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Competitive Positioning in Portugal's Textile and Apparel Industry: can Consumer Environmental Consciousness support a differentiation strategy

Iúri José Sousa Gama

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Competitive Positioning in Portugal's Textile and Apparel Industry: can Consumer Environmental Consciousness support a differentiation strategy

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Iúri José Sousa Gama

Under supervision of

(PhD) Luís Francisco de Gouveia Durão Pina Rebelo
Universidade Católica do Porto, Católica do Porto Business School

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Resumo

Esta dissertação investiga o papel da consciência ambiental do consumidor no apoio a uma estratégia de diferenciação na indústria têxtil e do vestuário em Portugal. O estudo utiliza um questionário estruturado de Kumar et al. (2021),ao qual se obtiveram 276 respostas. As principais conclusões indicam que a consciência ambiental, atitude, normas subjetivas e disposição para pagar afeta significativamente as intenções de compra de produtos sustentáveis. A pesquisa destaca o potencial para as empresas aproveitarem os valores ambientais para se diferenciar e ganhar uma vantagem competitiva, respondendo a uma crescente procura de mercado por vestuário e têxtil sustentável. O estudo proporciona contributos valiosos para as PMEs Portuguesas, na indústria têxtil e do vestuário, enfatizando a importância de alinhar as estratégias de negócios com valores ecológicos para melhorar o posicionamento no mercado.

Palavras-chave: Consciência Ambiental, Intenção de Compra, Vestuário Sustentável, Indústria Têxtil.

Abstract

This dissertation studies the role of consumer environmental consciousness in supporting a differentiation strategy in the textile and apparel industry in Portugal. The study utilizes a structured questionnaire by Kumar et al. (2021), for which 276 responses were obtained, focusing on young and literate adults. The main findings indicate that environmental consciousness, attitude, subjective norms, and willingness to pay significantly affect purchase intentions for sustainable products. The research highlights the potential for companies to leverage environmental values to differentiate themselves and gain a competitive advantage, responding to a growing market demand for sustainable apparel and textiles. The study provides valuable insights for SMEs in the Portuguese textile and apparel industry, emphasizing the importance of aligning business strategies with ecological values to improve market positioning.

Keywords: Environmental Consciousness, Purchase Intention, Sustainable Apparel, Apparel and Textile Industry.

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Introduction

Portuguese textile and apparel industry is representative of 8 thousand million euros in turnover (Banco de Portugal, 2021) and 122 thousand employees. The number of Portuguese companies in the textile and apparel industry is 6375. The indicated 6375 companies are represented by 60,64% micro, 30,45% small, 8,25% medium and only 0,64% are big companies.

Portugal is known to be a competitive market regarding the textile and apparel industry in which the strategic positions can be based on customer's needs, customer's accessibility, or the variety of a company's products (Porter, 1996) however, this competitive advantage can erode not only because imitation undermines the uniqueness of resources, but also because consumer valuation of firm differences declines due to the effects of decreasing marginal utility (Adner & Zemsky, 2006). In order to mitigate these risks companies must gain attributes that can be directed at meeting the customers' functional needs (Sheehan & Bruni-Bossio, 2015), one of these needs comes from increase in global consumer awareness concerning environmental protection. Individuals are now aware of environmental harm stemming from materials used in daily products. Various industries are placing greater emphasis on aspects such as packaging materials, pesticide usage, and waste management.

This environmental awareness has led to a shift in the vision of many companies towards eco-friendly practices. Companies are now incorporating ecological considerations into their production strategies and daily operations, encompassing areas like waste management (Notarnicola et al., 2012). This

behavior has particularly impacted certain sectors, with the fast-moving consumer goods industry, manufacturing, textile and apparel industries spreading the adoption of ethical production processes to mitigate environmental consequences.

Therefore, my research question is to examine how environmental consumer choices underly Portuguese buying intentions. More specific the objectives of this research will be:

Research Question 1: Does consumer awareness concerning environmental protection affect buying intentions of the Portuguese apparel consumer?

- H1. Consumers' intentions to purchase fair trade products are positively influenced by the construct "Attitude".
- H2.Consumers' intentions to purchase fair trade products are positively influenced by the construct "Subjective Norms".
- H3. Consumers' intentions to purchase fair trade products are positively influenced by the construct "Perceived Behavior Control".
- H4. Consumers' intentions to purchase fair trade products are positively influenced by the construct "Willingness to Pay"
- H5. Consumers' intentions to purchase fair trade products are positively influenced by the construct "Environmental Consciousness"

Research Question 2: Is there a market for environmental responsible textile and apparel in Portugal?

In order to answer these questions a structured questionnaire from Kumar et al. (2021) has been conducted to a sample of 276, with 19 quantitative questions about the consumers' behavior and intentions regarding sustainable apparel.

In chapter 2 an explanation regarding the methodology is presented.

In chapter 3, a clarification regarding the collection and analyses of data is made. Based on the findings of this research greater understanding is provided on the perception of consumers towards environmentally sustainable apparel for decision making among SME's in the textile and apparel industry in Portugal contributing with valuable knowledge and conception for future research.

Chapter 1: Literature Review

1.1. Textile and Apparel Industry

The textile and apparel industry is a dynamic sector encompassing the design, manufacturing, and distribution of clothing and textile products. It plays an important role in global commerce and fashion, serving as a key contributor to the economies of various countries (Puig et al., 2009). This industry operates at the intersection of art, technology, and commerce, catering to the diverse preferences of consumers worldwide.

