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Exploring Apparel E-Commerce Unethical Return Experience: A Cross-Country Study

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Abstract: This study examines the relationships between socio-demographic factors, purchase frequency, internet expertise, and unethical return behavior in apparel e-commerce, with a particular focus on the act of wardrobing—wearing and then returning used apparel. The research involved a survey of 1026 online apparel consumers from Portugal and the Czech Republic. The results show that frequent buyers, internet-savvy users, women and younger e-consumers report more satisfactory return experiences. However, several e-consumers engage in wardrobe shopping, with higher rates observed among males, internet-savvy users and youth. There are differences between the countries studied: in the Czech sample, men and advanced internet users are more likely to engage in wardrobing, while in the Portuguese sample, it is more prevalent among younger e-consumers. The results also document that, overall, men are seven times more likely to practice unethical return, while increasing age decreases the likelihood. The originality of the study lies in its approach and findings, which contribute to the understanding of post-purchase behavior and moral hazards in e-commerce and highlight the need for retailers to balance return policies that prevent abuse while maintaining customer satisfaction. Recommendations are made for improving loyalty programs and personalizing the e-shopping experience to minimize returns and promote ethical consumer behavior. Further research is suggested to develop these findings and improve return management in apparel e-commerce.

Keywords: wardrobing; unethical behavior; moral hazard; online apparel customer experience

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1. Introduction

Shopping on business-to-consumer (B2C) e-commerce platforms grew to an estimated USD 7.1 billion in 2023 and is expected to grow at a 13.8 percent compound annual growth rate until 2028, e.g., [1,2].

The expansion of online retailing has led to an increase in product returns from risk-averse customers, who, as they are unable to check ex ante if the goods meet their expectations, end up returning them, e.g., [3]. According to Janssen and Williams [4], the sale value of returned merchandise in 2020 in relation to online retail was "approximately $102 billion and 18% of online sales".

Typically, online shopping transactions are binding contracts in which the parties are asymmetrically informed, and the better informed party (BIP) has incentives to behave opportunistically to exploit their informational advantage, either ex ante or ex post contract execution, e.g., [5,6].

Under this asymmetric information framework, online shopping transactions are prone to both sellers and buyers' unethical behavior by hiding information or future actions detrimental to the informationally disadvantaged counterparty, respectively, e.g., [1,5,7–10].

Despite the exponential growth in B2C e-commerce, the empirical study of the behavioral ethics of e-commerce market participants has been developing at a slower pace, whereas the literature on the behavioral ethics of sellers has been developing at a steadily pace. Concerning the supply side of the market, the examination of e-retailers' unethical behavior, and its implications on customers' buying experience and satisfaction, has received a sizable amount of attention from scholar research [8,11–13]. In contrast, a scholarly examination of e-buyers' ethical behavior in online markets has been lagging. However, on the demand side of the market, we were unable to find prior research on the effects of unethical e-seller behavior on online customers' experience and satisfaction; see, e.g., [9] for an examination of unethical customer behavior on frontline shopping.

In this paper, we aim at contributing to narrow that research gap, examining the perceived unethicality of customer behavior of two samples of Portuguese and Czech consumers' online experience of returning online purchased apparel goods and the associations between return experience, purchasing frequency, and internet expertise, and sociodemographic characteristics. Furthermore, we explore the factors that determine wardrobing behavior. The originality of our study lies in its exploration of how wardrobing behavior relates to the return experience, thereby contributing to narrowing the literature gap.

Under the presumption that return guarantees are costly to ethical sellers, buyers' recurring unethical behavior may lead sellers to curtail or discontinue return warranties, or even to exit the market, leading to consumer surplus erosion and potential adverse welfare effects [5,14–16].

As such, the primary research question of this study is whether the online return experience related to apparel is associated with sociodemographic characteristics, purchasing frequency, and internet expertise and if wardrobing behavior is explained by these variables and differs among the consumers who have/have not engaged in this behavior before. For this purpose, we apply the online return experience scale to the Czech and Portuguese samples and perform a measurement invariance analysis to ensure the associations among the variables in our study persist regardless of the country.

Overall, our findings document, based on frequency and internet expertise, the following: (i) Czech and Portuguese e-buyers have similar online apparel purchasing behavior; (ii) women and younger consumers found their return experiences satisfactory and seamless; (iii) we found that as many as 13.8 percent of the surveyed e-consumers engaged in unethical behavior by returning worn apparel; (iv) men, younger consumers and internet-savvy users were more likely to engage in unethical behavior; (v) in the Czech sample, men and advanced internet users were more prone to wardrobing, while in the Portuguese sample, younger consumers were more likely to engage in this behavior; and (vi) for the total sample, we found, in contrast with prior research, that men are more likely to engage in unethical returns than women.

The remainder of the paper is organized as follows. The following section presents a literature review. The Methods Section develops the hypotheses of the study and describes the instruments and analyses used, followed by the documentation and discussion of the results. The paper concludes with a summary of the findings, the main conclusions, and future research opportunities.

2. Literature Review

Returning e-purchased goods may involve moral hazard behavior whenever the buyer, ex ante, intends to buy goods and return them to the seller after they have used them temporarily, demanding a refund or credit [17]. This illegitimate return phenomenon constitutes opportunistic unethical behavior, known as wardrobing, prevailing in the online apparel trade [18–20].

Scholarly research on return policies for purchased goods has predominantly adopted the perspective of retailers, aiming to devise return policies that not only bring multifaceted benefits but also streamline the return process, assess the value of returned products, and minimize return rates [21,22]. From the consumer perspective, research has largely focused on how the comprehensiveness of a return policy influences their perceived fairness, quality assessment, risk, trust in the retailer, brand image, and consequent buying intentions [17,23,24]. However, there is a notable lack of research examining the comprehensive moral decision-making process of consumers when confronted with varying return policies, which underscores a critical area for future research, necessitating a more nuanced understanding of consumer behavior in the context of return policies [17,25].

In practice, a flexible return policy set up by vendors to attract customers and provide them with a better online customer experience (OCX), while designed to enhance customer satisfaction and trust, may inadvertently encourage a subset of consumers to exploit this system through unethical return practices [17]. These practices, often driven by self-serving objectives, not only breach the retailer's return guidelines but can also impose additional costs and logistical challenges on the business [24]. Although such behavior is typically carried out by a minority of customers, it is necessary to develop strategic policies that balance consumer flexibility with safeguards against policy abuse [26].

2.1. Asymmetric Information in E-Commerce Markets

Online commerce is prone to asymmetric information conflicts; because of their specific informational endowments buyers and sellers are differentially informed, e.g., [6,27].

Under this framework, the better informed party (BIP) has the incentive to opportunistically exploit his/her informational advantage, either in the form of adverse selection or moral hazard behavior. Under this framework, online shopping transactions are prone the unethical behavior of both sellers and buyers.

In an e-commerce buying transaction, a lesser informed party (LIP) may be faced with an adverse selection problem if they prefer to trade a good with specific attributes, but if the BIP does not disclose such information, the LIP may face a selection problem. Likewise, adverse selection problems can be, in general, mitigated by signaling BIP's private information, e.g., [5,28].

Moral hazard behavior occurs whenever, ex post transaction closing, e-buyers hide their intent to become involved in actions otherwise detrimental and undesirable for informationally disadvantaged e-sellers when the verification of e-buyers' true characteristics is costly or even impossible. Hence, moral hazard behavior is a material impediment to the dependable flow of information among market participants, with relevant implications for economic allocative efficiency, which might be mitigated through incentive mechanisms [16,29,30].

2.2. Apparel Online Customer Experience

Prior research argues that the study of online customer experience (OCX) can be usefully approached, examining customers' behavior along their shopping journey across three stages: pre-purchase, purchase, and post-purchase stages, e.g., [6].

In the post-purchase stage, OCX is defined as the experience after the placing of the order and ceases with the consumption or return of the product [31]. A fulfilling post-purchase OCX can foster customer loyalty, encouraging repeat purchases and increasing overall customer satisfaction [32,33]. Consequently, it is incumbent upon e-commerce leaders in the apparel industry to prioritize and refine post-purchase strategies that build lasting customer relationships through post-sale value creation.

