#### Article

# **Cross-Cultural Validation of COSF and LOHAS Scales: Examining Slow Fashion Consumption Behaviors in Portugal and the Czech Republic**

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#### ABSTRACT

The purpose of the paper is (1) to validate and measure the invariance of the COSF and LOHAS scales across countries (Portugal and the Czech Republic) and establish their convergent and discriminant validity, (2) determine the variables that explain perceived customer value, purchase intention, and willingness to pay a price premium, and (3) assess the differences between participants who have and have not already bought slow fashion products. Quantitative data were collected via questionnaire survey between April and October 2024 in Portugal (n = 1728) and the Czech Republic (n = 1652). The positive correlation between the COSF and LOHAS scales suggests that individuals inclined toward slow fashion consumption will likely exhibit broader sustainable and health-conscious lifestyles, integrating sustainable practices into various aspects of their lives, not just in fashion. The findings contribute to understanding the relationships between consumer values (COSF and LOHAS) and purchase behavior, which can inform marketing strategies, especially in the growing slow fashion market. Policymakers and companies in the fashion industry can use these insights to promote sustainability and environmentally conscious consumption. Also, the study reveals significant differences between Portuguese and Czech consumers sociodemographic characteristics regarding and slow fashion consumption behaviors. Marketers can use these insights to tailor their campaigns to specific cultural and demographic groups, adjusting messaging based on income perception, education level, and purchase behavior. Consumer values such as authenticity, equity, environmental consciousness (COSF and LOHAS) influence purchasing decisions. Slow fashion brands can use this information to develop

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Copyright © 2025 by the author(s). Licensee Hapres, London, United Kingdom. This is an open access article distributed under the terms and conditions of <u>Creative Commons Attribution</u> <u>4.0 International License</u>. products that resonate with these values, such as emphasizing sustainable materials, ethical production practices, or local craftsmanship, appealing directly to consumers who prioritize these attributes.

**KEYWORDS:** COSF; LOHAS; slow fashion; consumer behavior; crosscultural differences; sustainability

#### INTRODUCTION

The fashion industry has been a major driver of global economic growth, yet it is increasingly criticized for its environmental and social impacts. In recent years, the concept of slow fashion has emerged as a counterpoint to the dominant fast fashion model, offering a more sustainable and ethical approach to clothing production and consumption [1]. This shift in consumer behavior and industry practices has been further accelerated by global events such as the COVID-19 pandemic and ongoing financial crises, which have reshaped consumer priorities and highlighted the need for more resilient and sustainable business models [2,3].

Slow fashion, as conceptualized by Fletcher [1], emphasizes quality, longevity, and ethical production over rapid turnover and low prices. This approach is aligned with the principles of sustainability and circular economy, aiming to reduce waste, extend product lifecycles, and minimize environmental impact [4–6]. Jung and Jin [7] developed the Consumer Orientation to Slow Fashion (COSF) scale, which encompasses five dimensions: equity, authenticity, functionality, localism, and exclusivity. These dimensions reflect consumers' concerns for fair trade, appreciation of craftsmanship, preference for versatile and durable clothing, support for local production, and desire for unique items [8].

Slow fashion emphasizes fair working conditions, sustainable business models, and the use of organic and environmentally friendly materials [9]. This shift in consumer behavior is driven by a desire to reduce the environmental and social impacts of rapid fashion consumption, as well as to support local and independent designers and artisans [9].

The concept of durability is central to slow fashion and is closely aligned with circular economy principles. By producing high-quality, longlasting garments, slow fashion brands aim to reduce the overall consumption of clothing and minimize waste. This approach contrasts sharply with the linear "take-make-dispose" model of fast fashion, which has led to significant environmental degradation and depletion of resources [10].

Circular economy practices in fashion aim to prolong the lifespan of garments through reuse, recycling, and repair. This shift not only reduces waste but is also aligned with growing consumer demands for sustainable choices [11,12]. Brands are increasingly offering repair services and encouraging secondhand sales, reflecting a broader industry trend towards circularity [11].

The fashion industry has traditionally been a significant contributor to global economic growth [13,14]. However, the fast fashion model's environmental and social costs have led to a reassessment of its long-term sustainability. The slow fashion movement presents an opportunity for more balanced and sustainable economic growth within the sector.

Recent financial crises and economic uncertainties have also influenced consumer behavior in the fashion industry. Economic pressures have led some consumers to prioritize value and durability in their clothing purchases, potentially aligning with slow fashion principles. However, these same economic challenges can also drive consumers towards cheaper, fast fashion options, creating a complex landscape for sustainable fashion initiatives [15].

The COVID-19 pandemic lockdowns and social distancing measures led to a surge in online shopping for fashion items, accelerating the existing trend of digital transformation in the industry [15]. The pandemic also prompted a shift in consumer priorities, with comfort and functionality becoming more important considerations in fashion choices [15,16].

Interestingly, the pandemic has also heightened awareness about sustainability issues. Many consumers have become more conscious of the environmental and social impact of their clothing choices, leading to a growing interest in eco-friendly and locally produced fashion [15].

A McKinsey [17] survey revealed that 57% of respondents adopted lifestyle changes to reduce their environmental footprint, while over 60% prioritized recycling and purchasing sustainable products. In the fashion sector, this trend is particularly pronounced: 65% of consumers expressed increased willingness to invest in durable apparel, reflecting a broader alignment with slow fashion principles that emphasize longevity and timeless design over transient trends [17]. Jung and Jin [18] contextualize this shift through their customer value creation framework, positing that durability enhances perceived value, thereby strengthening purchase intentions and willingness to pay premium prices—a critical factor for the economic sustainability of slow fashion. Those authors underscore the growing consumer preference for durable fashion items, driven by heightened awareness of sustainability and functionality. Their findings reveal that perceived customer value, particularly in terms of product longevity and ethical production, directly enhances purchase intention and willingness to pay premium prices for slow fashion goods [18]. This is aligned with broader trends in sustainable consumption, where individuals increasingly adopt lifestyle of health and sustainability (LOHAS) principles, emphasizing environmental stewardship and social responsibility [19].

Environmentalism and social consciousness are identified as core dimensions of the LOHAS framework, explaining why consumers prioritize recycling and ethical manufacturing transparency [14,19]. For instance, heightened interest in understanding supply chain ethics reflects the LOHAS-driven demand for accountability in production practices [19]. These behavioral shifts suggest a reorientation toward circular economy principles, where durability and transparency are critical to reducing environmental impact [18,19].

Furthermore, regional cultural differences may significantly influence consumers' approach to fashion, reflecting different historical, economic, and social contexts [20]. The present study aims to extend our understanding of slow fashion consumption in two European countries: Portugal and the Czech Republic. These countries represent interesting case studies due to their distinct economic and cultural backgrounds, allowing for a comparative analysis of slow fashion attitudes and behaviors across different contexts. To this end, a survey was conducted in both countries.

The research objectives are threefold:

- 1) To validate and measure the invariance of the COSF and LOHAS scales across Portugal and the Czech Republic and establish their convergent and discriminant validity.
- 2) To determine the variables that explain perceived customer value, purchase intention, and willingness to pay a price premium.
- 3) To assess differences between participants who have already bought slow fashion products and those who have not, concerning sociodemographic variables, COSF, LOHAS, perceived customer value, purchase intention, and willingness to pay a price premium.

This approach will provide a better understanding of factors influencing slow fashion consumption in Portugal and the Czech Republic. By examining the interplay between consumer orientations, perceived value, and buying behaviors, the aim of this study is to contribute to understanding how slow fashion can be promoted and adopted more widely. As Portugal and the Czech Republic face the consequences of the COVID-19 pandemic along with ongoing economic uncertainties, it is crucial for industry stakeholders and policymakers to understand how these factors influence consumer decisions regarding slow fashion.

The novelty of this paper is that it validates COSF and LOHAS scales in Portugal and the Czech Republic, and explores how these variables together influence perceived customer value and, ultimately, the intention to purchase slow fashion garments and the willingness to pay a price premium.

In conclusion, this research aims to provide a comprehensive analysis of slow fashion consumption intentions in Portugal and the Czech Republic, considering the complex interplay of consumer orientations, perceived value, and economic factors. By doing so, it will contribute to the growing body of literature on sustainable fashion consumption and offer practical insights for promoting more responsible practices in the fashion industry.

# LITERATURE REVIEW

#### Cross-Cultural Management and Sustainability: A Paradigm Shift

Contemporary cross-cultural management research in different fields has been organized along distinct paradigmatic lines, limiting each field's ability to comprehensively address complex cross-cultural phenomena [21]. An emerging paradigm shift is moving from mono-paradigmatic approaches toward multi-paradigmatic sensitivity in cross-cultural management research and practice. The traditional positivist paradigm, with its focus on quantifiable cultural dimensions and universal frameworks, is increasingly being complemented by interpretive paradigms that focus on meaning-making and contextual understanding of cultural phenomena, adopting meta-perspectives that allow for of cross-cultural [22], reflexive consideration dynamics and acknowledging diverse cultural interpretations of human-environment relationships and alternative pathways to sustainable development [23]. This reflexivity enables a more ethnorelativist attitude that acknowledges the validity of multiple cultural viewpoints rather than privileging any single perspective [22]. By adopting paradigmatic diversity, cross-cultural management becomes better prepared to handle the complex challenges of global sustainability. Cross-country studies indicate that cultural differences shape sustainable development trajectories, which suggests culturally sensitive approaches to global environmental and social challenges [24].

