustainable fashion products. Thus, the following research hypothesis is reached:

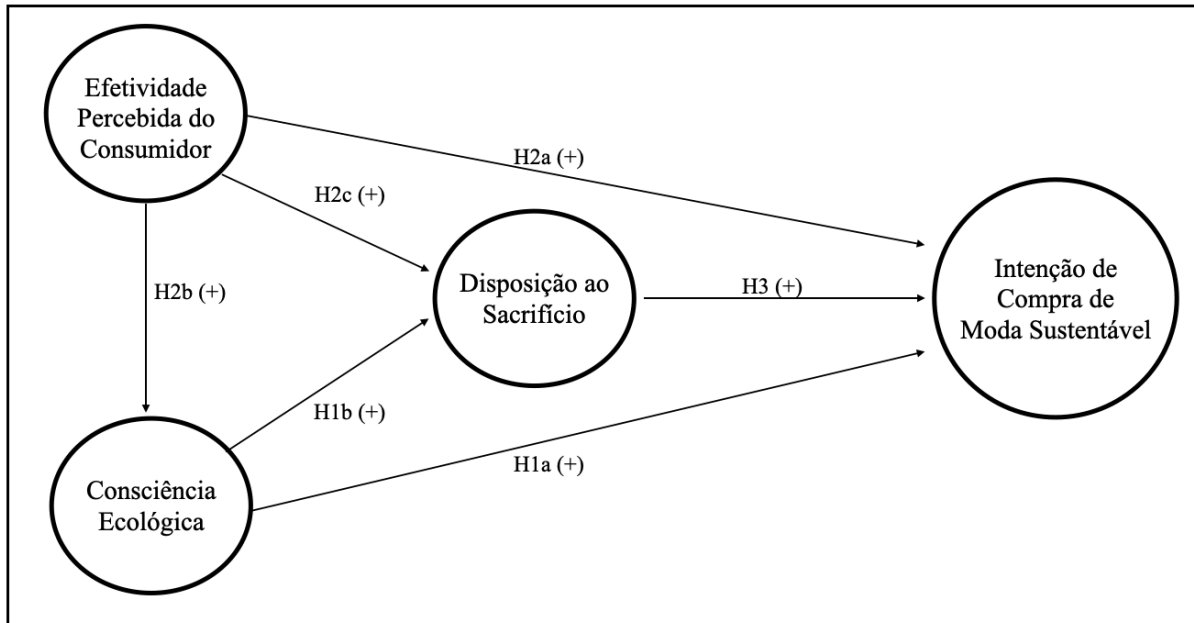
H2c: EPC positively and directly influences the willingness to sacrifice.

One perspective from which sacrifice can be understood is as a form of communion, seen as a symbolic communication of group identification, belonging, and collective concern that reinforces social norms and expectations. Considering that ecological consciousness involves the individual's concerns, sense of responsibility, and involvement in environmental protection (Dagher; Itani, 2014; Dunlap; Jones, 2002; Xiao; McCright, 2015) and that people perceive themselves as a central part of nature (Newton et al., 2015), it is possible to assume that ecological consciousness may lead individuals to a willingness to sacrifice for the environment. From this perspective, it is conjectured that:

H1b: Ecological awareness positively and directly influences the willingness to sacrifice.

Based on the research hypotheses, a theoretical model was developed (Figure 1)

Figure 1. Theoretical model



Font: prepared by the authors, 2025.

3. Methodological Procedures

The proposed objective is to analyze the influence of ecological awareness, perceived consumer effectiveness and willingness to sacrifice about the intention to purchase sustainable fashion. Therefore, to understand this phenomenon, a quantitative approach is used, understood as the one that best represents the proposal. By extension, it is guided by a conclusive research concept of a descriptive nature (Malhotra, 2012). It is also guided by a realist ontology and the positivist paradigm (Saccol, 2009). The target audience for this research is consumers over 18 years of age given that they supposedly have greater purchasing power and autonomy in their decisions and are interested in consuming sustainable fashion products.