The implementation of a product return guarantee can significantly enhance consumer attraction by mitigating the perceived financial and psychological risks associated with purchasing [21]. This strategy taps into the behavioral tendency of consumers to avoid loss, making them more confident and comfortable in proceeding with a transaction; by offering a safety net, businesses can increase customer trust and satisfaction, which in turn may

lead to a higher sales volume and customer loyalty [24]. Products purchased online may occasionally be returned to the retailer, creating logistics and marketing issues.

Some consumers purchase prudently, assessing the value and availability of the product before making any decision according to the expected utility [34]. However, even these, and other less prudent consumers, may return items because there is an inconsistency between the product description and the actual product or because they have purchased impulsively, by mistake, or under the influence of other people. Further reasons may be due promotions and discount campaigns, because they since lost interest in the product, they were dissatisfied with the quality of the product, there were problems with the delivery or because of changing needs or preferences [19,35,36].

Some consumers may experience post-purchase dissonance, especially if the chosen product does not meet their expectations or the expected functions are inadequate or if they are dissatisfied with the price paid or the service provided [37]. However, the quality issues related to the products do not always justify their return; other factors, such as the delivery of the wrong or similar products with different specifications, purchase price, elapsed shipping time, or "variety-seeking" shopping behavior, can cause consumers to make unintentional returns, which are considered to be genuine [38]. The reasons behind the return of products purchased online identified by Frei et al. [39] and Abdulla et al. [19] include late delivery, the delivery of an incorrect, damaged product, an unacceptable substitute product, an item lost during transport, the wrong image or online description, a missing item, a manufacturing fault or defect, the inability to assemble or use the product by the customer, the customer changes their mind, the wrong size or characteristics, an inappropriate product (does not fit the customer), an unwanted gift, a refused delivery, a product found cheaper or a faster delivery at another retailer, a discrepancy between the expectations created and the actual product, the product is no longer needed, and the product is ordered to try it out, among other reasons.

In the realm of online retail, the return process is a significant factor that influences customer decisions. Unlike traditional retail, customers do not have the opportunity to physically inspect or try products before purchase, which increases the likelihood of returns [40]. Online retailers providing a straightforward and customer-friendly return process can reduce the perceived risk associated with online shopping, encouraging more frequent purchases. For example, clear return policies and efficient logistics for returning products can enhance customer confidence in the online shopping process [41].

To mitigate the risk of picking the wrong size, many consumers order more than one piece of the same clothing and only then decide which style, size, or color best suits their desires and needs, selecting the ones to keep and the others to return [37,42,43]. This type of practice, called bracketing, is considered a safety mechanism that provides consumers with acceptable purchasing behavior [30,37,44]. The greater the uncertainty about product quality, the more likely a consumer will return the product [44].

The increase in preference for online shopping, where it is easy to compare prices and customers have almost unlimited access to internal and external markets, in addition to a risk-free shopping experience, has influenced the returns of items purchased online [39]. The money-back guarantee and free returns also help to improve consumer confidence in the vendor, encouraging them to try new products and services and thus boosting sales; consumers value and are willing to pay more for products when retailers offer these options [45,46].

2.3. Unethical Returns (Wardrobing)

Paradoxically, the quality of products has improved in recent years, but the volume of returns has also increased; consumers return products even before they feel dissatisfied, although the products do not have defects [37,47]. Returns without justification to obtain benefits such as partial refunds, discounts, or complimentary products constitute opportunistic consumption behavior [23], which can be influenced by the ease of return, type of store return policy, quality of the product and perception of the product value [47].

Kang and Gong [48] state that some consumers may engage in unethical behaviors, such as fraud, vandalism, rude or aggressive behavior, excessive complaints or an abuse of complaints due to dissatisfaction with the product or service and negative experiences, stemming from one's personality or demographic characteristics or social norms. Other behaviors can be promoted by the absence of adequate security measures or the complexity of return processes [49,50].

One of the reasons why consumers may return a product is the desire to save and have access to luxury products, namely to use the latest trends regularly without having to worry about prices and personal financial resources, or the remorse of harming other consumers, companies, or society as a whole [51,52]. Another increasingly unethical behavior occurs when a consumer buys a product to use for a short period only to return it shortly afterward, claiming a refund or credit. This opportunistic behavior, commonly referred to as wardrobing, is frequent in online clothing commerce, facilitating item returns [18–20]. Products such as clothes, shoes, and accessories, often only needed once for a specific event, are used before being returned [53]. Wardrobing can also be related to the desire to try on clothes before buying, wearing luxury clothing of high quality and prices, or wearing haute couture items sold in branded stores without having to pay the total price [54].

The practice of wardrobing can be influenced by internal consumer factors, such as personal values, reasons, and preferences, as well as by external factors, such as the social, economic, and political context experienced by the consumer [55]. Some studies suggest that such a practice is not perceived as something unethical [51,56].

3. Methods

3.1. Hypotheses Development

3.1.1. Apparel Online Return Experience and Purchase Frequency

A positive return experience enhances customer satisfaction, critical in terms of customer retention and loyalty, which are important predictors of purchase frequency [40]. Furthermore, the return experience has been shown to influence customer behavior beyond the immediate interaction. For instance, customers who find the return process convenient are more likely to engage in repeat purchases and to recommend the retailer to others, thereby expanding the retailer's customer base and increasing sales volume [8]. The psychological comfort that comes from knowing returns are easy and risk-free encourages customers to make more frequent and sometimes higher-value purchases [57]. The ethical dimension of returns, particularly in the context of e-retailers, also affects customer perceptions and behavior. Retailers that transparently communicate their return policies and handle returns ethically are more likely to foster trust and customer loyalty, which, in turn, influence purchase frequency as customers feel more confident in their transactions with the retailer [8].

In light of the above considerations, the first hypothesis is as follows:

H1. There will be significant differences in the return experience according to the online purchase frequency.

Additionally, in order to ensure that the associations between the return experience and the variables in our study persist regardless of the country, we will test measurement invariance.

3.1.2. Sociodemographic Characteristics and Unethical Returns

Gender and age influence the intention to purchase online [58–60]. For example, in clothing and fashion, women are more active online shoppers than men [58], namely of sustainable apparel [61]. Some authors claim that women tend to be more ethical than men [62] and less disposed to fraudulently return items [63], while others state that women return items more systematically and illegitimately [64], usually after a period of time [65] or after reflecting on the purchase [63].

There are notable differences between men and women in their reasons for shopping, behaviors, and responses to online shopping experiences, including return policies. For instance, women are generally more involved shoppers and are likely to spend more time browsing before making a purchase decision, which can lead to a higher likelihood of returns due to dissatisfaction or misaligned expectations [54]; their enhanced level of engagement can give rise to higher expectations, which, if not met, may result in a greater propensity to return items [66]. Conversely, men tend to make quicker decisions and may have lower return rates yet are less tolerant of cumbersome return processes [10]. The differential justification of unethical return behaviors based on gender-based ethical perceptions and attitudes has been observed. For instance, men may be less likely to engage in wardrobing as less emphasis is placed on fashion variability, whereas women, facing social pressures to display a diverse wardrobe, may be more tempted by such opportunities [54].

Younger consumers are more prone to fraudulent returns, but so are middle-aged consumers [63,67]. Empirical evidence suggests that younger consumers may be more prone to engage in wardrobing. This phenomenon can be attributed to a number of factors, including a more exploratory nature, a desire for novel experiences, and a higher propensity to follow rapidly evolving fashion trends [54]. As younger consumers have grown up with technology, they may also have greater expertise in navigating online return systems, which could potentially lead to a more frequent and extensive use of such systems. As digital natives, younger consumers are adept at using online platforms to their advantage, including understanding and potentially exploiting return policies; their familiarity with technology could facilitate repeated fraudulent behavior as they may find and share flaws within return systems [68].

King and Dennis [65] found that consumers with prior fraudulent return experiences are more likely to return to such behavior in the future. Consumers are looking for an effortless shopping experience, including reliable post-purchase services such as returns and refunds. Those who have experienced or are made aware of easy and consumer-friendly return processes may be more likely to engage in fraudulent returns, seeing it as a low-risk activity, especially if they have previously experienced poor return policy enforcement [68]. The expectation of easy returns, familiarity with the process, and the psychological and financial rewards from previous fraudulent behavior could increase the likelihood of future occurrences [68].

Given the existing contradictions in the literature, it can only be concluded that there are differences in apparel return behavior between groups of consumers with different sociodemographic characteristics regarding their propensity to engage in unethical return practices.