The clothing industry is traditionally characterized by its strong dependence on labor with low wage costs.

The industry is characterized by its wide range of products, including clothing, accessories, and textiles used in various applications. It is marked by a complex and often global supply chain that involves sourcing raw materials, textile manufacturing, garment production, and distribution to end consumers. Over the years, the industry has witnessed substantial transformations due to globalization, technological advancements, sustainability concerns, and shifts in consumer preferences (Puig et al., 2009).

1.2. Environmental Sustainability in Textile and Apparel Industry

Environmental sustainability has been a concept refined over time, integrating diverse disciplinary perspectives to enhance our understanding and application of sustainable practices. Morelli (2011) highlights the essential nature of defining environmental sustainability, advocating for an interpretation that aligns closely with the ecological concept.

In examining sustainable business practices, Boons et al. (2013) emphasize the role of innovative business models in achieving environmental sustainability. They argue that "sustainable innovation requires radical and systemic innovations" which can be facilitated by business models that integrate economic, ecological, and social value creation (Boons et al., 2013).

This is evident in specific industries, such as textiles and apparel, where circular economy models have been adopted to promote sustainability. Muthu (2020) analysis of the textile industry shows how adopting circular economy principles significantly mitigates environmental impacts. He illustrates this through examples of "recycling, reuse, and lifecycle management" that enhance resource efficiency and reduce waste (Muthu, 2020).

Similarly, urban planning plays an important role in integrating sustainable practices. Vallance et al. (2011) discuss how urban planning can contribute to environmental sustainability by emphasizing "integrated planning strategies that prioritize ecological integrity and social welfare" (Vallance et al., 2011).Their work underscores the necessity of incorporating sustainability into the planning and development to ensure the long-term viability of urban environments.

Environmental sustainability in the textile and apparel industry is a critical issue given its extensive impacts on global pollution and resource utilization. The industry faces significant challenges at every stage of production, from raw material cultivation to the disposal of finished goods. As noted by Gbolarumi et al. (2021), the industry is marked by substantial water usage, heavy chemical loads, high energy consumption, and significant waste generation, which negatively affect ecosystems and human health.

In discussing sustainability challenges within the textile sector, Boström & Micheletti (2016) highlight the importance of various actors, including businesses, consumers, and policymakers. They argue that technological solutions can address some issues, but more substantive shifts require changes in the values associated with production and consumption habits.

Gbolarumi et al. (2021) discuss the need for companies to adopt sustainable manufacturing practices not only to mitigate environmental impacts but also to enhance their market competitiveness and respond to increasing consumer demand for sustainable products. Boström & Micheletti (2016) suggest that developing effective communication strategies and ensuring more accountable corporate practices are essential for fostering consumer trust and encouraging sustainable purchasing behaviors.

1.3. Consumers Sustainable Purchasing

Understanding consumer behavior in relation to environmental sustainability involves psychological and demographic aspects.

Nguyen & Johnson (2020) emphasize the role of multiple motives and determinants that affect environmentally sustainable behavior, including internal beliefs, social influences, and external circumstances. These factors vary significantly across different national and consumer contexts, suggesting that sustainable behaviors are deeply embedded in cultural and demographic frameworks. This aligns with findings from McDonald & Oates (2006) who explore consumer perceptions regarding the effort and impact of sustainable practices. They suggest that understanding these perceptions can help marketers design strategies that resonate more effectively with consumer motivations, potentially enhancing engagement with sustainable practices.

Moreover, the psychological consumer decisions, as discussed by Trudel (2019) reveal that identity, values, and social norms play crucial roles in shaping sustainable consumer behavior. This psychological dimension is critical as it influences whether consumers perceive their actions as effective in contributing to environmental sustainability. Such perceptions are often influenced not just by knowledge but by the extent to which individuals believe that their behavior makes a difference, a concept known as perceived consumer effectiveness.

This psychological aspect is echoed in the real-world impacts of the COVID-19 pandemic, as noted in the survey by Granskog et al. (2020). During the pandemic, consumers displayed a heightened awareness and engagement with sustainability, driven by a broader societal shift towards recognizing the environmental and social impacts of individual and collective consumption. This

period saw an increase in consumer actions aimed at reducing environmental footprints, such as recycling and choosing products with sustainable packaging, reflecting a significant shift in consumer behavior towards sustainability.

The relationship between awareness, personal identity, societal norms, and perceived effectiveness thus forms a complex understanding in which consumer behavior towards sustainability unfolds. For businesses and policymakers, this means that effective strategies must not only educate and inform but also align with deeper psychological motivations and broader societal values to truly resonate with consumers and encourage sustainable practices.

1.4. Environmental Sensibility in Young and Literate Consumers

Environmental sensibility in younger individuals with higher literacy levels reflect a more active play in environmental issues, as detailed in the studies by Goldman et al. (2017). These young individuals demonstrate an understanding of environmental challenges and show a high level of self-efficacy, believing in their ability to effect change within their communities (Goldman et al., 2017).

These young activists often view themselves as capable role models and are willing to integrate environmentally supportive activities into their broader social activities, indicating a readiness to extend their activism into environmental spheres.