The fashion industry is currently experiencing a paradigmatic shift that reflects broader economic transformations. Current discussions on sustainability show a shift from traditional Welfare State Economy models toward Digital Economy frameworks characterized by well-being priorities [25]. This transformation involves moving from rigid, materialistic production systems to flexible, experience-based models that prioritize personalization and talent development. The competing economic perspectives causing these changes reflect fundamental tensions between mainstream and heterodox approaches. Mainstream economic thought, grounded in Neoclassical Synthesis and post-Keynesian perspectives, typically backs interventionist public management with expansive spending and debt-driven models, often resulting in sustainability initiatives focused primarily on environmental metrics [26]. In contrast, heterodox approaches—including Austrian Economics and New-Institutional perspectives—embrace what Sánchez-Bayón et al. [26] categorize as "Cornucopist" or developer perspectives that see technological advancement and innovation as ways toward abundance rather than scarcity. This heterodox framework advocates returning to "original sustainability" principles emphasizing business continuity through productivity and authentic well-being rather than merely environmental compliance. The emerging paradigm emphasizes talent capitalism and cross-cultural management that transcends materialistic

consumption patterns, potentially aligning with slow fashion's emphasis on quality, durability, and meaningful production relationships [25]. This transition from welfare state economics to well-being economics (WBE) represents a significant reorientation of sustainability concepts that may provide a theoretical grounding for understanding consumer shifts toward slow fashion alternatives that prioritize human-centered production models and genuine expressions of sustainable consumption behaviors.

#### **Slow Fashion**

The clothing industry is ranked second in the world in terms of environmental pollution after the oil industry [27]. The fashion industry's environmental and social impacts have catalyzed a paradigm shift toward sustainable consumption, with slow fashion emerging as a critical counterpoint to fast fashion [1,28]. Watson and Yan [29] distinguish fast and slow fashion consumers, with the fast fashion consumer being "a consumer who chooses to purchase trendy, fashion forward clothing at low prices thus instilling a high replaceable factor allowing them to fulfil a need to purchase frequently and in quantity", while a slow fashion consumer is "a consumer who chooses to purchase high quality, versatile clothing that allows them to build a wardrobe based on the concept of clothing created out of care and consideration". Gomes de Oliveira [8] found a lot in common between the two types of consumers, who tend to differ in terms of shopping behavior, together with an ambivalent effect: final customers, on the one hand, attach great importance to sustainability and, on the other hand, they are not willing to pay a higher price for it. In his paper, Pookulangara [30] does not consider slow fashion synonymous with ethical fashion or as just a contrast to fast fashion but defines this concept as a leading trend in the clothing industry, namely throughout the distribution channel, i.e., from production, through distribution, until the final consumption.

In her work, Musova [31] incorporates slow fashion into the circular economy and examines how consumers perceive this area. In her research, conducted with Slovak respondents, she focuses on the willingness to involve consumers in the so-called circular models in such a way that they would be interested in slow fashion products. Subsequently, she recommends raising awareness of final customers about the possibilities of further use or recycling of clothing industry products and other benefits of purchasing and consuming environmentally friendly products.

Rooted in principles of quality, ethics, and longevity, slow fashion intersects with broader themes of sustainability, consumer well-being, and value perception. Slow fashion addresses these concerns through localized production, reduced carbon footprints, and circular economy practices, such as recycling and upcycling textiles [3]. The slow fashion movement offers a more conscientious approach to fashion consumption, prioritizing ethical production processes, low environmental impact, garment durability, and recyclability [32,33].

Jung and Jin's [7] foundational work highlights sustainability as a core driver of perceived customer value, linking eco-conscious practices to consumer loyalty. Their study demonstrates that garments made from organic or recycled materials not only reduce environmental harm but also enhance brand trust and long-term engagement. Similarly, Choi and Feinberg [19] identify environmentalism as a key dimension of the LOHAS framework, which is aligned with slow fashion's emphasis on minimizing chemical use and water pollution. These practices foster a regenerative system where sustainability is both an ethical imperative and a competitive advantage [34].

# Lifestyle of Health and Sustainability: The Holistic Impact of Slow Fashion

Slow fashion transcends environmental benefits by promoting holistic well-being. The LOHAS framework, which integrates physical, mental, and social health, provides a lens to understand how sustainable consumption enhances quality of life [19]. By rejecting toxic dyes and synthetic materials, slow fashion reduces exposure to harmful substances, benefiting both consumers and garment workers [35]. Furthermore, the movement's focus on craftsmanship and timeless design fosters emotional satisfaction, as consumers develop deeper connections with their clothing [18].

Empirical studies link slow fashion to psychological well-being. For example, a survey by Silva et al. [3] found that 69% of Portuguese consumers prioritize understanding garment origins, reflecting a desire for ethical alignment. This transparency reduces cognitive dissonance, enabling individuals to reconcile their values with consumption habits. That study further quantifies these benefits, showing that slow fashion's emphasis on quality and durability correlates with reduced anxiety over trends and financial waste. Participants reported higher life satisfaction when wearing ethically produced garments, underscoring the interplay between sustainable choices and mental health.

The LOHAS concept, as explored by Choi and Feinberg [19], represents a consumer segment that prioritizes health, well-being, and sustainability in their purchasing decisions. While not specific to fashion, the LOHAS scale encompasses dimensions such as physical fitness, mental health, emotional health, spirituality, environmentalism, and social consciousness. These values often align with the principles of slow fashion, making LOHAS consumers a potentially significant market for sustainable clothing brands.

LOHAS consumers are characterized by their willingness to pay premium prices for products that are aligned with their values. In the context of slow fashion, this could translate to a higher willingness to pay for ethically produced, durable, and environmentally friendly clothing. Understanding the relationship between LOHAS values and slow fashion consumption could provide valuable insights for brands looking to target this growing consumer segment.

# Perceived Customer Value and Consumer Orientation to Slow Fashion

Customer value in slow fashion is multifaceted and encompasses functional, emotional, and social dimensions. Perceived quality, a cornerstone of value, is closely tied to durability and craftsmanship. Jung and Jin [18] note that consumers equate longevity with cost-effectiveness, as fewer replacements are needed over time. Sweeney and Soutar [36] identified four aspects of consumer perceived value: quality, price, and emotional and social values. Quality (performance value) relates to the functional benefits stemming from how well the product performs, while price value is understood as the monetary worth gained from the product's usefulness, taking the cost into account. Emotional value refers to the perceived usefulness of a product based on feelings and emotional experiences, whereas social value arises from the product's ability to enhance a customer's social self-image. In a slow fashion context, greater customer value would increase opportunities not only for purchase, but also for paying a price premium [37].

This is in line with the LOHAS framework, where environmental stewardship enhances self-image and social capital [19]. Furthermore, the COSF scale, validated by Jung and Jin [18], operationalizes slow fashion adoption through five variables, which shape perceived customer value: (1) equity—fair wages and safe working conditions for producers; (2) authenticity—traditional craftsmanship and artisanal techniques; (3) functionality—practicality and durability of garments; (4) localism support for domestic production and cultural heritage; and (5) exclusivity—unique designs that resist mass-market replication. In Jung and Jin study [18], the exclusivity dimension, in particular, was found to significantly predict perceived customer value, suggesting that consumers who seek unique and limited-edition items are more likely to perceive higher value in slow fashion products [18]. Sung [38] used the LOHAS model to determine that men from Generation Y combine the purchase of slow fashion products with the fulfillment of such attributes as quality, social, emotional value, and price value because they consider these products to be more durable, of better quality and, therefore, more effective in the long run. However, the literature suggests an apparent lack of sufficient studies on the possible association of sociodemographic characteristics (e.g., gender, age, generational group, and education level) with the behavior of consumers of sustainable clothing [39].

#### Purchase Intention and Willingness to Pay a Price Premium

The growing consumer shift toward slow fashion has reshaped purchase intentions in the apparel industry, with the interplay between slow fashion's core principles and consumers' psychological and behavioral responses being central to this shift. Purchase intention is closely linked to perceived value in sustainable fashion. Research has shown that consumers with a higher perceived value for sustainable fashion products tend to show a stronger purchase intention and are willing to pay a higher price. This relationship underscores the importance of effectively communicating the value proposition of slow fashion to potential consumers.

Silva et al. [3] found that functionality and localism were the strongest predictors of purchase intention in Portugal, with consumers valuing durable garments that support local economies. Conversely, exclusivity resonated more in markets like Kazakhstan, where unique designs symbolized status and individuality [40]. Such cross-cultural variations highlight the adaptability of the COSF framework, which accommodates diverse consumer priorities while maintaining its core ethical tenets.

The willingness to pay a price premium for sustainable fashion products is a critical factor in the viability of slow fashion business models. When consumers consider that slow fashion products convey significantly higher values (i.e., perceived customer value), consumers will have the intention to buy and pay an additional cost for them [37]. In a survey, Niinimaki [41] found almost 95% of her respondents were willing to buy clothes at a higher price, assuming that quality was guaranteed, and the negative environmental impact was reduced. Jung and Jin [18] found that perceived customer value positively influenced consumers' willingness to pay a price premium for slow fashion products. Consumers who perceive higher value in slow fashion items are more willing to accept higher prices, which is essential for the economic sustainability of slow fashion businesses.

However, economic pressures and financial uncertainties can impact consumers' willingness to pay premium prices for sustainable fashion. The challenge for slow fashion brands is to effectively communicate the longterm value and benefits of their products to justify the higher price point.

The literature suggests an apparent lack of sufficient studies on the possible association of sociodemographic characteristics (e.g., gender, age, generational group, and education level) with the behavior of consumers of sustainable clothing [6,39].