Finally, internet-savvy users have easy access to various online retailers, which makes it convenient to purchase clothing and other products from the comfort of their homes [69]. However, this convenience can also lead to increased wardrobing, as returning items purchased online is typically easier than returning items purchased in physical stores. As previously stated, online retailers often have more flexible return policies than brick-and-mortar stores [40]. They often offer generous return windows and free returns, which may encourage internet-savvy users to purchase items and return them after use. Additionally, online shopping provides a certain level of anonymity, making it easier for consumers to adopt wardrobing practices without facing direct scrutiny or judgment from sellers or other customers. In the literature, however, we could not identify a direct correlation between internet expertise and an increased likelihood of wardrobing due to internet expertise. Instead, the implications suggest that the online behavior and social media engagement associated with internet-savvy users could increase the incidence of wardrobing due to social pressure and the desire for newness, rather than internet expertise per se. Consequently, while internet expertise may not be a direct predictor, the associated online behavior and the values influenced by heavy internet use could contribute to such unethical practices. Consumers who are actively engaged online, particularly those who frequently update

their outfits on social platforms, may feel pressured to appear in new attire consistently, which can lead to unethical practices like wardrobing to sustain their online image [54].

As such, the following hypotheses are proposed:

H2. The return experience differs significantly according to consumers' sociodemographic characteristics.

H3. The apparel return experience differs significantly according to consumers' internet expertise.

H4. There will be differences among consumers who engage in wardrobing with regard to sociodemographic characteristics.

H5. Age, gender, and return experience will be predictors of wardrobing practice.

3.2. Procedures

A survey was conducted in the Czech Republic and Portugal based on a questionnaire disseminated online after it was initially tested in a restricted group of 49 university students in Portugal. The result of this test was evaluated by the research team (in Portugal and the Czech Republic), and after careful and minor corrections, the questionnaire was distributed among university students, who were asked to help share it with third parties of diversified characteristics, thus constituting a snowball process and a convenience sample. The responses were collected from 1 November to 14 December 2022. The inclusion criteria for participants in the sample consisted only of being of Portuguese/Czech nationality, being 18 years of age or older, and having made online apparel purchases. All participants were previously informed about the research objectives and were assured of anonymity and data confidentiality, accessing the questionnaires only after expressing their consent. The questionnaires were collected and evaluated, with 310 invalid responses being rejected (incomplete or incorrectly completed); 590 responses were validated in Portugal and 437 in the Czech Republic and then processed in SPSS 28.0.1.0 and SPSS AMOS version 28.0.0.

3.3. Instrument

The questionnaire included items prepared by the authors and items adapted from the literature, translated into Czech and Portuguese, respectively. The questionnaire protocol was established including a section with socio-demographic items, namely gender, age, the level of education, occupation, internet expertise, and income [70,71], and questions organized according to the reasons for returning apparel online, the level of satisfaction concerning the return experience (comprising eight items for the benefit of avoiding a lengthy questionnaire, selected and adapted from the literature), and wardrobing practice (Appendix A—Table A1).

3.4. Data Analysis

The sociodemographic profile of the respondents was first characterized in terms of the total sample and Portuguese and Czech samples using descriptive indicators (mean, standard deviation, and relative frequencies). From the scalar variable of age, a new variable was produced—the generational group (0—Generation Z, aged up to the age 27 years old, 1—Generation Y or Millennials, aged between 28 and 42 years old, 2—Generation X, aged between 43 and 57 years old, and 3—the boomer generation, 58 years old or older). Asymmetry (−3 to +3) and kurtosis (−7 to +7) values were calculated to assess the normality of variable distributions. Factorial analysis (EFA) was applied with the maximum likelihood method with a principal component analysis of the eight items of the variable clothing return experience of online consumers (expdev), using an analysis of orthogonal rotation (Varimax) to obtain a structure of factors for that variable. Sample adequacy was assessed using the Kaiser–Meyer–Olkin value (KMO > 0.8) [72]

and Bartlett's sphericity test ($p < 0.05$) [73]. A confirmatory factor analysis (CFA) with maximum likelihood estimation was performed by applying the corrected Satorra and Bentler chi-square value ($\chi^2 < 3$) using IBM AMOS 28.0.

To assess the overall adequacy of the expdev scale model, the comparative fit index (CFI), Tucker–Lewis index (TLI), and the root mean square error of approximation (RMSEA) were used. The goodness of fit statistics that are used in this study are RMSEA ≤ 0.06, CFI/TLI ≥ 0.95, and SRMR ≤ 0.08 [74]; the PCLOSE measure proposed by Browne and Cudeck is also calculated, which tests the adequacy of the model (>0.05) [75].

The standardized root mean square (SRMR) measure allowed the adequacy of the scale model to be assessed, as it reflects the average dimension of the discrepancies between the observed and expected correlations and should present a value below 0.08 [76]. A measurement invariance of the scale was carried out, comprising configural, metric, and scalar invariance, that is, a configural model (freely estimated all factor loadings and item intercepts across the subsamples of the two countries), a factor-loading-constrained model (constrained factor loadings equally and freely estimated the item intercepts), and a factor-loading and item-intercept-constrained model (constrained the factor loadings and item intercepts equally). The CFI was used to examine whether a configural model was supported, and the ΔCFI was determined to analyze whether the more constrained models were equivalent to the less constrained ones; ΔCFI < 0.01 indicates that the two nested models were equivalent, and, therefore, the measurement invariance across the two countries' subsamples was supported for the tested factor model [77].

Cronbach's alpha value ($\alpha > 0.7$) was used to assess instrument reliability. Since it was intended to determine whether there were statistically significant differences between ordinal and continuous dependent variables, given the non-normality of their distributions by group (verified with the Shapiro–Wilk test), the non-parametric Mann–Whitney U tests were used as well as the Kruskal–Wallis test (according to the number of groups). The statistical significance level was considered $p < 0.05$. A binary logit regression was conducted to find predictors of wardrobing practices amongst consumers that returned clothing. The linearity of the continuous variables with respect to the logit of the dependent variable was assessed via the Box–Tidwell procedure [78]. A Bonferroni correction was applied using all terms in the model [79]. The binary logistic regression results were checked for cases that did not fit the model well; identified outliers were removed. The Nagelkerke R^2 indicator was used to quantify the explained variation in the dependent variable. The respective ROC curve was analyzed to determine the level of discrimination.

4. Results

4.1. The Sample

The total sample (Table 1) comprises 672 women (65.5%) and 354 men (34.5%), with an average of 29.5 years old (*SD* = 12.0). Most have completed a university degree (or are currently attending university), are active, and consider that they receive a satisfactory income. Almost two-thirds are members of Generation Z and declare that they are advanced internet users. Compared to the total sample, the Portuguese one is slightly older (30.1 ± 12.7), comprising a lower percentage of women (61.7%) and Generation Z (60%) and a higher percentage of more educated consumers (57%); in contrast, the Czech sample is slightly younger (28.6 ± 11.1), with a higher percentage of women (70.6%) and Generation Z members (71%) and a lower percentage of higher-educated participants (50%). Table 1 also displays the same characteristics for the subgroup of respondents that declare to have returned clothing purchased online (at least once). In the total, Portuguese, and Czech samples, a comparatively higher percentage of women have already returned garments, with this effect more enhanced in the Czech sample; also, consumers who have returned items are more educated, older, active, and more proficient internet users in all samples.

Table 1. Total, Portuguese, and Czech sample frequencies and differences.