The environmental literacy of these youth, as they function in leadership and educational roles, suggests that integrating environmental education into youth movements and other non-formal educational settings can be highly effective. This approach can harness their existing skills and leadership potential to promote environmental sustainability more broadly. By fostering an environment where young people are not only informed but also actively engaged in environmental advocacy and sustainability practices, there is a significant potential to influence broader societal attitudes towards the environment.

In the case of Portugal with the integration of Environmental Education in schools a transition from environmental activism to formal educational practices (Schmidt & Guerra, 2013).

Additionally, Schmidt & Guerra (2013) identify a recurring emphasis on ecological issues at the expense of civic and socio-economic topics, which are equally vital for sustainability indicating environmental education initiatives largely focus on traditional themes such as urban solid waste management and nature conservation (Schmidt & Guerra, 2013).

1.5. Attitude and Green Apparels

Within the framework of the Theory of Planned Behavior (TPB), attitude emerges as a determinant, exerting considerable influence on the prediction of behavioral intentions, particularly in the context of green apparel purchases.

Scholarly inquiries spanning various countries have consistently accentuated the significance of attitude in shaping consumer behavior (Murphy & Dweck, 2016),(Rucker et al., 2012) especially among those individuals deeply attuned to

environmental concerns. These studies collectively reinforce the notion that individuals' attitudes toward sustainable practices impact their purchasing decisions. This is particularly relevant in the context of the global shift towards sustainable and eco-friendly consumption patterns.

In the specific context of Portugal, where sustainability has been gaining increasing traction (Aleixo et al., 2018), understanding the dynamics of consumers' attitudes towards eco-friendly apparel becomes imperative. As Portuguese society becomes more environmentally conscious, (De Carvalho et al., 2015) it is crucial to explore how attitudes shape consumers' intentions to embrace sustainable apparel choices.

Building upon this foundation, the hypothesis (H1) posits that attitude significantly influences consumers' purchasing intentions towards eco-friendly apparel.

1.6. Subjective Norms and Green Apparels

Subjective norms highlight the significant role that society and family play in influencing purchasing decisions (Witt & Bruce, 1970). Cowan & Kinley (2014) explore the impact of societal pressures on consumer choices, emphasizing how subjective norms guide individuals towards making environmentally conscious decisions. They point out that societal expectations can strongly influence consumers to choose eco-friendly options.

Liobikiene et al. (2016) contribute to this understanding by examining the determinants of green purchasing behavior across various EU countries. Their

study shows that societal pressures and the expectations of others are crucial motivators for consumers to engage in sustainable consumption. In the context of green apparel, these findings suggest that consumers are likely influenced by the perceived approval of family, friends, and society when making environmentally friendly purchasing decisions.

In this cultural context, it is suggested that subjective norms significantly affect a consumer's intention to purchase eco-friendly apparel (H2). Liobikiene et al. (2016) further indicate that the combination of knowledge and confidence in green products enhances the influence of subjective norms. Well-informed consumers who trust the efficacy of green products are more likely to be swayed by societal expectations.

As consumers chose amid familial, societal, and peer expectations, understanding the dynamics of subjective norms is essential for elucidating the factors driving sustainable consumer behavior.

1.7. Perceived Behavioral Control (PBC)

Within the theoretical framework of the Theory of Planned Behavior (TPB), Perceived Behavioral Control (PBC) emerges as a construct, influences and predicts purchase intentions (Ajzen, 2002). PBC centers around an individual's beliefs concerning their control over executing a specific behavior, and in the context of sustainable consumer choices.

Studies of green consumer behavior Jansson et al. (2010) and Straughan & Roberts (1999) highlight the important role that PBC plays in molding individuals' decisions to opt for eco-friendly products, emphasizing that

consumers who feel confident in their ability to incorporate environmentally friendly practices into their lifestyle are more likely to exhibit positive purchase intentions (Lu et al., 2015).

Drawing upon these insights, it is suggested that Perceived Behavioral Control significantly influences consumers' purchase intentions towards eco-friendly apparels in the Portuguese context (H3). As consumers take their choices, the connection between perceived control and sustainable behavior becomes a dynamic force that shapes the evolving landscape of green consumerism.

1.8. Willingness to Pay (WTP) and Green Purchase Intention

In the realm of consumer decision-making, the pricing of green products plays a pivotal role in shaping preferences and purchase intentions. The concept of Willingness to Pay (WTP) (Hanemann, 1991), which represents the maximum amount a buyer is willing to spend on a product, has significant implications for sustainable consumer behavior. As consumers balance environmental awareness with economic factors, understanding WTP becomes crucial.

Studies have consistently highlighted the importance of pricing in determining consumers' willingness to adopt green products (Michaud & Llerena, 2011). These studies reveal that individuals who prioritize environmental factors in their purchasing decisions tend to have a higher WTP for eco-friendly products, indicating that consumers increasingly use their purchasing power to support sustainable practices.

Harms & Linton (2016) expand on this by demonstrating that WTP for eco-certified refurbished products is notably higher than for non-certified refurbished products. Their research shows that eco-certification acts as a reliable indicator of lower environmental impact and better quality, thereby increasing consumer utility and their willingness to pay a premium. This is especially relevant in Europe, where environmental awareness and support for eco-labels are stronger.