#### Hypotheses

The COSF model bridges the gap between intention and action. Jung and Jin [18] demonstrate that high perceived value—driven by equity and authenticity—directly increases willingness to pay price premiums. This is reinforced by Silva et al. [3], whose survey of Portuguese consumers revealed that 37% actively recycled clothing, linking ethical practices to post-purchase satisfaction. Jung and Jin [18] established that perceived customer value directly enhances purchase intention and willingness to pay price premiums. Sustainability and ethical concerns are critical drivers of purchase decisions. Consumers prioritizing environmental stewardship and social responsibility are often aligned with the LOHAS framework, which emphasizes environmentalism and social consciousness [19].

Our study assumes that slow fashion attributes and lifestyle health and sustainability are sources for creating customer value, which, in turn, enhance purchase intention and the willingness to pay price premiums. Given the above considerations, we posit the following hypotheses:

H1. Models adjusted to the total sample, as well as to each country (Czech Republic and Portugal), invariance across countries, and convergent and discriminant validity will be found.

H2. COSF and LOHAS variables will contribute to explain the variance of perceived customer value, purchase intention, and willingness to pay a price premium.

H3. Participants who have already bought slow fashion products present a different profile in all studied dimensions than those who have not.

# **METHODS**

#### **Procedures and Instruments**

For the study, a survey was conducted, approved by the Ethics Committee of CICEE-UAL, no. CE07202401 (approved on 1 July 2024). The research protocol included informed consent, and confidentiality and anonymity of the data were assured. The questionnaire was shared on social media from April to October 2024. Participants had to be over 18 years old and reside in either Portugal or the Czech Republic.

# Sociodemographic questionnaire

The sociodemographic questionnaire included the following variables: country (Portugal or the Czech Republic), gender (0—male; 1—female), age, education (0—without university studies, 1—with university studies), professional status (0—inactive; 1—active) and income perception (1—insufficient; 2—sufficient; 3—satisfactory; 4—high). In addition, a question was raised regarding the consumption of slow fashion ("Have you ever bought slow fashion products?"; 0—no; 1—yes).

# Consumer orientation to slow fashion scale (COSF)

Jung and Jin [7] defined slow fashion theoretically with underlying dimensions. The initial scale items were generated based on a literature review and an open-ended survey (applied to student and non-student samples); then, the items were purified and validated. Respondents were

asked to rate their agreement with the statements, and the items were measured on a 5-point Likert-type scale (from 1—strongly disagree to 5 strongly agree). In the end, the authors found that 15 items distributed by five dimensions accounted for slow fashion: equity, authenticity, functionality, localism, and exclusivity. The authors stated that the five dimensions show that slow fashion is a "broader concept than environmental sustainability alone, encompassing (1) caring for producers and local communities for sustainable life (equity and localism); (2) connoting history for the sustainable perceived value of the product (authenticity); (3) seeking diversity for the sustainable fashions world (exclusivity); and (4) maximizing product lifespan and efficiency for a sustainable environment (functionality)" [7]. The authors found a Cronbach's alpha of 0.819 for equity, a composite reliability of 0.833, and an average variance extracted of 0.626. For authenticity, the authors found 0.746, 0.764, and 0.505, respectively. For functionality, 0.670, 0.702 and 0.383; for localism, 0.786, 0.736, and 0.586; and for exclusivity, 0.742, 0.687, and 0.498.

# The lifestyle of health and sustainability scale (LOHAS)

The LOHAS scale assesses an emerging lifestyle defined by attention to health, well-being, and environmental sustainability [19]. LOHAS was conceived as a multidimensional construct with 28 items distributed by six dimensions: physical fitness, mental health, emotional health, spiritual health, environmentalism, and social consciousness; each component is measured with a multi-item scale. The initial pool of items was obtained from an extensive review of the literature [19]. LOHAS was measured with a 5-point Likert-type scale varying from strongly agree (5) to strongly disagree (1). The authors decided to retain items with a Cronbach's alpha above 0.60 for the six subscales. Moreover, they assessed the composite reliability (CR) and average variance extracted (AVE) for each domain and found: physical fitness: CR = 0.800, AVE = 0.450; mental health: CR = 0.790, AVE = 0.560; emotional health: CR = 0.830, AVE = 0.560; spiritual health: CR = 0.870, AVE = 0.690; environmentalism: CR = 0.900, AVE = 0.500; and social consciousness: CR = 0.800, AVE = 0.570 [19].

# Perceived customer value scale

To assess perceived customer value, four items from Sweeney and Soutar's [36] PERVAL (perceived value) scale were used, with 19 items and four subscales (quality, emotional, price, and social): "...has consistent quality; ...is one that I would enjoy; ...is reasonably priced; ...would help me to feel acceptable...". "In addition, respondents were asked to think of a situation in a shop in the last three months or so when they had looked at a particular durable product. A wide variety of durable goods was selected by respondents, including clothing, footwear, furniture, cars, computers, sports goods, and household appliances" [36]. Participants were also asked to rate the level of their agreement with each item on a 5point Likert scale (1—strongly disagree to 5—strongly agree). Sweeney and Soutar [36] found Cronbach's alpha values from 0.84 to 0.95; the average variance extracted ranged from 0.76 to 0.85; the square root of AVE ranged from 0.56 to 0.61.

# Purchase intention scale

Three items were adapted from Jung and Jin [18] ("There is a strong likelihood that I will buy slow fashion products"; "I will purchase slow fashion products"; "I would consider buying slow fashion products"), which, in turn, adapted from Sweeney et al. [42] ("I would consider buying this product at this store"; "I will purchase this product at this store"; "There is a strong likelihood that I will buy this product at this store"). Participants were asked to rate the level of their agreement with each item on a 5-point Likert scale (1—strongly disagree to 5—strongly agree). Jung and Jin [18] found a value of Cronbach's alpha of 0.89 and values of CR of 0.92; AVE = 0.73; the square root of AVE was 0.86.

# Willingness to pay a price premium scale

Three items were adapted from Jung and Jin [18] ("buying slow fashion products seems smart to me even if they cost more"; "I would still buy slow fashion products even if other bran ds were on sale"; "I am ready to pay a higher price for slow fashion products"), which, in turn, were adapted from Castaldo et al. [42] ("buying \_\_\_\_\_ seems smart to me even if they cost more"; "I'm ready to pay a higher price for \_\_\_"; "I'd still buy \_\_\_\_\_ if other brands reduced their prices"). Participants were asked to rate the level of their agreement with each item on a 5-point Likert scale (1—strongly disagree to 5—strongly agree). Jung and Jin [18] found a value of Cronbach's alpha of 0.83 and values of CR of 0.84; AVE = 0.62; the square root of AVE was 0.78.

# Sample

The total sample (n = 3380) includes a sample of Portuguese participants (51.1%) and a sample of participants from the Czech Republic (48.9%). There were 2176 questionnaires collected in Portugal, of which 1728 (79.4%) were validated and processed; 2103 questionnaires were collected in the Czech Republic, of which 1652 (78.6%) were validated and processed. These samples show statistically significant differences concerning most sociodemographic variables but gender (Table 1). The Portuguese sample has older participants, more participants with university studies, more inactive participants, and more dissatisfied with income than the Czech Republic sample (Table 1).

Socio-demog	raphic variables	Portugal	Czech Republic			
		n (%)	n (%)	$\chi^2$	р	Φ
Sample size		1728 (51.1)	1652 (48.9)	-	-	-
Gender	Female	1076 (62.3)	1068 (64.6)	2.17	0.141	0.03
Male		652 (37.7)	584 (35.4)			
Education	Without university studies	970 (56.1)	1122 (67.9)	40.72	<0.001	-0.12
	With university studies	758 (43.9)	530 (32.1)			
Professional	Inactive	183 (10.6)	106 (6.4)	18.82	<0.001	0.08
status	Active	1545 (89.4)	1546 (93.6)			
Income	Insufficient	229 (13.3)	83 (5.0)	157.66	<0.001	0.22
	Sufficient	607 (35.1)	388 (23.5)			
	Satisfactory	792 (45.8)	1021 (61.8)			
	High	100 (5.8)	160 (9.7)			
Socio-demog	raphic variables	<i>M</i> ± <i>SD</i> ; Min–Max	<i>M</i> ± <i>SD</i> ; Min–Max	t	р	d
Age		31.41 ± 14.31; 18–87	29.99 ± 13.63; 18–88	31.00	<0.001	0.10

Table 1. Sociodemographic characteristics of t	the sample.
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n = frequencies; % = percentage;  $\chi^2 =$  chi-squared; p = p-value;  $\Phi =$  phi; M = mean; SD = standard deviation; t = t-test; d = Cohen's d.

#### **Data Analysis**

Descriptive analysis was employed to define the characteristics of the sample, items, and overall scales and subscales. The values for kurtosis and skewness aid in determining how closely the variable distributions approximate a normal distribution. Differences between the samples were assessed using the chi-squared test and Student's t-test. The reliability of the instruments was evaluated using Cronbach's alpha. Confirmatory factor analysis (CFA) with robust maximum likelihood estimation was conducted using the Satorra and Bentler adjusted chi-square ( $\chi^2 < 2$ ) in AMOS 27 [43]. The comparative fit index (CFI), Tucker-Lewis index (TLI), and root mean square error of approximation (RMSEA) evaluate the overall fit of the model. Higher values for CFI and TLI and lower values for RMSEA indicated a better fit. CFI and TLI  $\geq$  0.90 and RMSEA  $\leq$  0.08 were criteria for adequate model fit, whereas CFI and TLI  $\geq$  0.95 and RMSEA  $\leq$  0.06 were criteria for well-fitting models [44]. Browne and Cudeck [45]

employ the definition of "close fit", with PCLOSE giving a test of close fit ( $\geq$  0.05). Standardized root mean square residual (SRMR) allows for assessing the average magnitude of the discrepancies between observed and expected correlations as an absolute measure of (model) fit criterion; it should present a value < 0.08 [46].