Variable	Total Samples			Respondents Who Returned Samples		
	Total	**POR**	**CZE**	**Total**	**POR**	**CZE**
Gender	***n* (%)**	***n* (%)**	***n* (%)**	***n* (%)**	***n* (%)**	***n* (%)**
Female	672 (65.5)	364 (61.7)	308 (70.6)	460 (71.5)	206 (66.0)	254 (76.7)
Male	354 (34.5)	226 (38.3)	128 (29.4)	183 (28.5)	106 (34.0)	77 (23.3)
Total	1026 (100.0)	590 (100.0)	436 (100.0)	643 (100.0)	312 (100.0)	331 (100.0)
	χ^2	***p***	**Φ**	χ^2	***p***	**Φ**
Difference between POR and CZE	**8.882**	**0.03**	**0.093**	**9.051**	**0.03**	**0.119**
Education	***n* (%)**	***n* (%)**	***n* (%)**	***n* (%)**	***n*(%)**	***n* (%)**
Basic	30 (2.9)	16 (2.7)	14 (3.2)	16 (2.5)	5 (1.6)	11 (3.3)
Secondary/vocational	441 (43.0)	236 (40)	205 (47.0)	270 (42.0)	118 (37.8)	152 (45.9)
Higher education	555 (54.1)	338 (57.3)	217 (49.8)	357 (55.5)	189 (60.6)	168 (50.8)
Total	1026 (100.0)	590 (100.0)	436 (100.0)	643 (100.0)	312 (100.0)	331 (100.0)
	χ^2	***p***	**Φ**	χ^2	***p***	**Φ**
Difference between POR and CZE	5.706	0.058	0.075	**7.212**	**0.027**	**0.106**
Occupation	***n* (%)**	***n* (%)**	***n* (%)**	***n* (%)**	***n* (%)**	***n* (%)**
Inactive	39 (3.8)	19 (3.2)	20 (4.6)	22 (3.4)	7 (2.2)	15 (4.5)
Active	987 (96.2)	571 (96.8)	416 (95.4)	621 (96.6)	305 (97.8)	316 (95.5)
Total	1026 (100.0)	590 (100.0)	436 (100.0)	643 (100.0)	312 (100.0)	331 (100.0)
	χ^2	***p***	**Φ**	χ^2	***p***	**Φ**
Difference between POR and CZE	1.281	0.258	0.035	2.545	0.111	0.063
Income	***n* (%)**	***n* (%)**	***n* (%)**	***n* (%)**	***n* (%)**	***n* (%)**
Insufficient	24 (2.3)	19 (3.2)	5 (1.1)	14 (2.2)	10 (3.2)	4 (1.2)
Low	109 (10.6)	89 (15.1)	20 (4.6)	69 (10.7)	54 (17.3)	15 (4.5)
Sufficient	303 (29.5)	198 (33.6)	105 (24.1)	174 (27.1)	90 (28.8)	84 (25.4)
Satisfactory	529 (51.6)	260 (44.1)	269 (61.7)	341 (53.0)	142 (45.5)	199 (60.1)
High	61 (5.9)	24 (4.1)	37 (8.5)	45 (7.0)	16 (5.1)	29 (8.8)
Total	1026 (100.0)	590 (100.0)	590 (100.0)	643 (100.0)	312 (100.0)	331 (100.0)
	χ^2	***p***	**Φ**	χ^2	***p***	**Φ**
Difference between POR and CZE	**61.586**	**<0.001**	**0.245**	**37.577**	**<0.001**	**0.242**
Internet expertise	***n* (%)**	***n* (%)**	***n* (%)**	***n* (%)**	***n* (%)**	***n* (%)**
Novice	25 (2.4)	15 (2.5)	10 (2.3)	16 (2.5)	8 (2.6)	8 (2.4)
Average user	294 (28.7)	189 (32)	105 (24.1)	184 (28.6)	101 (32.4)	83 (25.1)
Advanced user	529 (51.6)	306 (51.9)	223 (51.1)	320 (49.8)	156 (50)	164 (49.5)
Professional user	178 (17.3)	80 (13.6)	98 (22.5)	123 (19.1)	47 (15.1)	76 (23.0)
Total	1026 (100.0)	590 (100.0)	436 (100.0)	643 (100.0)	312 (100.0)	331 (100.0)
	χ^2	***p***	**Φ**	χ^2	***p***	**Φ**
Difference between POR and CZE	**17.113**	**<0.001**	**0.129**	**8.244**	**0.041**	**0.113**
Generation	***n* (%)**	***n* (%)**	***n* (%)**	***n* (%)**	***n* (%)**	***n* (%)**
Generation Z ($\leq$ 27 years)	664 (64.7)	354 (60.0)	310 (71.1)	396 (61.6)	167 (53.5)	229 (69.2)
Millennials (27 to 42 years)	173 (16.9)	113 (19.2)	60 (13.8)	120 (18.7)	71 (22.8)	49 (14.8)
Generation X (42 to 57 years)	160 (15.6)	105 (17.8)	55 (12.6)	105 (16.3)	62 (19.9)	43 (13.0)
Boomers ($\geq$ 57 years)	29 82.8)	18 (3.1)	11 (2.5)	22 (3.4)	12 (3.8)	10 (3.0)
Total	1026 (100.0)	590 (100.0)	436 (100.0)	643 (100.0)	312 (100.0)	331 (100.0)
	χ^2	***p***	**Φ**	χ^2	***p***	**Φ**
Difference between POR and CZE	**13.660**	**0.003**	**0.115**	**16.814**	**<0.001**	**0.162**
Age	***M* (*SD*); *Min–Max***	***M* (*SD*); *Min–Max***	***M* (*SD*); *Min–Max***	***M* (*SD*); *Min–Max***	***M* (*SD*); *Min–Max***	***M* (*SD*); *Min–Max***
	29.47 (12.0); 18–76	30.1 (12.7); 18–68	28.59 (11.1); 18–76	30.12 (12.1); 18–76	31.4 (12.7); 18–64	28.87 (11.1); 18–76
	t	***p***	***d***	***t***	***p***	***d***
Difference between POR and CZE	**2.016**	**< 0.001**	**0.127**	**2.710**	**0.003**	**0.214**

Note: POR—Portuguese subsample (n = 590); CZE—Czech subsample (n = 436); *N*—frequency; %—percentage; χ^2—chi-square; *p*—*p*-value; Φ—effect size; *M*—mean; *SD*—standard deviation; *Min*—minimum; *Max*—maximum; *t*—t-test; *d*—Cohen's *d* effect size. In **bold**: statistically significant differences.

4.2. Apparel Returns

Most Portuguese and Czech respondents have resorted to returning apparel items purchased from online stores. Table 2 shows the proportion of those who point out each reason for returning an item, which is higher in the Czech sample. The difference in proportions (comparing the Czech sample against the Portuguese samples) is statistically significant for all reasons (except for the "the product arrived very late and was no longer needed" reason), as this was enhanced concerning the following: "The product did not live up to my expectations" (with a difference in proportions of 0.277, $p < 0.001$), "wrong size" (0.243, $p < 0.001$), "I had ordered several pieces (different sizes/colors) to choose the most appropriate one, with the intention of returning the rest" (0.160, $p < 0.001$), "the product did not correspond to the description/photos" (0.148, $p < 0.001$), and "the product was damaged/ defective" (0.107, $p < 0.001$). The item the respondents indicated as the primary reason for making a return was "Wrong size".

Table 2. Reasons for returning apparel and differences between Portuguese and Czech samples.

Reason	Sample	No *Freq. (%)*	Yes *Freq. (%)*	χ^2	*p*	Φ
Wrong size.	POR	340 (57.6)	250 (42.4)	**59.740**	**<0.001**	**0.24**
	CZE	145 (33.3)	291 (66.7)			
	Total	485 (47.3)	541 (52.7)			
The product did not live up to my expectations.	POR	510 (86.4)	80 (13.6)	**101.866**	**<0.001**	**0.32**
	CZE	256 (58.7)	180 (41.3)			
	Total	766 (74.7)	260 (25.3)			
The product did not correspond to the description/photos.	POR	527 (89.3)	63 (10.7)	**38.895**	**<0.001**	**0.19**
	CZE	325 (74.5)	111 (25.5)			
	Total	852 (83.0)	174 (17.0)			
I had ordered several pieces (different sizes/colors) to choose the most appropriate one, with the intention of returning the rest.	POR	560 (94.9)	30 (5.1)	**61.387**	**<0.001**	**0.24**
	CZE	344 (78.9)	92 (21.1)			
	Total	904 (88.1)	122 (11.9)			
The product was damaged/defective.	POR	553 (93.7)	37 (6.3)	**29.759**	**<0.001**	**0.17**
	CZE	362 (83.0)	74 (17.0)			
	Total	915 (89.2)	111 (10.8)			
I changed my mind.	POR	565 (95.8)	25 (4.2)	**14.598**	**<0.001**	**0.12**
	CZE	391 (89.7)	45 (10.3)			
	Total	956 (93.2)	70 (6.8)			
The product delivered was not the one ordered (store error).	POR	567 (96.1)	23 (3.9)	**13.895**	**<0.001**	**0.12**
	CZE	394 (90.4)	42 (9.6)			
	Total	961 (93.7)	65 (6.3)			
Wrong color.	POR	574 (97.3)	16 (2.7)	**13.992**	**<0.001**	**0.12**
	CZE	402 (92.2)	34 (7.8)			
	Total	976 (95.1)	50 (4.9)			
I found a better product elsewhere.	POR	579 (98.1)	11 (1.9)	**21.051**	**<0.001**	**0.14**
	CZE	402 (92.2)	34 (7.8)			
	Total	981 (95.6)	45 (4.4)			
It was an inappropriate gift.	POR	586 (99.3)	4 (0.7)	**20.680**	**<0.001**	**0.14**
	CZE	413 (94.7)	23 (5.3)			
	Total	999 (97.4)	27 (2.6)			
The product arrived very late and was no longer needed.	POR	582 (98.6)	8 (1.4)	2.558	0.110	0.05
	CZE	424 (97.2)	12 (2.8)			
	Total	1006 (98.1)	20 (1.9)			

Note: POR—Portuguese subsample (n = 312); CZE—Czech subsample (n = 331); *Freq.*—frequency; %—percentage; χ^2—chi-square; *p*—*p*-value; Φ—effect size.