Regarding the sampling technique, non-probabilistic sampling was used (Malhotra, 2012), adopting the snowball strategy —*snowball sampling*. Regarding sample size, in addition to adopting Hair et al.'s (2010) criterion of having the product of 5 in relation to the number of questionnaire items, G*Power was also used to calculate the minimum sample size, based on the parameters suggested by Ringle, Silva and Bido (2014): F test; *Linear multiple regression: Fixed model, R² deviation from zero; effect size $f^2 = 0.15$; $\alpha = 0.05$; power = 0.80; number of predictors = 3. After inserting the values, the software suggested a minimum sample size of 77. Following Ringle et al. (2014), double or triple the suggested value should be considered to increase sample power. Therefore, the sample must have at least 231 respondents.*

The data collection instrument was initially applied to a sample of 15 respondents, as suggested by Malhotra (2012), with a profile similar to that of the research target audience to eliminate potential problems, such as the lack of clarity of the assertions, due to the questions having been adapted to Portuguese. This phase was carried out in *on-line*, being the tool used to structure the instrument, Google *Forms*. Respondents suggested improvements to the presentation of construct concepts at the beginning of each section and indicated adjustments to be made to the wording of the assertions to avoid comprehension problems. *feedbacks* were

analyzed and then adjustments were made. Since the instrument underwent some changes, the participants from the pre-test phase did not make up the final sample.

The final collection data were obtained between the months of September and November 2021, through *survey on-line*, through the *Google Forms* disseminated through the following social media: Facebook, Instagram, and WhatsApp. The data collection instrument has four parts, the first three of which are composed of scales previously used in studies on the topic (see Table 1), namely: ecological awareness, the scale of Dunlap et al. (2000) was used, translated according to Silva Filho and Dinato, (2003); consumer perceived effectiveness was used and translated into the scale proposed by Roberts (1996); willingness to sacrifice was measured by the translated scale developed by Rahman and Reynolds (2016), and intention to buy sustainable fashion, adapted from Nguyen, Hung Nguyen and Hoang (2018)).

It should be noted that in the second part of the questionnaire a question was inserted to prevent errors in filling out the questionnaire due to the lack of reading by those investigated. Therefore, respondents were asked to mark 3 on the scale to indicate that they were reading the questionnaire carefully. Finally, questions about the respondents' demographic profiles included gender, education level, marital status, age, average family income, number of residents in the household, and state of residence. Finally, it should be noted that the constructs were measured using a 7-point multi-item Likert-type scale.

Table 1. Measurement scales action of constructs

Construct	Items	Code
Ecological awareness (Dunlap et al., 2000, translated according to Silva Filho & Dinato, 2003)	Q1. Humans do NOT have the right to modify the natural environment to meet their needs.	CE1
	Q2. The Earth has riches in natural sources, we just have to learn how to develop them.	CE2
	Q3. When humans interfere with nature, it often has disastrous consequences.	CE3
	Q4. Human ingenuity will ensure that we make the earth uninhabitable.	CE4
	Q5. We are approaching the number of people the Earth can support.	CE5
	Q6. Plants and animals have as much right to exist as human beings.	CE6
	Q7. The natural balance is NOT stable enough to absorb the impacts of modern industrial nations.	CE7
	Q8. Despite our special abilities, human beings remain subject to the laws of nature.	CE8
	Q9. The so-called "Ecological Crisis" facing humanity has NOT been greatly exaggerated.	CE9
	Q10. The Earth is like a spaceship with very limited spaces and sources.	CE10
	Q11. Humans were NOT made to reign over the rest of nature.	CE11
	Q12. The natural balance is very delicate and easily upset.	CE12
	Q13. Humans will NOT learn enough about how nature works to be able to control it.	CE13

	Q14. If things continue on their current course, we will soon experience a major ecological catastrophe.	CE14
	Q15. Humans are severely abusing the environment.	CE15
Perceived effectiveness by the consumer (translated from Roberts, 1996)	Q16. It is meaningful for the consumer to do anything to reduce pollution.	EPC1
	Q17. When I buy products, I try to consider how my use of them will affect the environment and other consumers.	EPC2
	Q18. Since every action has an impact on pollution and natural resource problems, my actions make a difference.	EPC3
	Q19. Through my personal choices, I can contribute to solving environmental problems.	EPC4
Willingness to sacrifice for the environment (translated from Rahman& Raynolds, 2016)	Q20. I am willing to give up what I enjoy doing if it harms the natural environment.	DS1
	Q21. I am willing to take on responsibilities that will help conserve the natural environment.	DS2
	Q22. I am willing to do things for the environment, even if I am not thanked for my efforts.	DS3
	Q23. Even when it is inconvenient for me, I am willing to do what I think is best for the environment.	DS4
	Q24. I am willing to make the effort for what is best for the environment.	DS5
Sustainable purchasing intention (translated from Nguyen et al., 2018).	Q25. I intend to buy sustainable fashion in the next 30 days.	INT1
	Q26. I am willing to consider switching to other fashion brands for sustainable reasons.	INT2
	Q27. I am willing to pay more for fashion that is sustainable or helps protect the environment.	INT3
	Q28. I will consider purchasing sustainable clothing because it is less polluting.	INT4

Font: prepared by the authors, 2025.