The European perspective on green purchasing behavior shows a strong correlation between pro-environmental attitudes and higher WTP for eco-friendly products. Harms & Linton (2016) study in the Netherlands, where consumers are known for their environmental concern and thriftiness, reveals that Dutch consumers are willing to pay more for eco-certified products. This trend is indicative of broader European values, where sustainability is increasingly factored into consumer decisions.

The WTP for green products, particularly those with eco-certification, is vital for promoting sustainable consumption. The findings from Harms & Linton (2016) highlight the importance of credible eco-certifications in boosting consumer confidence and willingness to pay.

1.9. Environmental Consciousness and Green Apparels

In green consumerism, the connection between environmental awareness and purchasing decisions is relevant for understanding sustainable behavior. As Portugal experiences a cultural shift towards greater environmental consciousness (Do Paço & Raposo, 2009), exploring the relationship between

consumers' ecological awareness and their intentions to buy eco-friendly apparel becomes essential.

The study by Do Paço & Raposo (2009) identified three distinct segments of Portuguese consumers based on their levels of environmental engagement. "The Green Activists" (35%) are particularly significant, displaying high levels of environmental knowledge and activism. This segment mainly includes individuals aged 25-34 and 45-54, with higher education and income levels. They are more likely to engage in environmentally friendly purchasing behaviors and are skeptical of green marketing claims, underscoring the importance of credible eco-certification in influencing their buying decisions.

The study also highlights the "Uncommitted" segment (36%), which consists primarily of young individuals aged 18-34. Despite their high educational background, this group shows lower engagement in green behaviors. Their negative attitude towards green purchasing points to the need for targeted educational and marketing efforts to increase their environmental awareness and willingness to pay for eco-friendly products (Do Paço & Raposo, 2009).

Maichum et al. (2017) explore the generational differences in environmental consciousness, noting distinct trends among younger consumers. Their study indicates that younger demographics exhibit a strong intention towards eco-friendly choices, suggesting a generational shift in consumer preferences. In Portugal, this shift is starting to emerge, with younger consumers showing growing interest in sustainable products, though with some hesitations, as highlighted in the segmentation study do Paço & Raposo (2009).

The hypothesis suggests that environmental consciousness significantly impacts consumers' purchase intentions towards eco-friendly apparel in Portugal (H5).

By exploring these complex dimensions, this hypothesis aims to enhance the understanding of the relationship between environmental awareness and green consumer behavior in Portugal, offering valuable insights for businesses, policymakers, and scholars.

Chapter 2: Research Methods

2.1.Methodology

In the pursuit of a comprehensive examination of the consumers perception of sustainability in the textile and apparel in Portugal, this dissertation uses the analysis of quantitative data with the assistance of IBM SPSS Version 29.0.2.0 and SmartPLS 4 for structural equation modeling (SEM) and path analysis.

The questionnaire was distributed through social media, to a variety of people in different social context such as students, company workers, schoolteachers and sports teams, but hopping to obtain a significant amount of responses from the young literate adult segment of the population.

It consists of a structured questionnaire with 19 questions, by Kumar et al. (2021) in the article "Does environmentally responsible purchase intention matter for consumers? A predictive sustainable model developed through an empirical study". This questionnaire, using a five-point Likert scale where (1) represents "strongly disagree" and (5) represents "strongly agree", assesses the different factors that influence the consumer "Environmentally Responsible Purchase Intention" which is referred to as the consumer's predisposition to prioritize and select apparel options that are perceived to be ecologically beneficial. This intention is supported by a conscientious commitment to future purchases (ERPI1) and a consistent preference (ERPI2) for clothing items that

minimize environmental harm. It is an indicative measure of a consumer's deliberate choice to integrate environmental considerations into their buying habits, reflecting a long-term orientation towards sustainability in their apparel consumption. Environmental Responsible Purchase Intention (ERPI) represents the probability that a consumer will select apparel choices that are aligned with environmental sustainability not only as a one-time decision but as a regular practice, suggesting a persistent, value-driven move towards environmentally considerate consumer behavior.

In order to address which factors influence the ERPI, a set of interconnected questions made for each construct are employed, such as Attitude, Social Norms, Perceived Behavior, Willingness to Pay, and Environmental Consciousness.

Attitude encompasses the predispositions and values consumers hold toward eco-friendly apparel, including their preference for sustainably produced, recyclable, and non-brand specific items, reflecting a broader respect for ecological principles over commercial renown.

Subjective Norms explores the social dimensions of purchase decisions, acknowledging that the recommendations of influential figures and the positive regard of one's social circle can sway consumers towards eco-conscious apparel choices.

Perceived Behavioral Control (PBC) addresses the aspects of eco-friendly purchasing by evaluating consumers self-assessed capability to procure such apparel, which revolve on both self-confidence and access to resources.

Willingness to Pay (WTP) indicates the financial commitment consumers are ready to make for the interest of ecological benefits, highlighting a readiness to invest more in eco-friendly options and even a predisposition towards organic cotton products.

Lastly, Environmental Consciousness (EC) captures the depth of consumers eco-centric attitudes, measuring their inclination to go to significant lengths to

find eco-friendly apparel and to switch brands for environmental reasons, as well as their preference for products with minimized ecological impact.

Chapter 3: Empirical Study

3.1.Sample and data collection

The questionnaire was carried out without collecting identifiable information from participants in order to reduce social desirability bias. Such bias is often present when participants are asked about ethical intentions (Carrington et al., 2010).