4.3. The Apparel Return Experience Scale

4.3.1. Descriptives and Correlations

The apparel return experience of online consumers was measured with the eight items described in Table 3. The skewness and kurtosis values are in a range that allows the normality of the respective distributions to be admitted. Pearson correlations among the items are positive and statistically significant, between $r = 0.466$ ($p < 0.01$) and $r = 0.818$ ($p < 0.01$).

Table 3. Apparel return experience: frequency and Pearson correlation matrix (total sample of returning consumers).

Item	*M*	*SD*	*Sk*	*Kr*	λ	h^2	Pearson Correlation *r*							
							expdev1	**expdev2**	**expdev3**	**expdev4**	**expdev5**	**expdev6**	**expdev7**	**expdev8**
expdev1	4.1	1.0	−1.15	0.940	0.842	0.710	1							
expdev2	4.1	1.0	−1.05	0.606	0.882	0.778	0.818 **	1						
expdev3	4.0	1.0	−1.02	0.843	0.814	0.663	0.634 **	0.683 **	1					
expdev4	3.8	1.1	−0.75	−0.082	0.697	0.486	0.507 **	0.538 **	0.565 **	1				
expdev5	4.0	1.1	−1.05	0.362	0.860	0.739	0.670 **	0.731 **	0.654 **	0.569 **	1			
expdev6	4.1	1.0	−1.20	1.091	0.906	0.821	0.767 **	0.783 **	0.691 **	0.561 **	0.791 **	1		
expdev7	4.3	1.0	−1.46	1.526	0.820	0.673	0.586 **	0.653 **	0.590 **	0.466 **	0.647 **	0.718 **	1	
expdev8	4.1	1.1	−0.95	0.206	0.785	0.616	0.556 **	0.590 **	0.573 **	0.490 **	0.601 **	0.644 **	0.762 **	1

Note: ** $p < 0.01$. *M* = mean; *SD* = standard deviation; *Sk* = skewness; *Kr* = kurtosis; λ = structural loadings; h^2 = communalities.

4.3.2. Exploratory Factorial Analysis

Exploratory factor analysis (EFA) was used with principal component analysis of the eight explanatory items of the experience with returning clothing items purchased online. The KMO value (0.917) suggests that the sample is factorable; Bartlett's test of sphericity is statistically significant [4040.101(28), $p < 0.001$]; the diagonal of the anti-correlation matrix presents values between 0.892 and 0.962. The analysis led to a scale of a single factor, whose structural coefficients are greater than 0.700 and commonalities above 0.5, as documented in Table 3, except for item expdev4 (λ = 0.697, h^2 = 0.486); however, there was no severe violation of the recommended cut-off values for this case and, for that reason, the item was not removed.

4.3.3. Confirmatory Factorial Analysis

A confirmatory factor analysis (CFA) was conducted for the total sample, confirming the one-factor model found in the EFA and presenting excellent adequacy according to all the indicators (Table 4); nevertheless, it was necessary to establish some correlations between the errors of the items to obtain the model. The scale's internal consistency was assessed using Cronbach's α, concluding the instrument was reliable (α = 0.93). The same analysis was performed with the Portuguese and Czech samples, achieving good model fits in all cases (Table 4).

Table 4. Scale fit indexes for total, Portuguese, and Czech samples.

Sample	χ^2	*df*	χ^2/df	*p*	*CFI*	*TLI*	*RMSEA* (90% *CI*)	*SRMR*
Total	42.437	16	2.652	< 0.001	0.993	0.989	0.051 (0.032–0.070)	0.015
Portuguese	39.270	16	2.454	0.001	0.991	0.984	0.068 (0.042–0.096)	0.017
Czech	22.230	16	1.389	0.049	0.996	0.993	0.034 (0.000–0.066)	0.018

Note: χ^2 = chi-square; *df* = degrees of freedom; *p* = *p*-value; CFI = comparative fit index; RMSEA = root mean square error of approximation; CI = confidence interval; SRMR = standardized root mean square residual.

4.3.4. Measurement Invariance Testing

Table 5 presents the results of the measurement invariances of the clothing return experience scale across countries. To assess the measurement invariance, we used the

criterion of an <0.01 change in CFI fit indices, and the criterion ΔRMSEA < 0.015 (for metric invariance) and <0.015 (for scalar invariance). The progressive country invariance test stated that the configural invariance model across countries demonstrated a good model fit. The metric invariance testing constrained factor loading so that it was equal across countries, documenting that the model fits the data well. In addition, the change in CFI between configural and metric invariance tests is within the threshold of 0.01, supporting the metric invariance across countries. The scalar invariance test showed that the indicators' intercepts were not invariant across countries, as the CFI change between the scalar and metric invariance tests was greater than 0.01 and ΔRMSEA was greater than 0.15. Therefore, a partial invariance test was performed (intercepts for items expdev5 and expdev7 freely estimated across countries), resulting in ΔCFI < 0.01 and ΔRMSEA < 0.015 ($p < 0.001$), thus supporting partial scalar invariance.

Table 5. Measurement invariance tests of the apparel return experience scale across countries.

Invariance	χ^2	*df*	χ^2/df	*p*	*CFI*	*RMSEA* (90% *CI*)	*SRMR*
Configural	61.500	32	1.922	0.001	0.993	0.038 (0.023–0.052)	—
Metric	74.450	39	1.909	0.001	0.991	0.038 (0.024–0.051)	0.000
Scalar	160.589	46	3.491	<0.001	0.972	0.062 (0.052–0.073)	0.044
Partial	99.400	43	2.311	<0.001	0.986	0.045 (0.034–0.057)	0.007

Note: χ^2 = chi-square; *df* = degrees of freedom; *p* = *p*-value; CFI = comparative fit index; RMSEA = root mean square error of approximation; CI = confidence interval; ΔCFI = adjusted comparative fit index.

4.4. The Apparel Return Experience

4.4.1. Differences According to the Online Apparel Purchasing Frequency

Differences in the return experience were analyzed concerning online apparel purchasing frequency in the total, Portuguese, and Czech samples, as the apparel return experience variable was not normally distributed in any of the samples, as determined by the Shapiro–Wilk test ($p < 0.05$), and thus, a Kruskal–Wallis test was applied (Table 6). Pairwise comparisons were performed using Dunn's procedure [80] with a Bonferroni correction for multiple comparisons. The post hoc analysis revealed that, in all samples, consumers who purchase once a year significantly score lower in the return experience than those who do it quarterly, monthly, and more often (Table 6).

Table 6. Differences in apparel return experience according to online purchasing frequency.