The data from this research were analyzed using both descriptive and inferential statistics. The former served to analyze the demographic profile of the sample and general observation of the responses. The latter, in turn, allowed us to test the hypotheses proposed here, which were analyzed through partial least squares structural equation modeling. *software* SmartPLS (version 3.3.3), since the normal distribution of the data is not imposed and more complex models can be evaluated reliably with a smaller sample size (Hair et al., 2013; Ringle et al., 2014).

4. Results

4.1 Sample Profile

A total of 409 participants were obtained during the data collection period. However, 47 responses were eliminated because they selected another option on the scale for a question about their attentiveness when reading the collection instrument. Furthermore, we analyzed

whether there were atypical cases in the database, evaluating the percentage of similar responses for each respondent. The percentages remained below 80%, so it was not necessary to exclude any other participants. Therefore, the final sample consisted of 362 individuals, 76.2% female and 23.2% male and 0.6% identified with other genders. Regarding marital status, the study sample was mostly single, as they represented 53.2% of the total. This result was followed by married/stable union individuals (42.6%), divorced/separated (3.1%), and widowed individuals (1.1%). The predominant level of education was high school diploma (40.1%), followed by higher education diploma (34%), *stricto sensu* postgraduate degree (15.2%), *lato sensu* postgraduate degree (8.8%), and elementary education diploma (1.7%).

4.2 Common Method Bias

The independent and dependent variables in this study were collected using a self-administered instrument in a single cross-sectional study, i.e., they were collected simultaneously. Therefore, it is necessary to check for common method bias (CMB) in the proposed model (Podsakoff et al., 2003). Therefore, three models without relationships between the independent variables were tested to check the Variance Inflation Factor (VIF), which cannot be greater than 3.3, as this would indicate that the model is contaminated by CMB (Kock, 2015). To this end, three stages of checking were carried out using the consistent PLS (PLSc) algorithm with an internal weighting scheme *factor*. The steps resulted in VIFs of 1.00, 1.40, 1.76, and 1.56. Therefore, since these values are below 3.3, it indicates that the model is free from the common bias of the method.

4.3 Analysis of the Measurement Model

The first stages of model evaluation consisted of analyzing the convergent and discriminant validity, internal consistency, and factor loadings of the items, as recommended by Hair et al. (2013). This process was carried out in SmartPLS (version 3.3.3) and the internal weighting scheme selected for this stage was *factor* in the PLS-SEM algorithm, since we initially sought to evaluate the relationships between latent variables as correlations. First, the reliability of the constructs was assessed using composite reliability (Fornell & Lacker, 1981). The parameter used to check reliability at the latent variable level was above 0.7 for both composite reliability and Cronbach's alpha (Hair et al., 2013). The calculation of the average variance extracted (AVE) was also used, adopting a parameter greater than 0.5. According to these parameters, all constructs present internal consistency and convergent validity (see Table 1).

Table 1. Cronbach's Alpha, Composite Reliability, and AVE

	Cronbach's alpha	Composite Reliability	AVE
Ecological Awareness	0,802	0,859	0,510
Willingness to Sacrifice	0,894	0,922	0,704

Consumer Perceived Effectiveness	0,700	0,824	0,610
Intention to Buy Sustainable Fashion	0,851	0,900	0,694

Source: prepared by the author, 2025.

After assessing convergent validity, discriminant validity analysis was conducted to check whether the constructs were in fact independent. Therefore, the cross-loadings of the observed variables and the Fornell and Larcker (1981) criterion were observed. The items of the constructs do not present high cross-loadings (Table 2) and their factor loadings are higher within the construct, conferring discriminant validity to the measures (Chin, 1998).