Measurement invariance of the tools across different countries was assessed. Three types of tests for measurement invariance were conducted: a configural model (where all factor loadings and item intercepts were estimated freely across the two subsamples-configural invariance); a model with constrained factor loadings (where the factor loadings were constrained to be equal while the item intercepts were estimated freely-metric invariance); and a model that constrained both factor loadings and item intercepts to be equal (scalar invariance). CFI and RMSEA were utilized to determine whether the configural model was supported. Additionally,  $\Delta$ CFI was examined to see if the more constrained model was equivalent to the less constrained one. A  $\Delta$ CFI value of less than 0.01 suggests that the two nested models are equivalent; thus, the measurement invariance for the tested factor model across the two subsamples is validated [47]. Convergent validity was determined using composite reliability (CR) and average variance extracted (AVE). To assess discriminant validity, the square roots of the AVE values were compared with the correlations of the scale dimensions (Pearson correlation). A significance level was established at *p* < 0.05. Furthermore, multiple linear regressions were conducted to identify the variables contributing to the explanation of the dependent variables. Additionally, tests were performed to determine the differences between consumers of slow fashion products and those who do not purchase them.

# RESULTS

# **Consumer Orientation to Slow Fashion (COSF)**

# Descriptive statistics

In Table 2, the descriptive statistics of the items of the COSF for the total sample are presented. The values of skewness and kurtosis ensure the normal distribution of the items. Item eight ("I tend to keep clothes as long as possible rather than discarding quickly") presents the highest value, and item 14 ("I am very attracted to rare apparel items"), the lowest. Item nine ("I prefer simple and classic designs") is the only item whose removal increases the value of Cronbach's alpha. Items eight and nine correlate with a total below the recommended value of 0.300. Correlations between the 15 items range from r = 0.100 (p < 0.010) to r = 0.728 (p > 0.001). The subscale functionality presents the highest mean and the lowest value of Cronbach's alpha, the subscale exclusivity presents the lowest mean, and the subscale equity presents the highest value of Cronbach's alpha.

# Table 2. COSF scale items, subscales and total frequencies and Cronbach's α.

Variables and items	<i>M</i> (1–5)	SD	Sk	Kr	a if item deleted	Corrected total item correlation
Equity						
1 Fair compensation for apparel producers is	3.27	0.94	-0.30	-0.21	0.818	0.52
important to me when I buy clothes.						
2 I am concerned about fair trade when I buy clothes.	3.30	0.91	-0.31	-0.16	0.817	0.55
3 I am concerned about the working conditions of producers when I buy clothes.	3.27	0.97	-0.26	-0.31	0.817	0.54
Authenticity						
4 I value clothes made by traditional techniques.	3.68	0.95	-0.66	0.20	0.815	0.57
5 Craftsmanship is very important in clothes.	3.51	0.93	-0.42	-0.03	0.816	0.56
6 Handcrafted clothes are more valuable than	4.07	0.90	-1.07	1.27	0.819	0.51
mass-produced ones.	1.07	0.00	1.07	1.27	0.010	0.01
Functionality						
7 I often enjoy wearing the same clothes in multiple	3.84	0.92	-0.80	0.57	0.823	0.44
ways.						
8 I tend to keep clothes as long as possible rather	4.30	0.78	-1.23	1.94	0.831	0.29
than discarding quickly.						
9 I prefer simple and classic designs.	3.99	0.87	-0.76	0.54	0.835	0.22
Localism						
10 I prefer buying clothes made in U.S. to clothes manufactured overseas.	3.17	1.02	0.02	-0.42	0.820	0.49
11 I believe clothes made of locally produced	3.54	0.96	-0.43	-0.08	0.816	0.55
materials are more valuable.						
12 We need to support U.S. apparel brands.	4.01	0.89	-0.95	0.97	0.818	0.53
Exclusivity						
13 Limited editions hold special appeal for me.	2.98	1.13	-0.04	-0.72	0.829	0.36
14 I am very attracted to rare apparel items.	2.87	1.19	0.07	-0.92	0.828	0.40
15 I enjoy having clothes that others do not.	3.36	1.12	-0.34	-0.56	0.831	0.34
COSF Total	53.17	7.95	-0.19	0.73	α = 0.832	
COSF Equity	3.28	0.82	-0.32	0.13	α = 0.845	
COSF Authenticity	3.75	0.75	-0.62	0.79	α = 0.727	
COSF Functionality	4.04	0.63	-0.61	0.88	α = 0.582	
COSF Localism	3.58	0.78	-0.41	0.41	α = 0.752	
COSF Exclusivity	3.07	0.97	-0.04	-0.48	α = 0.806	

*M* = mean; *SD* = standard deviation; *Sk* = skewness; *Kr* = kurtosis; α = Cronbach's alpha.

# Factorial validity

Fit indices for the overall model and those of various countries can be seen in Table 3, following the determination of residual correlations among the eight items illustrated in Figure 1. While all three models show a chi-squared value divided by degrees of freedom that exceeds the suggested threshold (<2), the total sample exhibits favorable adjustment indicators. The Portuguese and the Czech Republic models present a PCLOSE value below that recommended ( $\geq 0.050$ ).

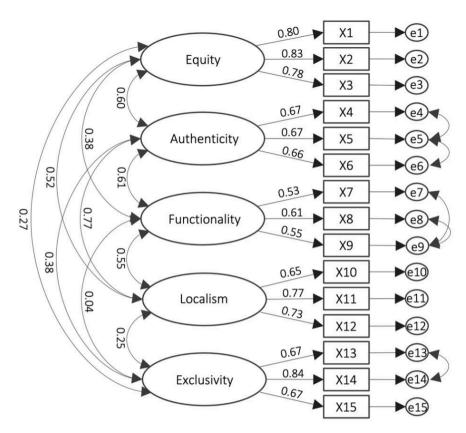


Figure 1. COSF standardized factor loading for the total sample.

**Table 3.** COSF scale fit indexes for total sample and different countries' samples.

Samples	Fit indexes of models <sup>1</sup>												
	$\chi^2$	df	$\chi^2/df$	р	CFI	GFI	AGFI	TLI	RMSEA (90% CI)	PCLOSE	SRMR		
Total	799.616	76	10.521	0.000	0.960	0.960	0.939	0.944	0.053 (0.050–0.056)	0.062	0.049		
Portugal	596.154	76	7.844	0.000	0.942	0.942	0.909	0.919	0.063 (0.058–0.068)	0.000	0.054		
Czech Republic	491.978	76	6.473	0.000	0.956	0.956	0.929	0.939	0.058 (0.053–0.062)	0.005	0.055		

<sup>1</sup>Fit indexes were adjusted after residuals correlations of 8 items. Abbreviations:  $\chi^2$  = chi-square; df = degrees of freedom; CFI = comparative fit index; GFI = goodness of fit index; AGFI = adjusted goodness of fit index; TLI = Tucker-Lewis index; RMSEA = root mean square error of approximation; CI = confidence interval; SRMR = standardized root mean square residual.

# Measurement invariance

Table 4 displays the findings regarding the measurement invariance of the COSF scale across different countries. The progressive country invariance assessment indicated that the configural invariance model across nations exhibited a satisfactory fit. The metric invariance evaluation, which enforced equal factor loadings across countries, also demonstrated a good fit to the data. Additionally, the change in CFI between the configural and metric invariance assessments remained within the 0.01 threshold, supporting the metric invariance across the two nations. Lastly, the scalar invariance analysis indicated that the intercepts of the indicators were not invariant across the countries, as the CFI change between the scalar and metric invariance assessments exceeded 0.01.

Test	$\chi^2$	df	$\chi^2/df$	р	CFI	RMSEA (90% CI)	ΔCFI
Configural invariance	1088.130	152	7.159	0.000	0.949	0.043 (0.040–0.045)	-
Metric invariance	1146.481	156	7.349	0.000	0.946	0.043 (0.041–0.046)	0.003
Scalar invariance	2012.584	171	11.769	0.000	0.900	0.056 (0.054–0.059)	0.046

Table 4. Measurement invariance tests of the COSF scale across countries.

Abbreviations:  $\chi^2$  = chi-square; *df* = degrees of freedom; CFI = comparative fit index; RMSEA = root mean square error of approximation; CI = confidence interval;  $\Delta$ CFI = adjusted comparative fit index.

# Convergent and discriminant validity

The convergent validity of the COSF scale was evaluated using composite reliability (CR), where the values exceeded the established benchmarks, and average variance extracted (AVE) values, all of which were equal to or greater than 0.500. Discriminant validity was determined by ensuring that the square roots of the AVE values were greater than the correlation values among each construct, both for the total and subscales, with the exception of the total (as shown in Table 5). All correlations between the overall score and the subscales are statistically significant, ranging from r = 0.192 (p < 0.001) to r = 0.779 (p < 0.001), with the exception of the correlation between the exclusivity and functionality subscales, which is significant but quite weak (r = 0.035; p < 0.010).

Table 5. Correlations between COSF scale total and subscales, AVE, AVE square roots and CR.

Scale/Sub-scale	1	2	3	4	5	6	AVE	CR
1 COSF Total	<b>0.</b> 77 <b>1</b>	-	-	-	-	-	0.595	0.956
2 COSF Equity	0.707**	0.830	-	-	-	-	0.690	0.870
3 COSF Authenticity	0.779**	0.459**	0.724	-	-	-	0.524	0.767
4 COSF Functionality	0.557**	0.264**	0.401**	0.706	-	-	0.500	0.748
5 COSF Localism	0.741**	0.431**	0.539**	0.376**	0.750	-	0.562	0.794
6 COSF Exclusivity	0.573**	0.210**	0.273**	0.035*	0.192**	0.835	0.697	0.873

\*\**p* < 0.001; \**p* < 0.010; AVE = average variance extracted; CR = composite reliability; **bold** = AVE square roots.