Group	*N*	*M*	*SD*	*MR*	*Md*	Kruskal–Wallis H	*df*	*p*
Total sample								
1—About once a year	106	3.8	0.81	218.04	4.00	**41.06**	**3**	**<0.001**
2—Quarterly	304	4.2	0.57	319.51	4.25			
3—Monthly	159	4.3	0.60	353.46	4.38			
4—More often	59	4.3	0.71	356.97	4.50			
Total	628	4.1	0.77		4.25			
Portuguese sample								
1—About once a year	57	3.4	1.16	103.59	3.75	**25.245**	**3**	**<0.001**
2—Quarterly	159	4.1	0.69	156.89	4.13			
3—Monthly	64	4.3	0.71	180.38	4.63			
4—More often	24	4.1	0.93	165.23	4.44			
Total	304	4.0	0.88		4.13			

Table 6. *Cont.*

Group	*N*	*M*	*SD*	*MR*	*Md*	Kruskal–Wallis H	*df*	*p*
Czech sample								
1—About once a year	49	3.8	0.81	114.31	4.00	**15.358**	**3**	**0.002**
2—Quarterly	141	4.3	0.57	166.94	4.25			
3—Monthly	95	4.2	0.60	171.58	4.38			
4—More often	37	4.3	0.71	177.38	4.50			
Total	322	4.2	0.66		4.25			

Note: *n* = Frequencies; *M* = mean (measures: 1–5); *SD*—Standard deviation; *MR*—Mean rank; *Md*—Median; *df*—degrees of freedom; *p* = *p*-value. In **bold**: statistically significant differences.

4.4.2. Differences According to Sociodemographic Characteristics

There are no statistically significant differences in the apparel return experience in the case of occupation and education. Differences in gender regarding the return experience were also analyzed using a Mann–Whitney test, with statistically significant differences only found in the total sample (Table 7). Accordingly, women score higher than men in the return experience.

Table 7. Differences in apparel return experience by gender (total sample).

Group	*N*	*M*	*SD*	*MR*	*Md*	Kruskal–Wallis H	*df*	*p*
Total sample								
Gender								
Female	460	4.09	0.86	331.08	4.25	**37,913.500**	**−1.972**	**0.049**
Male	183	3.97	0.86	299.18	4.00			
Total	643	4.05	0.86		4.13			

Note: *n* = Frequencies; *M* = mean (measures: 1–5); *SD*—Standard deviation; *MR—Mean rank*; *Md*—Median; *Z*—z-score; *p* = *p*-value. In **bold**: statistically significant differences.

Statistically significant differences were also found in the total sample in the return experience by groups of generation cohort (total sample), income (all samples), and internet expertise (all samples), as determined by Kruskal–Wallis tests (Table 8). In the total sample, the only statistically significant difference was that Generation Z scored higher in return experience than baby boomers. Concerning income, the following statistically significant differences were found: in the total sample, high-income consumers scored higher than insufficient-income, low-income, and sufficient-income consumers, while satisfactory-income consumers scored higher than low-income and sufficient-income consumers; in the Portuguese sample, satisfactory-income consumers scored higher than sufficient-income consumers; and in the Czech sample, high-income consumers scored lower than insufficient-income, low-income, sufficient-income, and satisfactory-income consumers, and low-income consumers scored higher than satisfactory-income consumers. Regarding internet expertise, the following statistically significant differences were found: in the total sample, novice internet users scored lower than average, advanced, and professional users, whereas average internet users scored lower than professional users; in the Czech sample, novice internet users scored lower than average, advanced, and professional users; and in the Portuguese sample, average internet users scored lower than professional users.

Table 8. Differences in the return experience by generation and internet expertise.

Group	*N*	*M*	*SD*	*MR*	*Md*	Kruskal–Wallis H	*df*	*p*
Total sample								
Generation cohort								
Generation Z (≤27 years old)	381	4.2	0.68	320.73	4.25	**7.995**	**3**	**0.046**
Millennials (27 to 42 years old)	117	4.1	0.70	301.48	4.13			
Generation X (42 to 57 years old)	100	4.1	0.77	303.05	4.13			
Boomers (≥57 years old)	22	3.6	1.05	215.23	3.94			
Total	620	4.1	0.72		4.25			
Internet expertise								
Initiated	16	3.1	1.17	137.22	3.19	**27.688**	**3**	**<0.001**
Average user	179	4.0	0.78	280.08	4.00			
Advanced user	305	4.2	0.65	320.29	4.25			
Professional user	119	4.3	0.64	351.87	4.38			
Total	619	4.1	0.73		4.25			
Portuguese sample								
Internet expertise								
Novice	8	3.1	1.56	95.88	3.69	**12.537**	**3**	**0.006**
Average user	101	3.9	0.82	135.04	4.00			
Advanced user	156	4.1	0.79	156.17	4.25			
Professional user	47	4.3	0.81	181.00	4.75			
Total	312	4.1	0.85		4.13			
Czech sample								
Internet expertise								
Novice	7	2.9	0.42	19.86	2.88	**18.281**	**3**	**<0.001**
Average user	82	4.1	0.76	154.67	4.13			
Advanced user	159	4.2	0.59	166.95	4.25			
Professional user	75	4.3	0.60	172.79	4.38			
Total	323	4.2	0.66		4.25			

Note: *N*—frequencies; *M*—mean (measures: 1–5); *SD*—standard deviation; *MR*—*Mean rank*; *Md*—median; *df*—degrees of freedom; *p*—*p*-value. In **bold**: statistically significant differences.

4.5. Wardrobing

4.5.1. Differences in Wardrobing Practice

Table 9 refers to the consumers who returned clothing for the total, Portuguese, and Czech samples, divided into two groups: those who have not practiced wardrobing and those who have. Differences are also analyzed and reported in Table 9 if statistically significant. Concerning gender, men register a higher proportion of wardrobing practitioners (wardrobers), and differences are statistically significant in the total sample (a difference in the proportions of 0.034, $p < 0.001$) and in the Czech sample (0.030, $p < 0.001$). In the total and Portuguese samples, higher-educated consumers document a larger proportion of wardrobing practice, while in the Czech sample, consumers with secondary/vocational education have a slightly higher proportion than their counterparts; however, only the Portuguese sample registers a statistically significant difference (a difference in the proportion between higher-educated consumers and their counterparts of 0.826, $p = 0.007$).

Consumers with a satisfactory income (followed by sufficient-income consumers) have a higher proportion of wardrobing practitioners in all samples, as differences are statistically significant in the total sample (the difference in those proportions is 0.415, $p = 0.034$) and in the Czech sample (0.531, $p = 0.024$). Regarding internet expertise, advanced users have the largest proportion of wardrobing practitioners in all samples, as a statistically significant difference occurs in the total sample, where the difference in advanced and average users' proportions is 0.315 ($p = 0.007$), and in the Czech sample (0.318, $p = 0.023$). There were no statistically significant differences in proportions concerning occupation and generational cohorts.

Table 9. Total, Portuguese, and Czech sample frequencies, and significant differences in gender and internet expertise among consumers who have/have not practiced wardrobing.

Variable	Total Sample		Portuguese Sample		Czech Sample	
	Have Not Practiced Wardrobing	Practiced Wardrobing	Have Not Practiced Wardrobing	Practiced Wardrobing	Have Not Practiced Wardrobing	Practiced Wardrobing
	Freq. (%)	*Freq. (%)*	*Freq. (%)*	*Freq. (%)*	*Freq. (%)*	*Freq. (%)*
Gender						
Female	417 (75.3)	43 (48.3)	195 (67.5)	11 (47.8)	222 (83.8)	32 (48.5)
Male	137 (24.7)	46 (51.7)	94 (32.5)	12 (52.2)	43 (16.2)	34 (51.5)
Total	554 (100.0)	89 (100.0)	289 (100.0)	23 (100.0)	265 (100.0)	66 (100.0)
	$\chi^2(1) = 27.366$; $\Phi = 0.21$; $p < 0.001$				**$\chi^2(1) = 36.861$; $\Phi = 0.33$; $p < 0.001$**	
Internet expertise						
Novice	13 (2.3)	3 (3.4)	7 (2.4)	1 (4.3)	6 (2.3)	2 (30)
Average user	166 (30.0)	18 (20.2)	95 (32.9)	6 (26.1)	71 (26.8)	12 (18.2)
Advanced user	274 (49.5)	46 (51.7)	143 (49.5)	13 (56.5)	131 (49.4)	33 (50.0)
Professional user	101 (18.2)	22 (24.7)	44 (15.2)	3 (13.0)	57 (21.5)	19 (28.8)
Total	554 (100.0)	89 (100.0)	289 (100.0)	23 (100.0)	265 (100.0)	66 (100.0)
	$\chi^2(3) = 12.118$; $\Phi = 0.14$; $p = 0.007$				**$\chi^2(3) = 9.499$; $\Phi = 0.05$; $p = 0.023$**	

Note: *Freq.*—frequency; %—percentage; χ^2—chi-square; *p*—*p*-value; Φ—effect size.

