

Will You Choose Secondhand Clothing? Exploring the Determinants of Secondhand Clothing Consumption and the Moderating Effect of Contamination Concern

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Introduction. Amid society's growing awareness of the fashion industry's environmental impact, consumers are increasingly prioritizing "sustainability" as a consideration and opting for secondhand rather than new clothing in their apparel shopping. As this trend continues, secondhand business is expected to grow exponentially in the industry, despite heightened anxieties around contamination since the emergence of COVID-19 (Kim & Woo, 2022; Thomas, 2022). The present study aims to identify the determinants influencing decisions to purchase secondhand clothing and to test a research model developed based on three existing theories. The study's findings will address gaps in the existing literature and highlight marketing implications for fashion industry professionals.

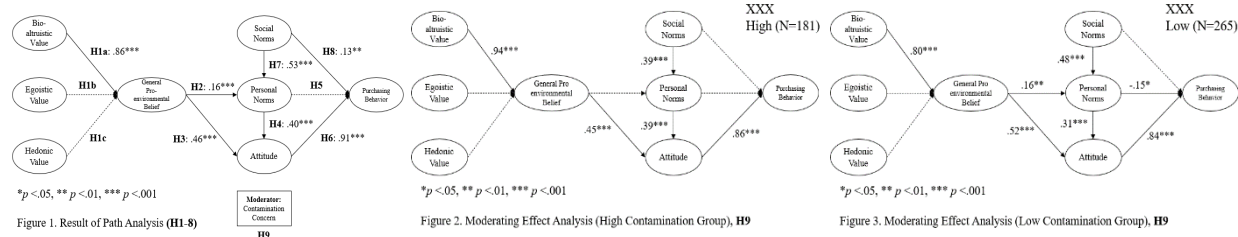
Theoretical Framework. This study draws on three existing theoretical frameworks to develop a research model and obtain an in-depth understanding of consumers' behavior with respect to secondhand clothing consumption. Value-belief-norm (VBN; Stern et al., 1999) theory proposes the causal effects of personal aspects on the activation of pro-environmental behavior. Many apparel studies have adopted VBN theory to explain how the three psychological components influence consumers behavior, as bio-altruistic, egoistic, and hedonic values, general pro-environmental belief, and personal norms are adopted and operationalized. The theory of reasoned action (TRA) developed by Ajzen and Fishbein (1980) considers the volitional control that explains the relationships between interpersonal components. It has been applied extensively with the aim of understanding voluntary behavior and examining the motivations that underlie individuals' decisions to engage in certain behaviors (Paul et al., 2016). The present study adopted three variables from the TRA: social norms, attitudes, and behavior. Lastly, the theory of consumer contamination (TCC) posits that consumers perceive objects less favorably once they have been touched by other consumers (Argo et al., 2006). The TCC articulates the intrinsic qualities of secondhand clothing and suggests that it may alter the ways in which consumers behavior is activated.

Research Model & Hypotheses. Several studies have attempted to incorporate the deficient social components of VBN theory based on the growing consensus that consumers behavior is susceptible to social approval (Carfora et al., 2021). By contrast, TRA is lacking the consideration of individual perceptions of values, belief, or norms (Kang & Moreno, 2020). Moreover, few research focuses on how contamination concerns moderate secondhand clothing consumption despite higher standards for hygiene in the wake of the COVID-19 pandemic (Hodayuni, 2023). As such, the integration of the three theoretical frameworks is intended to

elevate our understanding of consumers behavior by redeeming the shortcomings associated with the application of a single theory. That is, the integrative model examines the impact of personal and social components as well as contamination concerns on consumers behavior, measuring the extent to which consumers are willing to or intend to purchase secondhand clothing. The developed research model (Figure 1) illustrates the influence of personal values (a: bio-altruistic, b: egoistic, c: hedonic) on general pro-environmental belief (H1a–H1c), which is a predictor of personal norms (H2) and attitude (H3). The model also identifies relationships between social, personal norms, and attitude (H4 & H7) and their direct impacts on future purchasing behavior (H5, H6, & H8). The final hypothesis (H9) tests the moderating effect of contamination concerns on all structural paths.

Methods. The survey questions were adapted from previous studies. Having confirmed that the survey was exempt from the Institutional Review Board (IRB), the data were collected using an online self-administered survey from Qualtrics panels, and each respondent was compensated with approximately two dollars (N = 446; 221 males, 223 females, 2 prefer not to say). The data were analyzed using SPSS 28.0 and AMOS 28.0. Exploratory factor analysis (EFA), confirmatory factor analysis (CFA), and common method variance (CMV) were applied to validate the data's reliability and validity. CFA confirmed that data were an acceptable fit for the measurement model: $\chi^2(428) = 1196.71, p < .001$; CFI = .92, TLI = .91, RMSEA = .06. The main hypotheses were tested by means of structural equation modeling (SEM), demonstrating acceptable model fit: $\chi^2(354) = 1205.57, p < .001$, CFI = .90, TLI = .89, RMSEA = .07. The mediating effect analysis was followed up with the decomposition test using the phantom variables and bootstrapping techniques. Finally, a multi-group SEM analysis was conducted to investigate the moderating effect of contamination concerns between the median-split high (N = 181) and low (N = 265) contamination concern groups.

Results. As Figure 1 illustrates, when value–belief relationships were tested, bio-altruistic value was shown to have a significant influence only on general pro-environmental belief (supporting H1a), which, in turn, affected personal norms and attitude (supporting H2 & H3). Social norms and attitude were shown to directly influence future purchasing behavior (supporting H6 & H8); however, personal norms exerted an indirect influence only, mediating the relationship between social norms and attitude (supporting H7 & H4). Finally, the moderating effect analysis showed that the links from belief to future purchasing behavior via personal norms were deactivated as the contamination concern aggravated (supported H9). Moreover, the direct effect of social norms on future purchasing behavior was nullified for both the high and low contamination concern groups, as Figures 2 and 3 indicate.



Discussion, Conclusion, & Implications. First, among the three value variables, bio-altruistic value was the only statistically significant variable with respect to general pro-environmental belief; this was inconsistent with previous findings (Kim & Seock, 2019). This suggests that bio-altruistic value plays a major role in consumers' secondhand clothing purchasing behavior, illuminating their growing concerns about the welfare of the biosphere and human beings. Second, future purchasing behavior was activated by attitude even when the other factors had neither a direct nor indirect effect, confirming that attitude was the strongest determinant. Moreover, personal norms mediated the relationship between social norms and attitude, reaffirming earlier studies' findings (Thøgersen, 2006, 2009). Third, it was revealed that contamination concern functions as a deterrent that curbs consumers' choice of purchasing secondhand clothing, in line with previous findings (Baek & Oh, 2021). These three key takeaways underscore the importance of reinforcing the key determinants—bio-altruistic value, belief, personal, and social norms—to solidify positive attitudes. The finding will help drive consumers to prioritize secondhand clothing consumption and overcome contamination concerns. Finally, the key academic contribution is the extended use of an integrative framework of multiple theories, embracing the contamination concern as a moderator. This study also highlights practical implications for marketers by emphasizing the importance of cultivating positive attitudes toward secondhand clothing consumption and alleviating contamination concerns.

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