#### The Lifestyle of Health and Sustainability (LOHAS) Scale

#### Descriptive statistics

Table 6 presents the descriptive statistics of the items of the LOHAS scale for the total sample. The values of skewness and kurtosis ensure the normal distribution. Item 1 from the social consciousness subscale ("I am socially conscious") presents the highest value, and item 3 from the spiritual health subscale ("I spend a portion of every day in prayer, meditation, or personal reflection") presents the lowest. Item 4 from the emotional health subscale ("I am able to speak openly about my feelings when angry or worried") is the only item whose removal increases the

value of Cronbach's alpha and the only item whose correlation with the total is below the recommended value of 0.300. Correlations between the 28 items range from r = 0.041 (p < 0.010) to r = 0.741 (p > 0.001). The subscale of social consciousness presents the highest mean, and the subscale of spiritual health presents the lowest mean. The subscale of environmentalism presents the highest value of Cronbach's alpha, and the subscale of mental health has the lowest value.

Variables and items					a if	Connected
variables and items	M (1–5)	SD	Sk	Kr	α if item	Corrected total item
	(1-3)				deleted	
Physical fitness						
1 I purchase and eat foods considering my health.	3.79	0.91	-0.92	0.86	0.893	0.505
2 I limit foods like sugar, coffee, fats, etc	3.27	1.09	-0.34	-0.82	0.894	0.463
3 I choose diet low in fat, saturated fat, or cholesterol.	2.89	1.12	0.04	-0.96	0.894	0.469
4 I avoid foods with high additives.	3.27	1.05	-0.29	-0.60	0.892	0.525
5 I usually read the ingredients on food labels.	3.11	1.22	-0.16	-1.07	0.895	0.429
Mental health						
6 I try to control stress.	3.77	0.90	-1.03	1.22	0.895	0.382
7 I reduce stress and anxiety.	3.72	0.95	-0.85	0.50	0.894	0.421
8 I use specific methods to control my stress.	3.08	1.11	-0.17	-0.86	0.895	0.400
Emotional health						
9 I try to take a positive outlook on things.	3.92	0.92	-0.98	0.97	0.895	0.383
10 I think positively of life.	3.78	0.98	-0.79	0.30	0.895	0.373
11 I try to cope with positively on failure and	3.64	0.93	-0.75	0.34	0.895	0.384
frustration.						
12 I am able to speak openly about my feelings when angry or worried.	3.26	1.19	-0.30	-0.91	0.899	0.261
Spiritual health						
13 I feel connected with some force greater than myself.	2.98	1.24	-0.08	-1.00	0.896	0.388
14 I nurture the spiritual aspects of myself	2.84	1.25	0.03	-1.04	0.894	0.446
15 I spend a portion of the day in prayer, meditation, or personal reflection.	2.53	1.25	0.32	-1.09	0.895	0.401
Environmentalism						
16 I protect the environment.	3.87	0.76	-0.83	1.51	0.893	0.508
17 I choose environmentally friendly products.	3.38	0.92	-0.39	-0.11	0.891	0.584
18 I choose sustainable source products over	3.28	0.92	-0.24	-0.30	0.891	0.606
conventional ones.						

# Table 6. Cont.

Variables and items	M (1-5)	SD	Sk	Kr	a if item deleted	Corrected total item correlation
Environmentalism					ucietteu	correlation
19 I am interested in renewable energy sources.	3.68	0.96	-0.62	0.03	0.893	0.497
20 I prefer sustainable agriculture practices.	3.62	0.93	-0.53	0.13	0.892	0.566
21 I prefer products manufactured in sustainable ways.	3.67	0,89	-0.63	0.39	0.891	0.590
22 I prefer products made of recycled materials.	3.64	0.93	-0.51	0.07	0.892	0.560
23 My purchase decisions are based on its effect on the world.	3.36	0.97	-0.24	-0.39	0.891	0.587
24 I teach the benefits of environmentally friendly products to family or friends.	3.22	1.14	-0.27	-0.79	0.891	0.572
25 I would be willing to reduce my consumption to help protect	3.92	0.85	-0.92	1.18	0.894	0.476
Social consciousness						
26 I am socially conscious.	3.93	0.74	-0.76	1.48	0.894	0.489
27 I consider the local society and its members in daily life.	3.87	0.76	-0.82	1.50	0.894	0.459
28 I consider the entire world and population in daily life.	3.48	0.91	-0.54	0.13	0.894	0.453
LOHAS Physical fitness	3.27	0.81	-0.24	-0.30	α = 0.800	
LOHAS Mental health	3.52	0.78	-0.64	0.58	α = 0.688	
LOHAS Emotional health	3.65	0.77	-0.67	0.54	α = 0.758	
LOHAS Spiritual health	2.78	1.09	0.07	-0.85	α = 0.845	
LOHAS Environmentalism	3.57	0.67	-0.34	0.44	α = 0.900	
LOHAS Social consciousness	3.76	0.65	-0.58	1.20	α = 0.724	

M = mean; SD = standard deviation; Sk = skewness; Kr = kurtosis;  $\alpha$  = Cronbach's alpha.

# Factorial validity

Fit indexes for the overall model and those for individual countries are provided in Table 7, following the establishment of residual correlations among the 13 items shown in Figure 2. While the three models have a chi-square ( $\chi^2$ ) value divided by degrees of freedom that exceeds the recommended threshold of less than 2, the overall sample shows good fit indicators. However, the Portuguese model has a PCLOSE value that falls below the recommended limit of 0.05.

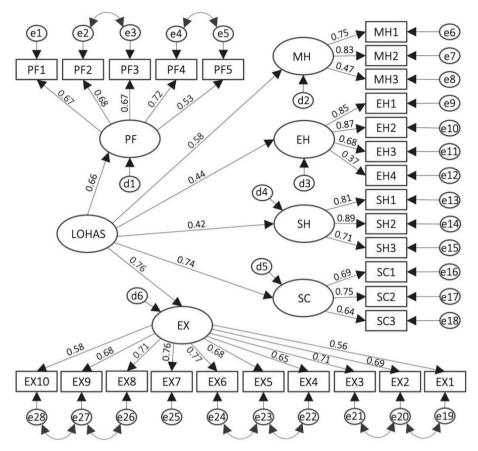


Figure 2. LOHAS standardized factor loading for the total sample.

Table 7. LOHAS scale fit indexes for total sample and different countries' samples.

Sample	Fit indexes of models <sup>1</sup>												
	$\chi^2$	df	$\chi^2/df$	р	CFI	GFI	AGFI	TLI	RMSEA (90% CI)	PCLOSE	SRMR		
Total	3348.860	337	9.937	0.000	0.926	0.926	0.918	0.917	0.051 (0.050–0.053)	0.068	0.059		
Portugal	2100.385	340	6.178	0.000	0.920	0.920	0.906	0.911	0.055 (0.053–0.057)	0.000	0.067		
Czech Republic	1779.724	340	5.234	0.000	0.924	0.924	0.908	0.915	0.051 (0.048–0.053)	0.320	0.067		

<sup>1</sup>Fit indexes were adjusted after residuals correlations of 13 items. Abbreviations:  $\chi^2$  = chi-square; df = degrees of freedom; CFI = comparative fit index; GFI = goodness of fit index; AGFI = adjusted goodness of fit index; TLI = Tucker-Lewis index; RMSEA = root mean square error of approximation; CI = confidence interval; SRMR = standardized root mean square residual.

# Measurement invariance

Table 8 presents the results of the measurement invariance analysis for the LOHAS scale at the country level. The findings show a similar trend to those observed for the COSF scale. The progressive country invariance test indicated that the configural invariance model across countries demonstrated a good fit. The metric invariance test, which constrained factor loadings to be equal across countries, also showed that the model fit the data well. Additionally, the change in CFI between the configural and metric invariance tests was within the acceptable threshold of 0.01, further supporting metric invariance across countries. However, the scalar invariance test revealed that the intercepts of the indicators were not invariant across countries, as the change in CFI between the scalar and metric invariance was greater than 0.01.

Table 8. Measurement invariance tests of the LOHAS scale across countries.

Test	$\chi^2$	df	χ²/ <i>df</i>	р	CFI	RMSEA (90% CI)	ΔCFI
Configural invariance	3880.106	680	5.706	0.000	0.922	0.037(0.036–0.038)	-
Metric invariance	3945.283	700	5.636	0.000	0.920	0.037(0.036–0.038)	0.002
Scalar invariance	5915.579	728	8.126	0.000	0.873	0.046(0.045–0.047)	0.047

Abbreviations:  $\chi^2$  = chi-square; *df* = degrees of freedom; CFI = comparative fit index; RMSEA = root mean square error of approximation; CI = confidence interval;  $\Delta$ CFI = adjusted comparative fit index.

#### Convergent and discriminant validity

The convergent validity of the LOHAS scale was assessed using composite reliability (CR), with values exceeding the established reference thresholds. The average variance extracted (AVE) values were at least 0.500, except for the environmentalism subscale. Discriminant validity was evaluated by comparing the square roots of the AVE values, all of which were greater than the correlation coefficients for each construct between the total and subscales, with the exception of the total score (see Table 9). All correlations between the total score and the subscales were significant, ranging from r = 0.187 (p < 0.001) to r = 0.713 (p < 0.001).

Table 9. Correlations between LOHAS scale total and subscales, AVE, AVE square roots and CR.