Table 2. Cross-loading of items

	Ecological Awareness	Willingness to sacrifice	Consumer Perceived Effectiveness	Intention to Buy Sustainable Fashion
CE15	0,822	0,427	0,441	0,362
CE14	0,833	0,480	0,498	0,342
CE9	0,770	0,392	0,402	0,366
CE6	0,677	0,443	0,352	0,365
CE5	0,540	0,217	0,264	0,297
CE4	0,590	0,279	0,294	0,295
DIS1	0,417	0,796	0,492	0,508
DIS1	0,450	0,857	0,471	0,473
DIS1	0,397	0,800	0,490	0,500
DIS4	0,497	0,859	0,491	0,519
DIS5	0,487	0,880	0,577	0,561
EPC2	0,331	0,491	0,731	0,446
EPC3	0,404	0,442	0,802	0,395
EPC4	0,514	0,478	0,808	0,395
INT1	0,327	0,440	0,339	0,720
INT2	0,491	0,592	0,496	0,885
INT3	0,346	0,503	0,435	0,843
INT4	0,389	0,489	0,470	0,873

Note¹: all factor loadings are significant ($p < 0,01$).

Note²: CE: ecological awareness; DIS: Willingness to sacrifice; EPC: consumer perceived effectiveness; INT: Intention to Buy Sustainable Fashion.

Source: prepared by the author, 2025.

As mentioned above, not only discriminant validity was assessed at the item level, but also at the latent variable level. Thus, the Fornell-Larcker matrix was used, in which it can be observed that the square root values of the AVE (expressed diagonally) are greater than the correlations between the constructs (see Table 3), indicating that there is discriminant validity (Fornell & Larcker, 1981).

Table 3. Fornell-Larcker Matrix

	1	2	3	4
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Ecological Awareness (1)	0,740			
Willingness to Sacrifice (2)	0,538	0,839		
Consumer Perceived Effectiveness (3)	0,537	0,603	0,781	
Intention to Purchase Sustainable Fashion (3)	0,472	0,612	0,528	0,833

Note¹: Values on the diagonal, in bold, represent the square root of the AVE and below the diagonal are the Pearson correlations.

Note²: All correlations are significant ($p < 0,01$).

Font: prepared by the authors, 2025.

4.4 Analysis of the Structural Model

The first stage of evaluating the structural model consisted of analyzing the Variance Inflation Factor (VIF) to check for multicollinearity problems. The values obtained for the VIF are less than 5, indicating that the next steps can be followed (Hair et al., 2013). Therefore, the second stage was conducted, which consisted of evaluating the path coefficients (*path coefficients*) for each relationship hypothesized in the model. The statistical significance of the structural path coefficients, in turn, was determined through the process of bootstrapping, considering 5,000 subsamples, bias-corrected confidence level, significance level of 0.05 and two-tailed tests, as recommended by Kock (2015).

In a later stage, the coefficient of determination (R^2) was calculated to assess the predictive power of the model, since it allows verifying the variance of the endogenous constructs (partially dependent on the model) explained by the exogenous (independent) constructs related to them (Loehlin, 1998). It should be noted, however, that as the R^2 value increases with the addition of non-significant but correlated constructs to the model, we chose to evaluate the adjusted R^2 to avoid bias in the interpretation of the predictive power (Hair et al., 2013). The Q values were also calculated², which being greater than zero indicate that exogenous constructs have predictive relevance in relation to the endogenous construct under consideration (Hair et al., 2013), which was found in all constructs. The reference values for predictive validity: above 0 = small; 0.25 = medium; and 0.50 = large. It is observed that the Ecological Awareness construct was the only one that presented a predictive relevance value considered small (0.130). Values off² of 0.02, 0.15, and 0.35 are interpreted as small, medium, and large effects, respectively (Hair Jr et al., 2014). Analyzing the values obtained, it is observed that the constructs present medium-sized effects (Ecological awareness and Consumer perceived effectiveness) and large effects (Willingness to sacrifice) in explaining the endogenous construct Sustainable Fashion Purchase Intention. In particular, when analyzing the Willingness to sacrifice construct, it is found that it has a greater effect than the other two constructs on Sustainable Fashion Purchase Intention.