Table 10 shows the frequency and significant differences in age among consumers who have/have not practiced wardrobing for all samples. In the total and Portuguese samples, a statistically significant difference is found, as consumers who have practiced wardrobing are younger than their counterparts; the same occurs in the total sample in which consumers who have practiced wardrobing are younger than their counterparts.

Table 10. Total, Portuguese, and Czech sample frequencies and significant differences in age amongst consumers who have/have not practiced wardrobing.

Age	Wardrobing	*Freq. (%)*	*M*	*SD*	*Md*	*MR*	Sum of Ranks	Mann–Whitney U	*Z*	*p*
Total sample	No	544 (87.0)	30.1	11.60	24.5	320.85	174,542.500	**17,761.500**	**−2.823**	**0.005**
	Yes	81 (13.0)	24.4	4.21	23.0	260.28	21,082.500			
	Total	625 (100.0)	29.3	11.09	24.0					
Portuguese sample	No	289 (92.9)	31.9	12.94	27.0	159.53	46,104.000	**2159.000**	**−2.513**	**0.012**
	Yes	22 (7.1)	24.0	5.43	22.0	109.64	2412.000			
	Total	311 (100.0)	31.4	12.72	26.0					
Czech sample	No	265 (88.0)	29.2	11.63	24.0	148.52	39,357.500	4112.500	−1.347	0.178
	Yes	36 (12.0)	30.5	11.56	28.0	169.26	6093.500			
	Total	301 (100.0)	29.4	11.61	24.0					

Note: *Freq.* = frequency; % = percentage; *M* = mean; *SD* = standard deviation; *Md*—median; *MR*—mean rank; *Z*—z-score (standardized test statistic); *p*—*p*-value. In **bold**: statistically significant differences.

4.5.2. Wardrobing Predictors

Binary logistic regression was conducted in the total sample to ascertain the effects of age, gender, and clothing return experience on the likelihood of unethical behavior. The linearity of the continuous variables with respect to the logit of the dependent variable was assessed via the Box–Tidwell procedure [78]. A Bonferroni correction was applied using the six terms in the model, resulting in statistical significance being accepted when $p < 0.00833$ [79]. Based on this assessment, all continuous independent variables were found to be linearly related to the logit of the dependent variable. There were sixteen standardized residuals above 2.5 standard deviations, which were removed from the

analysis. Since binary logit regression uses maximum likelihood, multivariate normality is assumed. However, we could not test for multivariate normality with SPSS and, therefore, there is a potential bias regarding the model parameter estimates. A linear regression was run to check for possible multicollinearity, with the result that the VIF values of the independent variables were all below 2, suggesting multicollinearity was not an issue.

The binary logistic regression was statistically significant, $\chi^2(3) = 81.127$, $p < 0.001$. The model explained 23.7% (Nagelkerke R^2) of the variance in wardrobing practice and correctly classified 89.6% of cases. The ROC curve was analyzed, and as the area under it was 0.80, a 95% CI [0.7542, 0.846] was achieved, which is an excellent level of discrimination according to Hosmer et al. [81]. All independent variables were statistically significant (Table 11). Males had six times higher odds of practicing wardrobing than females. Increasing age and return experience satisfaction were associated with a slight reduction in the likelihood of wardrobing practice.

Table 11. Binary logit regression: predictors of wardrobing behavior (total sample).

Variable	*B*	*SE*	*Wald*	*df*	*p*	Odds Ratio	95% *C.I.* for Odds Ratio	
							Lower	Upper
Gender	1.989	0.3	43.949	1	<0.001	7.307	4.059	13.156
Return experience	0.073	0.175	0.174	1	0.677	1.076	0.764	1.515
Age	−0.113	0.029	15.243	1	<0.001	0.893	0.844	0.945
Constant	−0.502	1.024	0.24	1	0.624	0.605		

Note: *B* = unstandardized regression weight; *SE* = standard error; *Wald*—Wald test; *df*—degrees of freedom; *p*—*p*-value; *CI*—confidence interval.

5. Discussion

From the acquired findings, the proposed online return experience scale reveals a robust fit to the data across the total sample and individual country samples (the Czech Republic and Portugal). Furthermore, the analysis of measurement invariance reveals consistent findings of configural, metric, and scalar invariance across the two countries. Essentially, the outcomes imply that the associations among the variables in our study persist regardless of the country, reinforcing the generalizability of the proposed scale.

The present study first hypothesized that online apparel consumers would have different return experiences depending on purchase frequency. Significant differences were found in the return experience amongst consumers with different purchase frequencies: Czech and Portuguese consumers who purchase items once a year have a less satisfactory experience with returns than their counterparts (Table 6). The rationale for assuming that frequent garment purchasers would have better returning experiences was that they would likely be more familiar with different retailers' return policies and procedures and therefore feel more comfortable and confident navigating the return process. Our results are aligned with Mainardes et al. [8] and Wang et al. [57], who stated that customers that find the return process convenient, easy and risk-free and are more likely to engage in repeat purchases. Also, frequent apparel purchasers often have higher expectations and standards regarding quality, fit, and overall satisfaction with their purchases. As a result, they may be more discerning and proactive about returning pieces that do not meet their expectations. Their experience and knowledge of different brands and retailers also help them decide which items are worth keeping and which should be returned. Another perspective is that frequent purchasers may have developed efficient shopping habits, such as researching product details and reading reviews, which could help minimize the need for returns, also saving time and effort associated with the return process. Therefore, the reported differences partially support hypothesis H1.

No statistically significant differences were found in the apparel return experience when comparing groups of respondents according to gender, although women showed a better return experience in the Czech and Portuguese samples (Table 7). This result is at odds with the findings of Estoesta [54] and Dholakia [66], who proposed that women are

more likely to be involved in the shopping experience and more prone to higher return rates, and Nardal and Sahin [10] also found that men have lower return rates and are less tolerant of complex return processes. To assess the differences in the return experience according to age, we determined statistically significant differences by generation cohort (Table 8). As in the total sample, younger consumers demonstrated a better return experience than their counterparts. These findings are aligned with the results of Arshad et al. [58] and Agrawal [68], who state that younger consumers are more inclined to more intense and frequent use of the internet; therefore, they are comfortable to navigate online return systems and take advantage of exploiting return policies. These results partially support hypothesis H2.

The apparel return experience was found to be significantly different among consumers with different degrees of internet expertise: for both Czech and Portuguese participants, the higher the expertise, the greater the consumer satisfaction with the return experience (Table 8). These results are aligned with van Coolwijk [69], Bansal and Sharma [40], and Agrawal [68], thus supporting hypothesis H3. According to these authors, the rationale behind assuming that internet-savvy consumers would declare better returning experiences is based on the fact that they are skilled at navigating various online platforms, including e-commerce websites, social media, and fashion blogs, often finding accurate and reliable product information, thus leading to a more satisfactory experience and potentially reducing the need for returns. Internet-savvy customers, who are more likely to understand and perceive these policies clearly, can make informed decisions about purchases and returns. These consumers are typically better able to take advantage of detailed return policies offered by online retailers, which may include free returns, extended return periods, and convenient drop-off options, contributing to a more satisfying shopping experience [69]. Internet-savvy users' knowledge could help them make better decisions and reduce the likelihood of returning items due to dissatisfaction. In addition, many retailers offer online return options, allowing customers to initiate and track their returns through the internet; consumers with internet expertise should generally be more comfortable using such possibilities, thus resulting in a smoother experience.

The study then explored differences in wardrobing practice according to sociodemographic characteristics, namely gender and age (Tables 9 and 10, respectively), as well as internet expertise (Table 9). Statistically significant higher proportions of wardrobing practitioners occurred: concerning gender for the total and Czech samples, in line with Schmidt et al. [63], who found that men were more inclined to unethical returning behavior, although this was in contrast to Reynolds and Harris [64]; vis-à-vis internet expertise (advanced users) for the total and Czech samples, in line with Agrawal [68], Bansal and Sharma [40], van Coolwijk [69], and Estoesta [54]; and regarding age (younger consumers) for the total and Portuguese samples, supporting the literature [63,67]. Such differences support hypothesis H4, which posited that there will be differences among consumers who engage in wardrobing regarding sociodemographic characteristics. It is interesting to note that people who state that they have previously returned apparel items they used show greater satisfaction with the returning process. Several explanations could be put forward concerning this finding: consumers who engage in wardrobing may be satisfied with the returning process because they were able to successfully return the items without any issues, having achieved their desired outcome of wearing the garments temporarily and then returning them, which can contribute to a sense of satisfaction. Moreover, wardrobers may have developed efficient strategies and routines for returning items as they are familiar with retailers' return policies and the procedures involved, which could mean greater convenience and flexibility (specifically in the case of consumers that benefit from retailers' generous return policies, such as extended return windows or free returns without facing any hurdles or obstacles). Also, by returning the clothing items they used, consumers can avoid the financial burden of keeping and paying for the items in the long term, making them feel they have saved money and obtained value from their temporary use of the garments.