Scale/Sub-scale	1	2	3	4	5	6	7	AVE	CR
1 LOHAS Total	0.720	-	-	-	-	-	-	0.519	0.967
2 LOHAS Physical fitness	0.713**	0.706	-	-	-	-	-	0.500	0.831
3 LOHAS Mental health	0.582**	0.323**	0.708	-	-	-	-	0.501	0.741
4 LOHAS Emotional health	0.531**	0.240**	0.387**	0.746	-	-	-	0.556	0.829
5 LOHAS Spiritual health	0.552**	0.265**	0.306**	0.267**	0.838	-	-	0.703	0.876
6 LOHAS Environmentalism	0.823**	0.491**	0.300**	0.187**	0.251**	0.680	-	0.463	0.894
7 LOHAS Social consciousness	0.632**	0.301**	0.287**	0.299**	0.210**	0.548**	0.721	0.520	0.764

\*\**p* < 0.001; \**p* < 0.010; AVE = average variance extracted; CR = composite reliability; **bold** = AVE square roots.

As demonstrated above, all models are adjusted to the total sample, as well as to each country, while invariance across countries and convergent and discriminant validity was found, thus confirming H1.

#### **Perceived Customer Value**

Table 10 presents the descriptive statistics of the items and the total perceived customer value dimension for the total sample. The values of skewness and kurtosis ensure the normal distribution. Item 1 ("slow

fashion has consistent quality") presents the highest value, and item 4 ("slow fashion would help me to feel respected by my peers / people I care for") the lowest. Correlations between the four items range from r = 0.236 (p < 0.001) to r = 0.609 (p > 0.001). This dimension presents an acceptable value of Cronbach's alpha.

Fit indices for the overall model and each individual country's model can be found in Table 11, following the establishment of correlations among the residuals of the two items. While two models (the total sample and the Portuguese sample) have a chi-square value divided by degrees of freedom that exceeds the recommended threshold (<2), the other indicators indicate a good fit. The findings regarding the measurement invariance of perceived customer value at the country level are presented in Table 12. The incremental country invariance assessment indicated that the configural invariance model has a good fit across countries. Nonetheless, the change in CFI between the configural and metric invariance assessments exceeds the 0.01 threshold, indicating a lack of support for metric invariance across countries. Furthermore, in the scalar invariance assessment, the intercepts of the indicators were not invariant across countries, as the CFI change between the scalar and metric invariance tests also surpassed 0.01.

Variables and items	М (1–5)	SD	Sk	Kr	a if item deleted	Corrected total item correlation
Perceived customer value						
CR = 0.808; AVE = 0.516; AVE square roots = 0.718						
1 Slow fashion has consistent quality	3.61	0.79	-0.26	0.45	0.599	0.486
2 Slow fashion is one that I would enjoy	3.50	0.83	-0.12	0.12	0.549	0.559
3 Slow fashion is reasonably priced	3.10	0.83	-0.10	0.33	0.647	0.409
4 Slow fashion would help me to feel respected by my peers / people I care for	2.89	0.91	-0.10	0.05	0.655	0.403
Purchase intention						
CR = 0.905; AVE = 0.761; AVE square roots = 0.872						
5 There is a strong likelihood that I will buy slow fashion products	3.29	0.85	-0.22	0.31	0.766	0.723
6 I will purchase slow fashion products	3.33	0.81	-0.15	0.45	0.716	0.774
7 I would consider buying slow fashion products	3.65	0.79	-0.52	0.72	0.851	0.632

**Table 10.** Perceived customer value, purchase intention, willingness to pay a price premium—total frequencies and Cronbach's alpha.

#### Table 10. Cont.

Variables and items	M (1–5)	SD	Sk	Kr	a if item deleted	Corrected total item correlation
Willingness to pay a price premium						
CR = 0.884; AVE = 0.718; AVE square roots = 0.847 8 Buying slow fashion products seems smart to me even if	3.45	0.84	-0.33	0.28	0.776	0.605
they cost more	3.45	0.04	0.55	0.20	0.770	0.005
9 I would still buy slow fashion products even if other brands were on sale	2.98	0.91	0.01	0.02	0.740	0.641
10 I am ready to pay a higher price for slow fashion products	3.04	0.95	-0.09	-0.32	0.667	0.709

*M* = mean; *SD* = standard deviation; *Sk* = skewness; *Kr* = kurtosis; α = Cronbach's alpha.

#### **Purchase Intention**

Table 10 presents the descriptive statistics of the items and the total purchase intention dimension for the total sample. The values of skewness and kurtosis ensure the normal distribution. Item 3 ("I would consider buying slow fashion products") presents the highest value, and item 1 ("There is a strong likelihood that I will buy slow fashion products") the lowest. The correlations among the three items range from r = 0.559 (p < 0.001) to r = 0.741 (p > 0.001). This dimension shows a good value for Cronbach's alpha. Item 3 is the only one whose removal results in an increase in the value of Cronbach's alpha.

Fit indices for both the total model and each country's model are documented in Table 11. Although both models (the total sample and the Portuguese sample) have a chi-square value divided by degrees of freedom that exceeds the recommended threshold (<2), the other indicators indicate a good fit. Table 12 displays the results for measurement invariance of purchase intention across different countries. Once again, no configural, metric, or scalar invariance was found.

**Table 11.** Perceived customer value, purchase intention, willingness to pay a price premium fit indexes for total sample and different countries' samples.

Variable/	Fit ind	Fit indexes of models <sup>1</sup>											
Sample	$\chi^2$	df	$\chi^2/df$	р	CFI	GFI	AGFI	TLI	RMSEA (90% CI)	PCLOSE	SRMR		
PCV													
Total	3.928	1	3.928	0.047	0.999	0.999	0.991	0.993	0.029 (0.003–0.062)	0.822	0.006		
Portugal	2.881	1	2.881	0.090	0.999	0.999	0.998	0.992	0.033 (0.000–0.080)	0.638	0.006		
Czech Republic	0.241	1	0.241	0.624	1.000	1.000	0.999	1.003	0.000 (0.000–0.051)	0.994	0.002		
PI													
Total	8.611	1	8.610	0.003	0.998	0.998	0.994	0.995	0.047 (0.022–0.079)	0.489	0.007		
Portugal	5.427	1	5.427	0.020	0.998	0.998	0.903	0.995	0.051 (0.016–0.096)	0.401	0.008		
Czech Republic	0.119	1	0.119	0.730	1.000	0.956	0.929	1.001	0.000 (0.000-0.046)	0.963	0.001		

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#### Table 11. Cont.

Variable/	Fit inde	Fit indexes of models <sup>1</sup>											
Sample	$\chi^2$	df	χ²/ <i>df</i>	р	CFI	GFI	AGFI	TLI	RMSEA (90% CI)	PCLOSE	SRMR		
WPP													
Total	26.779	1	26.779	0.000	0.992	0.992	0.976	0.977	0.087 (0.061–0.107)	0.012	0.059		
Portugal	16.102	1	16.102	0.000	0.991	0.991	0.971	0.973	0.094 (0.057–0.136)	0.027	0.067		
Czech Republic	23.607	1	23.607	0.000	0.987	0.987	0.959	0.960	0.117 (0.079–0.160)	0.002	0.067		

<sup>1</sup>Fit indexes were adjusted after residuals correlations of eight items. Abbreviations: PCV = perceived customer value; PI = purchase intention; WPP = willingness to pay a price premium;  $\chi^2$  = chi-square; *df* = degrees of freedom; CFI = comparative fit index; GFI = goodness of fit index; AGFI = adjusted goodness of fit index; TLI = Tucker-Lewis index; RMSEA = root mean square error of approximation; CI = confidence interval; SRMR = standardized root mean square residual.

**Table 12.** Measurement invariance tests of perceived customer value, purchase intention, and willingnessto pay a price premium across countries.

Variable/Test	$\chi^2$	df	$\chi^2/df$	р	CFI	RMSEA (90% CI)	ΔCFI
PCV							
Configural invariance	3.121	2	1.561	0.210	1.000	0.013 (0.000–0.039)	-
Metric invariance	97.697	5	19.539	0.000	0.967	0.074 (0.062–0.087)	0.033
Scalar invariance	209.759	9	23.307	0.000	0.928	0.081 (0.072–0.091)	0.039
PI							
Configural invariance	314.840	4	78.710	0.000	0.935	0.152 (0.138–0.166)	-
Metric invariance	531.179	7	75.883	0.000	0.890	0.149 (0.138–0.160)	0.045
Scalar invariance	571.426	8	71.428	0.000	0.882	0.144 (0.134–0.155)	0.008
WPP							
Configural invariance	39.709	2	19.855	0.000	0.989	0.075 (0.056–0.096)	-
Metric invariance	42.891	3	14.297	0.000	0.988	0.063 (0.047–0.080)	0.001
Scalar invariance	182.663	6	30.444	0.000	0.948	0.093 (0.082–0.105)	0.040

Abbreviations: PCV = perceived customer value; PI = purchase intention; WPP = willingness to pay a price premium;  $\chi^2$  = chi-square; *df* = degrees of freedom; CFI = comparative fit index; RMSEA = root mean square error of approximation; CI = confidence interval;  $\Delta$ CFI = adjusted comparative fit index.

#### Willingness to Pay a Price Premium

Table 10 presents the descriptive statistics of the items and the total willingness to pay a price premium dimension for the total sample. The values of skewness and kurtosis ensure the normal distribution. Item 1 ("buying slow fashion products seems smart to me even if they cost more") presents the highest value, and item 2 ("I would still buy slow fashion products even if other brands would be on sale"), is the lowest. Correlations between the three items range from r = 0.501 (p < 0.001) to r = 0.635 (p > 0.001). This dimension presents a good value of Cronbach's alpha.