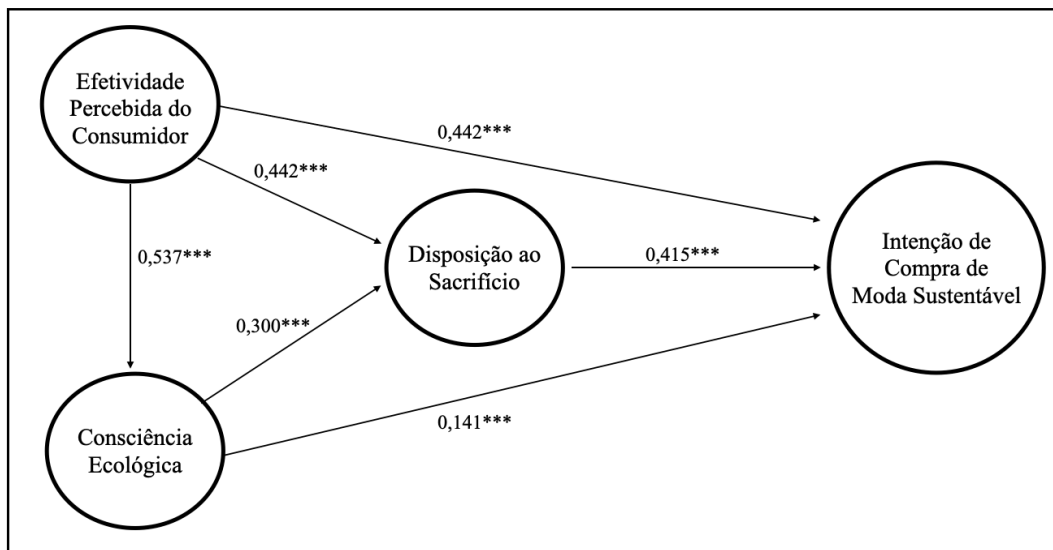
Finally, the testing of the hypotheses formulated in the model is done by jointly analyzing the size and statistical significance of the path coefficients, as shown in table 4 and also in figure 2.

Table 4. Hypothesis testing

Hypotheses	Path coefficient	<i>t-value</i>	<i>p-value</i>	Status
H1a(+): CE -> INT	0,141	2,514	0,012	SUPPORTED
H1b(+): CE -> DIS	0,300	4,420	0,000	SUPPORTED
H2a(+): EPC -> INT	0,202	2,808	0,005	SUPPORTED
H2b(+): EPC -> CE	0,537	7,000	0,000	SUPPORTED
H2c(+): EPC -> DIS	0,442	8,026	0,000	SUPPORTED
H3(+): DIS -> INT	0,415	6,954	0,000	SUPPORTED

Note¹: CE: Ecological awareness; DIS: Willingness to sacrifice; EPC: Consumer perceived effectiveness; INT: Intention to purchase sustainable fashion. Note²: $p < 0,05$
 Font: prepared by the authors, 2025.

Figure 2. Theoretical Model with Coefficients



Note: ***direct effect

Font: prepared by the authors, 2025.

5. Discussion of Results

The first hypothesis of this study (H1a), which proposes a direct and positive relationship between environmental awareness and sustainable fashion purchase intention, was statistically confirmed ($p < 0.05$). This result indicates that individuals, when more aware of the environmental impacts of their consumption decisions, tend to develop a more favorable intention to purchase sustainable fashion products. These findings are consistent with previous research that identifies environmental awareness as a strong predictor of sustainable product purchase intention (Rizkalla & Erhan, 2020; Prakash & Pathak, 2017; Rausch & Kopplin, 2021).

The literature suggests that environmentally conscious consumers tend to value sustainable policies and practices, preferring products with a lower environmental impact, produced with natural and local raw materials, and labeled as eco-friendly (Murgado-Armenteros et al., 2020; Moscato & Machin, 2018; Kang & Hustvedt, 2014).

These characteristics are fundamental to the principles of sustainable fashion, making environmental awareness a relevant factor in the purchasing decision-making process.

Hypothesis H1b, which suggests a positive influence of ecological awareness on willingness to sacrifice, was also confirmed ($p < 0.05$). This finding is in line with studies that indicate that environmentally conscious consumers tend to forgo personal interests, such as convenience and cost, in the name of collective benefits (Davis et al., 2011; Rahman & Reynolds, 2016; Loureiro et al., 2018). From this perspective, biospheric values guide pro-environmental behavior, generating a greater willingness to face barriers associated with sustainable consumption, such as high prices, difficult access, and distrust of product quality (Silva, Wang & Kuah, 2021).

The three hypotheses related to perceived consumer effectiveness (PEC) were also confirmed, reinforcing its central role in pro-sustainable behavior. H2a, which states that PCE positively influences sustainable fashion purchase intentions, was supported by studies demonstrating that when consumers believe in the effectiveness of their actions, their willingness to adopt sustainable consumption practices increases (Nguyen, Nguyen & Hoang, 2018; Tan & Lau, 2011; Jung et al., 2021). PCE thus appears as a key psychological factor, strengthening the perception that individual choices have a significant impact on environmental preservation (Kautish et al., 2019; Park & Lin, 2018).