The binary logit regression demonstrated that gender and age are significant predictors of wardrobing practice, whereas return experience is not (Table 11). These results provide partial support for hypothesis H5. In our sample, however, despite the impact of gender on wardrobing practice, in line with several authors, e.g., [54,64], we found that men have approximately seven times higher odds of practicing wardrobing than women. This finding contradicts Reynolds and Harris [64], King and Dennis [65], and Estoesta [54], who indicated that women exhibit poorer ethical behavior and are more inclined to engage in fraudulent returns. The observed magnitude of the odds is not readily explicable. Further research could potentially verify this outcome. A possible explanation is that the percentage of male youngsters (70%) is larger than their counterpart (58%), and younger consumers tend to be more internet-savvy and more prone to wardrobing practice [68]. Regarding age, we found that increasing age is associated with a slight reduction in the likelihood of wardrobing practice, a result that is aligned with previous studies by Estoesta [54] and Agrawal [68].

Table 12 summarizes the evaluation of hypotheses.

Table 12. Evaluation of hypotheses.

	Hypotheses	Evaluation	
H1	There will be significant differences in the return experience according to the online purchase frequency.	✧	Partially supported
H2	The return experience differs significantly according to consumers' sociodemographic characteristics.	✧	Partially supported
H3	The apparel return experience differs significantly according to consumers' internet expertise.	✓	Supported
H4	There will be differences among consumers who engage in wardrobing with regard to sociodemographic characteristics.	✓	Supported
H5	Age, gender, and return experience will be predictors of wardrobing practice.	✧	Partially supported

Note: ✓ supported hypothesis; ✧ partially supported hypothesis.

6. Conclusions

This study aims to examine how sociodemographic factors, purchase frequency, internet expertise, and unethical return behavior relate to apparel e-consumers. We focus on the online return process for apparel, exploring its connection with these variables in a sample of online consumers from Portugal and the Czech Republic. Additionally, we investigate wardrobing, where consumers wear and return apparel after use, and its potential relationship with those variables, especially among consumers who have and have not engaged in this behavior. To achieve this, we surveyed 1026 clothing consumers from both countries, most of whom had prior online apparel return experience, and used an online return experience scale. The analysis of measurement invariance on this scale demonstrated consistent findings of configural, metric, and scalar invariance across the two countries, ensuring that the associations among the variables in the study remained regardless of the country, thus reinforcing its generalizability—in itself, a first contribution of this exploratory study.

The results show similar behaviors by Czech and Portuguese consumers regarding the frequency of e-commerce apparel purchases (those who buy more often have a better return experience) and internet expertise (those who are more internet-savvy have a better return experience). Generally, females experience better returns, as do the youngest consumers. A substantial portion of the sample had previously returned used garments, suggesting unethical behavior, with higher proportions of men, internet-savvy consumers, and younger consumers more inclined to practice wardrobing. Significant differences within the two countries show that men and advanced internet users are more prone to wardrobing behavior in the Czech sample, while in the Portuguese sample, younger consumers are the ones who practice more wardrobing. Gender and age contribute to predicting wardrobing practice in the sample: men are associated with around a seven times higher probability of

unethical behavior, while increasing age reduces that probability. Most results align with the literature, yet notably, in the sample, men were more inclined than women to carry out unethical returns, a result that contrasts with the view of several scholars who state that, generally, women are more prone to wardrobing.

These findings have theoretical and practical implications. A moral hazard arises when there is a discrepancy between one party's actions and another party's risk, frequently due to the risk transfer between parties. In this case, the risk associated with the purchase, such as the fit or appearance of the apparel not meeting expectations, can be readily transferred by the buyer to the seller through the return process. The ease of returning products without much accountability creates a situation where customers may engage in unethical behavior, such as wearing and returning the item, knowing that the retailer bears the risk of this action.

Our findings also suggest that demographic factors and technological expertise influence ethical decision making in an e-commerce context. From a practical standpoint, this information can guide future e-commerce strategies to mitigate the risks associated with online returns and to tailor the customer journey to minimize the occurrence of a moral hazard. It is recommended that retailers consider a balanced approach to return policies that protect against moral hazards while ensuring customer satisfaction and repeat business. Retailers could explore methods to authenticate the need for returns or to encourage ethical consumer behavior. This could involve enhancing loyalty programs to encourage consistent ethical behavior or customizing the shopping experience to reduce the likelihood of returns. Such approaches, in the form of incentives or perks, would be a means to foster a positive customer experience, mitigating asymmetric information on the demand side.

The results of our study, which provide unique insights into the evolving discussion of ethical consumer behavior in relation to e-retail, are of significant importance as they underscore the need for a multifaceted approach to managing customer experiences and expectations in the digital age, providing them with adequate incentives to reduce non-ethical returning behaviors. This distinct perspective makes a contribution to the field, offering a new outlook on the complex dynamics of apparel e-commerce.

It is important to acknowledge the limitations derived from the sample characteristics and the convenience, snowball sampling procedure that was conducted. Future studies could include other ethics-related variables, reformulating questions to avoid dishonest answers. This would enhance our understanding of the dimensions that influence wardrobing, the return experience, and its magnitude. It would also be beneficial to include more countries in the data collection to analyze the online returning experience instrument invariance across different markets, for a more comprehensive comparison and to explore consumer relationships with retailers further.

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Appendix A

Table A1. Variables.

Variable	Label	Variable Description		
Socio-demographics				
Gender	gender	Female/male		
Age	age	Age in years		
Education	educ	Basic/secondary/vocational/higher education		
Occupation	job	Inactive/active		
Income	inc	Insufficient (it is necessary to resort to short-term credit because the available monthly income is insufficient)/low (basic needs are met, but prudence must be exercised to limit expenditure)/sufficient (all basic needs are met—e.g., food, clothing; other needs are limited)/satisfactory (all needs are met)/high (includes the possibility of investment and the purchase of luxury goods) [70,71]		
Internet expertise	dom	Novice/average user/advanced user/professional user		
Country	ctry	Portugal/Czech Republic		
Shopping habits				
Purchase frequency	freqonline	Average number of online apparel purchases: about once a year/quarterly/monthly/more often		
Variable	**Label**	**Variable description/Items**	**Scale**	**Source**
Reasons for returning an item	prf	Reasons to return items purchased online:	No/Yes	Own
	mtv_tam	Wrong size.		
	mtv_exp	The product did not live up to my expectations.		
	mtv_des	The product did not correspond to the description/photos.		
	mtv_mlt	I had ordered several pieces (different sizes/colors) to choose the most appropriate one, with the intention of returning the rest.		
	mtv_def	The product was damaged/defective.		
	mtv_ide	I changed my mind.		
	mtv_err	The product delivered was not the one ordered (store error).		
	mtv_cor	Wrong color.		
	mtv_els	I found a better product elsewhere.		
	mtv_ina	It was an inappropriate gift.		
	mtv_trd	The product arrived very late and was no longer needed.		
Return experience	expdev	Measure of the return experience satisfaction	1–5	Adapted from Colquitt [82] Pandey and Chawla [83] Maxham III and Netemeyer [84] Holloway et al. [85]
	expdev_1	It was easy to understand the return process.		
	expdev_2	It was easy to handle the return process.		
	expdev_3	The store's response was quick.		
	expdev_4	I was able to follow the evolution of the return process online.		
	expdev_5	I did not encounter any issues with the return process.		
	expdev_6	I was satisfied with the experience.		
	expdev_7	I am likely to shop at the same online store again.		
	expdev_8	I am also likely to recommend this online store.		
Wardrobing practice	ward1	I have returned items of clothing that I have actually worn (no/yes).		Own

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