Fit indices for the total and each country's models can be found (Table 11). The three models (total sample, the Portuguese, and the Czech sample) present a value of  $\chi^2$  divided by degrees of freedom above that recommended (<2) and the value of PCLOSE below that recommended ( $\geq 0.050$ ), although the remaining indicators present a good adjustment. Finally, Table 12 presents the results for measurement invariances of the willingness to pay a price premium across the country level. Once more, no configural, metric, or scalar invariance were found.

All variables in this study—COSF, LOHAS, perceived customer value, purchase intention, and willingness to pay a price premium—are positively and significantly correlated with each other.

#### **Multiple Regressions**

Income, equity, authenticity, functionality, localism, exclusivity (COSF), spiritual health, environmentalism, and social consciousness (LOHAS) altogether explain 33% of the outcome variable perceived customer value (Table 13). The variable that contributes most to explaining the perceived customer value is exclusivity (COSF). Gender, age, education, country, equity, authenticity, functionality, localism, environmentalism, social consciousness, and perceived customer value altogether explain 50% of the dependent variable purchase intention (Table 13). The perceived customer value is the variable that most contributes to explaining purchase intention. In addition, gender, country, income, equity, authenticity, functionality, localism, exclusivity (COSF), physical fitness (LOHAS), perceived customer value, and purchase intention explain 54% of the dependent variable willingness to pay a price premium (Table 13). The variable that most contributes to pay a price premium is purchase intention. Thus, hypothesis H2 is confirmed.

Variables	Model	1		Model	2		Model 3			Model 4		
	В	β	VIF	В	β	VIF	В	β	VIF	В	β	VIF
PCV												
Age	-0.001	-0.026	1.004	-0.001	-0.025	1.03	-0.001	-0.028	1.035	-	-	-
Income	0.012	0.015	1.004	0.020	0.026	1.018	0.023	0.029	1.022	-	-	-
COSF Equity	-	-	-	0.150	0.205	1.365	0.114	0.156	1.578	-	-	-
COSF Authenticity	-	-	-	0.082	0.102	1.701	0.067	0.083	1.732	-	-	-
COSF Functionality	-	-	-	0.126	0.132	1.271	0.116	0.122	1.313	-	-	-
COSF Localism	-	-	-	0.142	0.184	1.590	0.120	0.156	1.652	-	-	-
COSF Exclusivity	-	-	-	0.133	0.215	1.123	0.128	0.207	1.135	-	-	-
LOHAS Spiritual Health	-	-	-	-	-	-	0.039	0.071	1.120	-	-	-
LOHAS Environmentalism	-	-	-	-	-	-	0.086	0.097	1.866	-	-	-
LOHAS Social Consc.	-	-	-	-	-	-	0.026	0.028	1.497	-	-	-
$R^2$ ( $R^2$ Adjusted)	0.001 ((	).000)		0.315 ((	).313)		0.329 (0.	328)		-		
F for change in $\mathbb{R}^2$	1.614			308.786	)**		24.738**	¢				

**Table 13.** Variables that contribute to perceived customer value, purchase intention, and willingness to pay a price premium.

#### Table 13. Cont.

Variables	Model 1			Model	Model 2			Model 3			Model 4		
	В	β	VIF	В	β	VIF	B	β	VIF	B	β	VIF	
Purchase intention													
Gender	0.287	0.025	0.194	0.079	0.022	0.054	0.079	0.022	0.054	0.062	0.019	0.042	
Age	-0.003	0.001	-0.055	-0.004	0.001	-0.077	-0.004	0.001	-0.071	-0.002	0.001	-0.048	
Education	0.071	0.025	0.048	0.074	0.021	0.051	0.046	0.021	0.032	0.054	0.018	0.036	
Country	0.052	0.024	0.036	0.201	0.022	0.141	0.225	0.022	0.158	0.209	0.019	0.146	
COSF Equity	-	-	-	0.231	0.014	0.267	0.174	0.015	0.201	0.101	0.013	0.116	
COSF Authenticity	-	-	-	0.141	0.018	0.148	0.120	0.018	0.126	0.062	0.015	0.065	
COSF Functionality	-	-	-	0.120	0.018	0.107	0.104	0.018	0.092	0.059	0.016	0.052	
COSF Localism	-	-	-	0.184	0.017	0.202	0.159	0.017	0.174	0.080	0.015	0.088	
LOHAS Environmentalism	-	-	-	-	-	-	0.228	0.020	0.216	0.175	0.018	0.166	
LOHAS Social Consc.	-	-	-	-	-	-	-0.059	0.019	-0.053	-0.081	0.016	-0.074	
PCV	-	-	-	-	-	-	-	-	-	0.560	0.017	0.474	
R² (R² Adjusted)	0.044 ((	).043)		0.318 ((	).317)		0.344 (0.342)			0.504 (0.502)			
F for change in R <sup>2</sup>	30.003*	*		339.049	)**		64.584**	*		1089.74	9**		

I for change in h	00.000			000.01	,		01.001			1000.71	0	
WPP												
Gender	0.201	0.027	0.127	-0.022	0.023	-0.014	-0.024	0.023	-0.015	-0.062	0.019	-0.039
Country	0.080	0.027	0.052	0.241	0.024	0.158	0.258	0.024	0.169	0.173	0.020	0.113
Income	0.077	0.017	0.077	0.071	0.014	0.071	0.068	0.014	0.067	0.055	0.012	0.055
COSF Equity	-	-	-	0.265	0.015	0.286	0.247	0.016	0.266	0.118	0.013	0.127
COFS Authenticity	-	-	-	0.131	0.019	0.128	0.125	0.019	0.122	0.052	0.016	0.051
COSF Functionality	-	-	-	0.044	0.019	0.036	0.038	0.019	0.031	-0.052	0.016	-0.043
COSF Localism	-	-	-	0.207	0.018	0.212	0.197	0.018	0.202	0.091	0.015	0.093
COSF Exclusivity	-	-	-	0.120	0.012	0.152	0.117	0.012	0.149	0.056	0.010	0.071
LOHAS Physical Fitness	-	-	-	-	-	-	0.083	0.014	0.088	0.047	0.012	0.050
PCV	-	-	-	-	-	-	-	-	-	0.256	0.021	0.202
Purchase intention	-	-	-	-	-	-	-	-	-	0.440	0.017	0.411
$R^2$ ( $R^2$ Adjusted)	0.027 (	0.026)		0.335 (	0.334)		0.342 (0	.340)		0.540 (0	.539)	
F for change in $\mathbb{R}^2$	30.669	**		313.309	)**		32.916*	*		726.571	**	

Abbreviations: PCV = perceived customer value; WPP = willingness to pay a price premium; LOHAS Social Consc. = LOHAS social consciousness; B = unstandardized coefficients; β = standardized coefficient; VIF = variance inflation factor. \*\* The correlation is significant at the 0.01 level (2-tail).

#### Differences

Participants who have already bought slow fashion products are younger (M = 30.08; SD = 13.72) (t(3378) = 2.659; p = 0.008; d = 13.99) than those who have not (M = 31.36; SD = 14.26). Significantly more women (70.6%) than men (29.4%) bought slow fashion products ( $\chi^2(1) = 76.688; p < 10^{-10}$ 0.001;  $\Phi$  = 0.151). Significantly more participants with satisfactory perception concerning income (57.6%) than those with sufficient perception (27.5%) or insufficient perception (6.3) bought slow fashion products ( $\chi^2(3)$  = 50.225; p < 0.001;  $\Phi$  = 0.122). Participants from the Czech Republic bought slow fashion products (60.8%) significantly more than Portuguese participants (41.8%) ( $\chi^2(1) = 121.095$ ; p < 0.001;  $\Phi = 0.189$ ). No differences were found concerning education and professional status.

Participants who have already bought slow fashion products present higher means in COSF subscales, LOHAS subscales, perceived customer value, purchase intention, willingness to pay a price premium, and willingness to recommend variables than those who have not (Table 14). Therefore, H3 is confirmed.

Scales/Sub-scales	Have bought slow fashion products?	n	М	SD	t	df	р	d
COSF Total	No	1657	3.41	0.51	-15.49	3378.000	<0.001	0.51
	Yes	1723	3.68	0.51				
COSF Equity	No	1657	3.11	0.82	-12.50	3378.000	<0.001	0.80
	Yes	1723	3.45	0.79				
COSF Authenticity	No	1657	3.58	0.76	-13.50	3378.000	< 0.001	0.73
	Yes	1723	3.92	0.70				
COSF Functionality	No	1657	3.95	0.64	-8.47	3378.000	< 0.001	0.63
	Yes	1723	4.13	0.61				
COSF Localism	No	1657	3.47	0.77	-8.10	3378.000	< 0.001	0.77
	Yes	1723	3.68	0.78				
COSF Exclusivity	No	1657	2.93	0.95	-8.59	3376.984	< 0.001	0.96
	Yes	1723	3.21	0.97				
LOHAS Total	No	1657	3.38	0.53	-8.99	3334.425	< 0.001	0.51
	Yes	1723	3.53	0.49				
LOHAS Physical Fitness	No	1657	3.19	0.83	-5.49	3346.251	< 0.001	0.80
	Yes	1723	3.34	0.78				
LOHAS Mental Health	No	1657	3.45	0.80	-4.86	3332.220	< 0.001	0.77
	Yes	1723	3.58	0.74				
LOHAS Emotional Health	No	1657	3.61	0.80	-3.15	3340.181	< 0.001	0.77
	Yes	1723	3.69	0.74				
LOHAS Spiritual Health	No	1657	2.74	1.10	-2.24	3378.000	< 0.001	1.09
	Yes	1723	2.82	1.07				
LOHAS Environmentalism	No	1657	3.44	0.68	-10.46	3378.000	< 0.001	0.66
	Yes	1723	3.68	0.65				
LOHAS Social Consciousness	No	1657	3.71	0.66	-4.44	3344.143	< 0.001	0.64
	Yes	1723	3.81	0.62				
Perceived Customer Value	No	1657	3.13	0.56	-14.27	3368.077	<0.001	0.58
	Yes	1723	3.42	0.61				
Purchase Intention	No	1657	3.16	0.65	-22.53	3377.766	<0.001	0.66
	Yes	1723	3.68	0.67				
Willingness to Pay a Price	No	1657	2.92	0.70	-18.29	3374.970	<0.001	0.73
Premium	Yes	1723	3.38	0.75				

**Table 14.** Differences concerning having or not bought slow fashion products.

n = frequencies; M = mean; SD = standard deviation; t = t-test; df = degrees of freedom; p = p-value; d = Cohen's d.