The initial sample consisted of 276 valid responses with a female predominance, women accounting for 60.1% of participants, compared to 38.8% male and a small percentage (1.1%) who prefer not to disclose their gender. The age distribution indicated we reached a young adult demographic, with a substantial majority of respondents between 18 to 34 years old, comprising 39.5% within the 18-24 age bracket and 55.8% within the 25-34 age bracket. The sample includes very few individuals below 18 years old (0.4%), 34-49 bracket (2,9%) and over 50 years of age (1,4%).

Regarding employment status, two-thirds of the sample (66.3%) were employed, with students representing 17.4%. A combination of working students constitutes 12.3%, and a smaller fraction (4.0%) is unemployed. The monthly income after taxes is predominantly distributed in the range of 1001-1500€ for 33% of the participants, while 22.5% earn between 501-1000€. A significant segment (17.8%) preferred not to disclose their income.

In terms of education, the initial sample was highly educated, with 47.8% holding a Master's degree and 41.3% possessing a Bachelor's degree. Only a minimal number have education levels of high school or lower. This indicated the questionnaire reached an audience with a high level of educational attainment, as intended.

Given that our sample predominantly comprises individuals aged between 18-34, who account for 95.3% of participants, and 89.3% possess at least a bachelor's degree, we have tailored this study to focus exclusively on the consumers within this age range (18-34) and who at the same time possess a minimum educational level (at least a bachelor's degree or higher). Thus, our final sample focuses on a young and literate adults.

After adjusting the sample size to align with these criteria, we have arrived at the following demographic overview of 236 valid responses.

Gender					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Female	143	60,6	60,6	60,6
	Male	90	38,1	38,1	98,7
	Prefer not to say	3	1,3	1,3	100,0
	Total	236	100,0	100,0	

Table 1: Gender sample distribution

Age					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	18-24	99	41,9	41,9	41,9
	25-34	137	58,1	58,1	100,0
	Total	236	100,0	100,0	

Table 2: Age sample distribution

Employment status					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Employed	148	62,7	62,7	62,7
	Student	43	18,2	18,2	80,9
	Unemployed	11	4,7	4,7	85,6
	Working Student	34	14,4	14,4	100,0
	Total	236	100,0	100,0	

Table 3: Employment status sample distribution

Monthly Income after taxes					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	>2500€	10	4,2	4,2	4,2
	0-501€	19	8,1	8,1	12,3
	1001-1500€	80	33,9	33,9	46,2
	1501-2000€	19	8,1	8,1	54,2
	2001-2500€	7	3,0	3,0	57,2
	501-1000€	56	23,7	23,7	80,9
	Prefer not to say	45	19,1	19,1	100,0
	Total	236	100,0	100,0	

Table 4: Monthly income after taxes sample distribution

What is your education level?					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Bachelor's degree	108	45,8	45,8	45,8
	Master's degree	127	53,8	53,8	99,6
	Phd	1	0,4	0,4	100,0
	Total	236	100,0	100,0	

Table 5: Education level sample distribution

3.2.Analysis and results discussion

Similarly to Kumar et al. (2021), when analyzing the Cronbach Alfa of the construct Attitude a low Cronbach Alfa of 0,557 was found. Therefore, following Kumar et al. (2021) the question ATT4(R) - "Humans were meant to rule over the rest of nature (R)" - was removed, which resulted in an increase of the Cronbach Alfa to 0,651 in the Attitude subgroup.

The same happened with group of questions in Perceived Behavior Control that revealed a Cronbach Alfa of 0,525. Therefore, the question PBC3 was also removed increasing the Cronbach Alfa to 0,747 in the Perceived Behavior Control subgroup.

After removing the question ATT4(R) and PBC3 we end up with the results presented in Table 6.

	Mean	Std. Deviation	Skewness	Kurtosis	Factor Loading	CR	AVE
ATT (Attitude) (*Cronbach's alpha α = 0,658*)						0,818	0,607
ATT1	2,919	0,940	0,006	0,038	0,679		
ATT2	2,614	1,035	0,131	-0,435	0,606		
ATT3	3,903	1,057	-0,806	0,130	0,610		
SN (Social Norm) (*Cronbach's alpha α = 0,667*)						0,819	0,605
SN1	3,542	1,077	-0,677	-0,144	0,539		
SN2	2,331	1,040	0,242	-0,746	0,525		
SN3	3,047	0,999	-0,094	-0,110	0,571		
PBC (Perceived Behaviour Control) (*Cronbach's alpha α = 0,752*)						0,890	0,801
PBC1	2,669	1,064	0,158	-0,530	0,716		
PBC2	2,572	0,913	0,106	-0,396	0,613		
WTP (Willingness to Pay) (*Cronbach's alpha α = 0,838*)						0,903	0,756
WTP1	2,822	1,116	0,005	-0,962	0,645		
WTP2	2,970	1,139	-0,098	-0,923	0,611		
WTP3	3,441	1,107	-0,579	-0,356	0,695		
EC (Environmental Consciousness) (*Cronbach's alpha α = 0,616*)						0,796	0,566
EC1	3,280	1,039	-0,421	-0,344	0,659		
EC2	2,140	0,973	0,471	-0,288	0,486		
EC3	3,712	1,011	-0,666	0,021	0,346		
ERPI (Environmentally Responsible Purchase Intention) (*Cronbach's alpha α = 0,893*)						0,934	0,824
ERPI1	3,343	1,034	-0,517	-0,085	0,628		
ERPI2	2,852	1,031	-0,075	-0,556	0,667		
ERPI3	3,051	1,051	-0,258	-0,480	0,680		

Table 6: Measurement model

We found that most constructs demonstrate internal consistency which aligns well with established standards. 'Willingness to Pay' (α = 0.838), 'Environmentally Responsible Purchase Intention' (α = 0.893) and 'Perceived Behavior Control' (α = 0.752) are characterized by high reliability(Taber, 2018), asserting strong internal consistency.