The second hypothesis of this construct (H2b) indicates that EPC directly influences ecological awareness, and it was also confirmed. This corroborates studies showing that consumers who believe in the effectiveness of their actions are more likely to develop behaviors aligned with ecological concerns (Miniero et al., 2014; Heo & Muralidharan, 2017). In this sense, the belief that one's consumption choices contribute to social and environmental well-being strengthens ecological awareness, making it more internalized and active.

The third hypothesis (H2c) demonstrated that EPC also positively influences willingness to sacrifice. Although there is little direct research on this relationship, indirect evidence suggests that perceived personal efficacy is related to the willingness to sacrifice conveniences for environmental goals (Oreg & Katz-Gerro, 2006; Perry & Chung, 2019). These data indicate that, when consumers perceive clear environmental benefits, they become more motivated to adopt sacrificial attitudes, such as paying more, spending more time, or making more effort to purchase sustainable products.

Hypothesis H3, in turn, indicates that willingness to sacrifice directly influences the intention to purchase sustainable fashion, and is statistically confirmed. The data corroborate studies that have identified willingness to sacrifice as a determining factor for pro-environmental behavior and engagement in sustainable consumption practices (Lee & Huang, 2020; Kenny, 2019; Chung et al., 2019; Di Falco & Sharma, 2018). These studies show that consumers willing to sacrifice convenience for the sake of the environment demonstrate greater engagement with environmental causes.

Authors such as McNeill and Moore (2015) identify this behavior among "sacrificing" consumers, who seek to minimize their environmental impact even if it requires additional efforts. Carrington, Neville, and Whitwell (2012) emphasize that such consumers consider ethical, spiritual, and political aspects in their choices, demonstrating a consumption orientation strongly linked to values. This behavior is especially noticeable among young consumers, such as those in this study's sample, as pointed out by McNeill and Venter (2019) and Cherradi and Tetik (2020), who highlight that this age group is particularly sensitive to sustainability issues and more likely to develop attitudes and behaviors aligned with conscious consumption.

6. Conclusions and Final Considerations

This study aimed to understand the factors that influence sustainable fashion purchase intentions among sustainable fashion consumers, focusing on ecological awareness, perceived consumer effectiveness (PEC), and willingness to sacrifice. The results revealed that both ecological awareness and PEC positively impact purchase intentions and directly influence willingness to sacrifice, demonstrating that consumers are willing to sacrifice for the sake of environmental and social sustainability through sustainable fashion consumption.

Unlike previous approaches that treat sacrifice negatively in marketing, this work highlights the beneficial role of willingness to sacrifice as a facilitator of conscious consumption. Willingness to sacrifice emerges as an important link between ecological awareness and sustainable consumption behavior, suggesting that consumers value the environmental and emotional benefits associated with sustainable consumption more than the personal costs involved.

EPC has also been shown to be a relevant antecedent factor, influencing ecological awareness and willingness to sacrifice, a relationship still little explored in the literature (Neumann, Martinez & Martinez, 2020; Kang et al., 2013). This reinforces the importance of EPC as a strategic variable in inducing sustainable behaviors, opening up new research possibilities in different contexts and product categories.

Furthermore, ecological awareness was confirmed as a central variable in predicting both willingness to sacrifice and intention to purchase sustainable fashion, which helps to reduce the gap identified between conscious consumption attitudes and actions (Joshi & Rahman, 2015). Thus, the results reinforce the role of ecological awareness as an instrument of behavioral transformation and a strategic tool for sustainable marketing.

From a theoretical perspective, this study offers original contributions by integrating variables previously unrelated to the context of sustainable fashion. Analyzing willingness to sacrifice from a positive perspective, in conjunction with EPC and ecological awareness, fills important theoretical gaps, particularly by addressing the relationship between intention and sustainable consumption behavior, which still requires further exploration. The proposed model is unprecedented in national and international literature and can inform future research based on complementary constructs, such as product involvement, subjective norms, and status.

From a practical perspective, the findings offer valuable insights for companies in the sustainable fashion sector, enabling more targeted segmentation, communication, and product development strategies based on the profile of consumers willing to sacrifice. Although the research has methodological limitations, such as non-probability sampling and the context restricted to the pandemic, these do not compromise the validity of the findings and pave the way for future longitudinal and comparative research across different cultural and market realities.

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