#### DISCUSSION AND CONCLUSIONS

This research explores various dimensions of slow fashion consumption, focusing on the COSF and LOHAS models. It also examines the psychometric properties of the scales, measurement invariance across countries (Portugal and Czech Republic), and convergent and discriminant validity. The results reveal key findings that contribute to our understanding of slow fashion consumption and provide insights for academic research and management. By examining the invariance of the COSF and LOHAS scales in Portugal and the Czech Republic, this study confirms their cross-cultural applicability while identifying regional differences in variable prioritization.

The COSF scale's psychometric properties are generally robust, with good reliability (as indicated by Cronbach's alpha) and factorial validity across the total sample and the two countries. The descriptive statistics show that the items within the COSF scale exhibit normal distributions, ensuring the robustness of the data. The subscale functionality had the highest mean score, while exclusivity had the lowest mean, suggesting that consumers place higher importance on the practicality of clothing than on the exclusivity of fashion items. The correlation between some items was below the recommended threshold, which calls for further refinement of the scale to ensure stronger item interrelationships, particularly between functionality and exclusivity.

Factorial validity of the COSF model showed good fit indexes for the total sample, with minor issues in the Portuguese and Czech models regarding the PCLOSE value. This indicates that while the overall model is valid, country-specific variations may require consideration when applying the COSF scale cross-nationally. Furthermore, the measurement invariance tests revealed that while the configural and metric invariances were supported across countries, scalar invariance was not achieved. In terms of convergent and discriminant validity, the results indicate strong support for the scale's validity. All subscales met the threshold for composite reliability and average variance extracted (AVE), except for exclusivity, which showed weak correlations with other subscales. Discriminant validity was also supported, as the square roots of the AVE for each subscale were greater than their intercorrelations, except between functionality and exclusivity, which may indicate that these two subscales overlap in some aspects of measurement.

Similarly, the LOHAS scale demonstrated partial metric invariance, with environmentalism and social consciousness emerging as universal drivers of sustainable consumption. However, Portuguese consumers showed stronger ties between spiritual health (r = 0.251, p < 0.001) and purchase intentions, suggesting that ethical fashion resonates with deeper cultural values of community well-being. These findings are aligned with Batrancea et al.'s [13] post-pandemic observations, where Southern European nations linked sustainability to collective responsibility more strongly than their Central European counterparts. Still concerning the

LOHAS scale, the descriptive statistics showed normal distributions for all items, with the social consciousness subscale presenting the highest mean score and the spiritual health subscale presenting the lowest mean. This suggests that, in general, consumers in the sample are more focused on societal and environmental issues than on spiritual or emotional health. Notably, item four of the emotional health subscale was found to have a low correlation with the total scale, and its removal improved the reliability of the subscale, suggesting a possible lack of alignment with the other items within the scale.

The fact that the variance of perceived customer value is explained by COSF variables as well as the behavior outcomes, i.e., purchase intention and willingness to pay a price premium, supports Jung and Jin's [18] assertion that slow fashion's economic viability hinges on translating ethical attributes into tangible value propositions. However, to a lesser extent, LOHAS variables are also sources of customer value and influence purchase intention and willingness to pay a price premium.

COSF and LOHAS variables collectively explained 33% of perceived customer value, 50% of purchase intention, and 54% of willingness to pay price premiums. Exclusivity emerged as the strongest COSF predictor of perceived value, underscoring its role in differentiating slow fashion from mass-market alternatives [18]. Perceived customer value itself mediated 47.4% of the variance in purchase intention, reinforcing Sweeney and Soutar's [36] model, where ethical and functional benefits enhance economic viability.

The results of this study highlight significant differences between participants who have already purchased slow fashion products and those who have not. The findings shed light on the distinct profile of slow fashion consumers and have important implications for both marketers and researchers aiming to understand and engage this growing market segment.

The demographic analysis reveals that participants who have purchased slow fashion products are younger (*M* = 30.08 years) than those who have not (M = 31.36 years), with this difference being statistically significant. Gender also plays a substantial role in slow fashion consumption, with significantly more women (70.6%) than men (29.4%) purchasing slow fashion products. This finding is aligned with existing research showing that women are generally more likely to make sustainable purchases, possibly due to greater concerns about the environmental impact of consumer behavior and higher interest in fashion as a form of self-expression [3]. Income perception further differentiates the two groups, with participants who have a satisfactory income perception (57.6%) being significantly more likely to purchase slow fashion products than those with insufficient income perception (6.3%). The regional differences also reveal that participants from the Czech Republic are more likely to have purchased slow fashion products (60.8%) than Portuguese participants (41.8%). This could reflect cultural,

economic, or regional differences in awareness and acceptance of slow fashion, with some markets being more receptive to sustainability-driven fashion trends than others.

Watson and Yan [29] suggested numerous differences between slow and fast fashion consumers, for example, in reasons for their purchase, long-term satisfaction with the purchased clothes, and the way they deal with divestment. It is our experience that respondents who have already bought slow fashion products also present higher means in COSF and LOHAS subscales than those who have not. At the same time, Barbarossa [48] compared two types of consumers: those seeking environmental protection when shopping (ecological consumers) and those who ignore this issue. In this context, it was confirmed that for the first group, along with emphasizing the environmental consequences of purchasing, there was also a higher desire to accept "less comfort in purchase".

# Originality and Implications for Theory and Practice

The findings of this study advance our understanding of slow fashion adoption by validating critical theoretical frameworks and revealing nuanced consumer behavior patterns across distinct cultural contexts. The study breaks new ground both theoretically and practically by conducting a cross-cultural validation of the COSF and LOHAS scales in Portugal and the Czech Republic. The dual-scale approach bridges gaps between consumer behavior theory and cultural psychology, offering a nuanced model for analyzing how sustainability values translate into economic actions. Understanding the differences between Portuguese and Czech consumers in terms of sociodemographic profiles and slow fashion consumption behavior provides valuable insights for designing tailored marketing strategies. Managers can leverage these insights to create region-specific campaigns that emphasize the values that resonate most with each market, such as sustainability in Portugal and exclusivity in the Czech Republic.

Given the diverse consumer motivations highlighted by the study such as environmental sustainability, authenticity, and localism managers can develop personalized offerings for different consumer segments. For example, brands can segment their target audience based on values like health consciousness (LOHAS) or equity (COSF) and customize product features, branding, and communication messages to match the specific preferences of each segment.

Managers can use the study's insights on the importance of values such as authenticity, sustainability, and exclusivity to guide product development. For instance, brands might introduce new lines that emphasize sustainable materials, ethical production practices, and unique, limited-edition products to appeal to consumers who value these attributes.

For companies looking to expand into international markets, the research provides valuable information on how consumer values may differ across countries. Managers can apply these insights when deciding how to enter new markets, ensuring that their offerings and marketing messages are tailored to the specific cultural and economic conditions of the target market. Understanding the nuances of consumer behavior in different regions can help avoid missteps and improve the chances of success in international markets.

# **Limitations and Future Directions**

The study is limited to participants from only two countries (Portugal and the Czech Republic), which are not representative of global populations. Therefore, the results may not be generalizable to other regions or cultural contexts. The data is based on self-reported questionnaires, which may be influenced by response biases like social desirability or recall bias, potentially impacting the accuracy of the responses. While efforts were made to balance sociodemographic variables, there are significant differences between the two countries in terms of age, education, and income perception, which may influence consumer behavior in ways not fully accounted for. The study specifically focuses on slow fashion, and while this niche market is growing, the findings may not apply to broader fashion consumption behaviors. Additionally, the cross-sectional design precludes causal inferences; longitudinal studies could track how economic fluctuations or policy changes (e.g., EU textile waste regulations) reshape purchase intentions.

Future studies could explore the role of other sociodemographic variables or expand to a more diverse set of countries or other geographical regions to validate the findings and assess the broader applicability of the slow fashion consumer behavior models. The study also provides a strong foundation for future research in the field of sustainable consumer behavior. By revealing the underlying drivers of slow fashion consumption, it opens avenues for deeper investigation into the role of technology in sustainable fashion choices or the impact of social media on consumer values related to sustainability.

# DATA AVAILABILITY

The dataset of the study is available from the authors upon reasonable request.

# **AUTHOR CONTRIBUTIONS**

Conceptualization, JM, MZ and YY; Methodology, JM, MZ and YY; Formal Analysis, JM, MZ and YY; Writing—Original Draft Preparation, JM, MZ and YY; Writing—Review & Editing, JM, MZ and YY.

# **CONFLICTS OF INTEREST**

The authors declare that there is no conflict of interest.

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