The 'Attitude' (α = 0.658), and 'Social Norm' (α = 0.667) represent an adequate reliability, whilst 'Environmental Consciousness' (α = 0.616) ensures a moderate threshold, close but above the acceptable threshold. This might be explained by the few number of items in each subgroup which significantly influence the magnitude of coefficient alpha. In scales with fewer items, such as those with only 2 or 3 items as in our study, alpha tends to be lower (Cortina, 1993). This is

because fewer items may not sufficiently capture the variability and consistency across the construct being measured. Additionally, with fewer items, each item's variance has a larger impact on the overall alpha, making it more susceptible to individual item inconsistencies.

The integrity of the collected data was assessed by examining the measures of normality and multi-collinearity such as skewness and kurtosis using the framework by Groeneveld & Meeden (1984). The skewness within our variables extends from -0.806 to 0.471. Specifically, ATT3 demonstrates a skewness of -0.806, suggesting a distribution with a pronounced left tail, indicative of asymmetry and within the acceptable value of -2 to 2. Positive skewness values point to distributions with tails stretching to the right. However, most constructs exhibit skewness values near zero, denoting closed to symmetrical distributions.

As for kurtosis, our results range from -0.962 to 0.130. Compared to the kurtosis of a normal distribution, which is set at 3, our distributions appear less prone to outliers, classified as platykurtic. The negative kurtosis values suggest distributions with flatter peaks than a normal distribution, with lighter tails. The variable WTP1, with a kurtosis of -0.962, exemplifies a distribution with flatter tails.

Variance Inflation Factor (VIF) is situated between approximately 1.083 and 2.866. These VIF estimations indicate a moderate correlation among the predictors within our regression model. Notably, these values do not exceed the threshold (Thompson et al., 2017) which often references a VIF should be under 10. The magnitudes of these VIFs, being well below this benchmark, suggest that multicollinearity is unlikely to be inflating the variances of the estimated regression coefficients substantially. Therefore, the stability of the regression estimates in our model is not deemed to be at significant risk due to

multicollinearity. These statistical checks ensure the reliability of subsequent analyses performed on the data.

	VIF
ATT1	1,823
ATT2	1,839
ATT3	1,083
SN1	1,140
SN2	1,583
SN3	1,540
PBC1	1,571
PBC2	1,571
WTP1	2,143
WTP2	2,240
WTP3	1,732
EC1	1,322
EC2	1,191
EC3	1,212
ERPI1	2,498
ERPI2	2,684
ERPI3	2,866

Table 7: Variance inflation factor

3.3.Measurement Model

In examining the statistical measures for the constructs under consideration, we observed that the mean values exhibit a degree of variability, ranging from a minimum of 2.140 for EC2 (I have changed my apparel brands due to ecological reasons.) to maximum of 3.903 for ATT3 (I would buy eco-friendly apparels even if it is not from a well-known company.). This variation in mean scores highlights differences in the central tendency of responses across the various items within each construct. Specifically, the construct of ATT (Attitude) presented a spread in mean values from 2.614 to 3.903, which may indicate differing levels of agreement or frequency of behaviors associated with the corresponding items.

The standard deviations for the items varied from 0.913 for PBC2 to 1.077 for SN1, indicating variations in response consistency among the participants. Notably, the smaller standard deviation observed within the PBC2 item suggests a more uniform distribution of responses, while the larger standard deviation associated with SN1 item points to greater heterogeneity in participant responses.

For instance, the WTP construct displayed relatively high mean scores coupled with moderate variability, suggesting an overall inclination to agree with the statements regarding financial contributions towards environmental causes.

3.3.1.Factor Analysis

Our factor analysis is substantiated by a Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy of 0.921, which is exceptionally high and significantly exceeds the commonly recommended threshold of 0.6 (Shrestha, 2021), implying that the factor analysis is expected to produce reliable and distinct factors.

In analyzing the factor loadings from our exploratory factor analysis, we can observe that the most substantial loadings are the (PBC1) and (WTP3) constructs, with loadings of 0.716 and 0.695, respectively. Such loadings represent a higher correlation between the item and their constructs. However, not all items display equally high loadings. Notably, (EC3), within the Environmental Consciousness (EC) construct, presents a factor loading of 0.346, which is above the accepted minimum of 0.3, (Hair Jnr et al., 2010) but revealing a lower correlation between the item and the construct.

It is also important to note that the sample size includes a substantial base of 236 respondents, which provides a solid reliability of the loadings.

3.3.2.Composite Reliability and Average Variance Extracted

Utilizing the framework established by Fornell & Larcker (1981) for validating constructs in structural equation modeling, we focus on both Composite Reliability (CR) and Average Variance Extracted (AVE). The CR values in our dataset range from 0.796 to 0.934, which overall reflect positively on the reliability of our constructs. Particularly the ERPI construct, with a CR of 0.934, surpassing the advised threshold of 0.7, thereby underscoring its reliability. In terms of AVE, which quantifies the variance in indicators attributed to the construct relative to the variance ascribed to measurement error, the values all exceed Fornell & Larcker (1981) threshold of 0.5. This illustrates that each construct predominantly accounts for the variance in its indicators, affirming a satisfactory level of convergent validity across all constructs. Particularly, the ERPI and PBC constructs, with AVEs of 0.824 and 0.801 respectively, demonstrating strong convergent validity. This suggests that these constructs capture a considerable amount of variance in their indicators, pointing to a well-defined construct. The

consistency of the AVE values across the board suggests that the items within each construct capture the intended variance, thus reinforcing the validity of our scales.

3.3.3.Discriminant Validity: Fornell-Larcker Criterion

In our discriminant validity analysis following the Fornell-Larcker criterion (Ab Hamid et al., 2017), the data reveals each construct's Average Variance Extracted (AVE) surpasses its correlations with other constructs. Specifically, the square root of the AVE for Attitude is 0.779, indicating a definitive distinction from other constructs, as its inter-construct correlations are lower. This pattern holds for Environmental Consciousness, with a square root of AVE at 0.752, and similarly for Environmentally Responsible Purchase Intention, Perceived Behavior Control, Social Norm, and Willingness to Pay, with square root AVEs of 0.908, 0.895, 0.778, and 0.869 respectively. Such results assert that each construct is uniquely captured by its indicators and shares more variance with them than with indicators of other constructs. Consequently, the constructs within the model display sufficient discriminant validity, affirming that they are empirically distinct and validating the integrity of the conceptual framework.

Discriminant Validity						
Fornell-Larcker criterion						
	ATT	EC	ERPI	PBC	SN	WTP
ATT	0,779					
EC	0,533	0,752				
ERPI	0,572	0,712	0,908			
PBC	0,661	0,630	0,668	0,895		
SN	0,544	0,483	0,592	0,541	0,778	
WTP	0,478	0,673	0,652	0,565	0,482	0,869

Table 8: Discriminant validity Fornell-Larcker criterion

3.4.Hipoteses testing

3.4.1. H1. Consumers Environmentally Responsible Purchase Intention are positively influenced by "Attitude".

H1. Attitude (ATT -> ERPI: β = 0.065): Attitude shows a positive path coefficient, albeit relatively small (β = 0.065), indicating that while attitude has a positive influence on Environmentally Responsible Purchase Intention (ERPI), it is not the strongest predictor in the model.

3.4.2. H2. Consumers Environmentally Responsible Purchase Intention are positively influenced by "Subjective Norms".

H2. Subjective Norms (SN -> ERPI: β = 0.196): Subjective Norms have a moderate positive effect on purchase intention (β = 0.196), supporting H2. This suggests that the social pressures or norms perceived by consumers have a noteworthy impact on their intention to purchase eco-friendly clothing.

3.4.3. H3. Consumers Environmentally Responsible Purchase Intention are positively influenced by "Perceived Behavior Control".

H3. Perceived Behavior Control (PBC -> ERPI: β = 0.206): Perceived Behavior Control is positively associated with purchase intention, with a path coefficient of 0.206, which is higher than that of Subjective Norms. This supports H3, indicating that the perception of the ease or difficulty of purchasing eco-friendly clothing can influence consumer behavior.

3.4.4. H4. Consumers Environmentally Responsible Purchase Intention are positively influenced by "Willingness to Pay"

H4. Willingness to Pay (WTP -> ERPI: β = 0.193): Willingness to Pay has a positive influence on purchase intention (β = 0.193). This finding is in favor of H4, suggesting that consumers who are willing to pay more for eco-friendly options are more inclined to intend to purchase such products.

3.4.5. H5. Consumers Environmentally Responsible Purchase Intention are positively influenced by "Environmental Consciousness"

H5. Environmental Consciousness (EC -> ERPI: β = 0.323): Environmental Consciousness has the strongest positive effect on purchase intention among all predictors studied (β = 0.323), making it the most substantial factor in the model and supporting H5. This indicates that consumers with a higher level of environmental awareness are significantly more likely to intend to purchase green clothing. Furthermore, this path coefficient is closely aligned with the findings of Kumar et al. (2021) (EC -> ERPI: β = 0.330), indicating a comparable impact in both India and Portugal. This consistency highlights the robust influence of Environmental Consciousness on Environmentally Responsible Purchase Intention (ERPI) across the two countries.

Path coefficients		
H1	ATT -> ERPI	0,065
H2	SN -> ERPI	0,196
H3	PBC -> ERPI	0,206
H4	WTP -> ERPI	0,193
H5	EC -> ERPI	0,323

Table 9 :Path coefficients

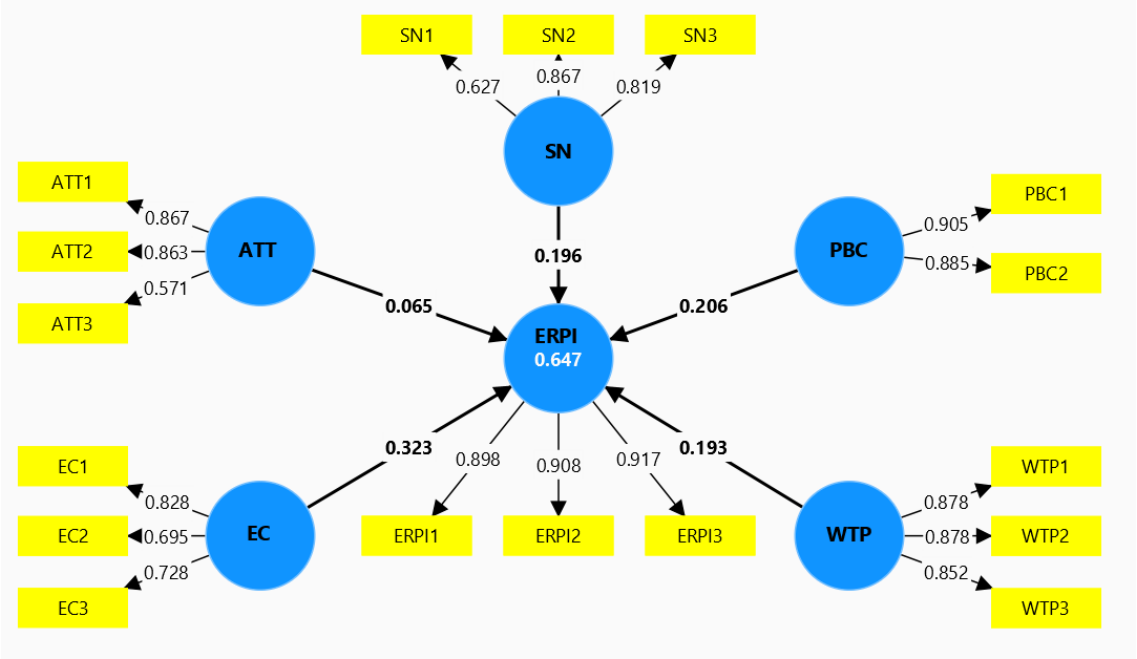

Figure 1: Structural Equation Modeling

Conclusion

Based on the findings and discussions presented in this thesis, it has become evident that environmental consciousness among consumers plays an important role in shaping the competitive landscape of Portugal's young and literate consumers in textile and apparel industry.

This is evidenced by their expressed willingness to make exceptional efforts to purchase eco-friendly apparel (EC1), a readiness to change apparel brands for ecological reasons (EC2), and a preference for products that are less harmful to the environment (EC3). This in turn is aligned with previous findings in India (Kumar et al., 2021).

The significant influence of consumer awareness on buying intentions can be a potential for differentiation strategies focused on sustainability. Companies that align themselves with these environmental values are not only responding to a growing market demand such as youngsters, but are also positioning themselves as leaders in a movement that values ecological integrity and social responsibility.

Furthermore, the research highlights that while consumers are increasingly aware of the environmental impacts of their purchases, there is still a considerable gap between awareness and actual purchase behavior. This gap presents an opportunity for companies to innovate not only in their product offerings but also in their marketing strategies, to more effectively communicate the environmental benefits of their products to consumers.

In conclusion, the thesis finds strong evidence that environmental sustainability business strategy offers a viable pathway for differentiation in a

crowded market, amongst a young adult population with certain educational level. By leveraging the growing consumer consciousness around environmental issues, companies can enhance their competitive advantage and contribute to a more sustainable future. This strategic alignment, therefore, is not merely a response to consumer demand but a forward-thinking approach to redefining industry standards and leading the market towards comprehensive sustainability practices.

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Attachments

Questionnaire

Constructs and Items	References
Attitude ATT1 I usually favour buying apparels that make use of eco-friendly material. ATT2 I usually buy those apparels that can be recycled. ATT3 I would buy eco-friendly apparels even if it is not from a well-known company. ATT4Humans were meant to rule over the rest of nature (R)	Prakash et al., 2019
Subjective Norms SN1 People I listen to could influence me to purchase organic cotton clothing SN2 The people important to me think that I should purchase eco-friendly apparels. SN3 My family and friends think purchasing of eco-friendly apparels is a good idea.	Han and Chung, 2014
Perceived Behavioural Control PBC1 I always try to purchase environmentally responsible apparels. PBC2 I am confident I will purchase eco-friendly clothes when I go to purchase clothes. PBC3 I have the resources and opportunities to buy eco-friendly clothes	Massey et al., 2018.
Willingness to Pay WTP1 I am ready to pay more for ecological apparels. WTP2 I am willing to pay more for conventional cotton apparels if they are made of organic cotton. WTP3 I am willing to pay more for environmentally friendly products to reduce the usage of cleansing agents and detergents.	Wan et al., 2018
Environmental Consciousness EC1I am willing to make some exceptional attempts to purchase eco-friendly apparels to protect the environment. EC2 I have changed my apparel brands due to ecological reasons. EC3When I have a choice, I will purchase a product that is less harmful to the environment.	Suki, 2016; Lin et al., 2018

Environmentally Responsible Purchase Intention ERPI1 I am planning to buy ecological apparels in future. ERPI2 I plan to buy ecological apparels regularly. ERPI3I will expend more effort on ecological apparels in comparison to traditional apparels.	Wee et al., 2014