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Perceived Brand Authenticity and Purchase Intention Toward Sustainable Fashion Brands Among Consumers Residing in Finland: The Moderating Role of Environmental Concern

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ABSTRACT:

Consumers' distrust in fashion industry due to the increased sustainability issues has already changed the competitive edge from sustainability labels to perceived brand authenticity. While there is a growing scholarly discussion about sustainable consumption, research on perceived brand authenticity as the predictor of the purchase intention in sustainable fashion has been neglected, particularly within highly sustainability-aware Nordic Market contexts. This study examines the influence of perceived brand authenticity (PBA) on purchase intention (PI) in sustainable fashion brands operating in Finland and how it is moderated by environmental concern (EC).

Using quantitative, cross-sectional survey of 160 consumers residing in Finland who had bought from a sustainable fashion brand in the previous year, this study draws on Signaling Theory, the Elaboration Likelihood Model (ELM) and the Value-Belief-Norm (VBN) Theory to investigate the effects of perceived brand authenticity on purchase intention, moderated by environmental concern. The sample reflects consumers living and shopping within the Finnish sustainable fashion market, rather than Finnish nationals exclusively. Three proposed hypotheses were tested in four hierarchical multiple regression models. The results reveal that perceived brand authenticity positively affects purchase intention ($\beta = .626$, $p < .001$), accounting for 38.5% of incremental variance; strongly supporting H1. Environmental concern did not significantly predict purchase intention ($\beta = .107$, $p = .093$, 95% CI [−0.018, 0.227]), and H2 was not supported. The moderating effect of environmental concern on the relationship between authentic brands and purchase intention was not significant ($\beta = -.111$, $p = .071$). The interaction coefficient was negative, contrary to the predicted direction. The confidence interval for the interaction term included zero, and no reliable directional conclusion can be drawn from this result. The overall model accounted for 44.1% of purchase intention variance ($R^2 = .441$, Adjusted $R^2 = .419$). This study highlights, within the current sample operating in the Finnish market context, an importance of perceived brand authenticity as a key credibility signal in a high-scrutiny, high-awareness sustainability environment.

KEYWORDS: Perceived brand authenticity, environmental concern, purchase intention, sustainable fashion, Finland, signaling theory, elaboration likelihood model, hierarchical regression

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1 Introduction

As the world is progressing, the fashion brands are facing growing pressure to consider sustainable practices and impacts. The issue of sustainability is now in the front and center of brands' business strategies, due to concerns regarding greenhouse gas emissions, water use, waste production, human rights violations (Centobelli et al., 2022; Rahaman et al., 2024). Consequently, brands are now proactively promoting their sustainability initiatives through promotional activities, certifications and disclosure (Öndoğan et al., 2022).

However, this rise in sustainability communication has created a lot of challenges. Instead of building trust, it's resulted in distrust and it has often led to greater skepticism. When the sustainability claims become widespread, consumers begin to question their credibility. This is especially the case when companies "greenwash" or overstate their environmental practices (Koch & Denner, 2025; Li et al., 2025). In fashion industry, it is further complicated by the industry's global supply chains where it is difficult to assess claims about ethical sourcing or sustainability at the time of purchase.

Under these circumstances, consumers cannot rely on individual product claims. Rather, they make more general considerations about a brand's overall authenticity. This is where brand authenticity comes into play. Brand authenticity is the degree to which the brand is perceived as consistent, credible and genuine in the eyes of consumers (Morhart et al., 2015; Södergren, 2021). The authenticity is not just about the specific message or indicator a brand may communicate (e.g., organic) but whether it's considered to be genuine or not. Existing research indicates that authenticity is a analytical factor in influencing consumer attitudes and behaviors, such as trust, liking, and purchasing in areas like food, cosmetics and hotels (Chen et al., 2020; Hernandez-Fernandez & Lewis, 2019; Turker et al., 2023). But it has been largely overlooked in sustainable fashion. This is an important gap given that fashion consumption is often guided by identity, trends, and aesthetics which may influence perceptions and responses to brand authenticity (Sindhuja et al., 2025; Vassalo et al., 2024).

Conversely, different consumers have different reactions to information about sustainability. According to the Elaboration Likelihood Model, the effect of a message is determined by the motivation to process the information (Gotlieb & Swan, 1990; Petty & Cacioppo, 1986). Environmental concern is an important factor in this regard. Environmental concern is a measure of the concern people have for the environment and their motivation to help protect it (Dunlap, 2008). Consumers who are more concerned about the environment are more likely to process sustainability information in depth, while consumers with lower concern may use more superficial cues.

This perspective is also consistent with the Value-Belief-Norm theory which describes a role that values and moral norms play in a pro-environmental behavior (Stern et al., 1999). People who have greater environmental concern are extra prospective to experience a sense of moral responsibility to consume in an environmentally sustainable way, which may affect their responses to cues of authenticity (Aslam et al., 2021). So, does environmental concern moderate the influence of perceived authenticity on purchase intention, or does perceived authenticity affect consumers the same, regardless of their level of environmental concern?

Finland is known for its strict environmental regulations, high institutional trust and environmentally conscious consumers (Raza et al., 2024; Strömgård, 2023). The Finnish market context is characterized by high sustainability awareness and strong environmental discourse, and the regulatory context is increasingly focused on transparency, for instance, the EU Green Claims Directive and Corporate Sustainability Reporting Directive. However, consumers residing in Finland are exposed to global fast-fashion trends, creating a context where sustainability and complexity in the market are present. This context is therefore interesting to examine the role of authenticity in consumer behavior.

However, there is a lack of empirical evidence directly investigating the link between the perceived brand authenticity and purchase intention in the sustainable fashion market in Finland. Specifically, whether environmental concern is a moderating variable is unknown. This research explores these questions through the following research questions:

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1. Does perceived brand authenticity have a positive effect on purchase intention towards sustainable fashion brands operating in Finland?
2. Is purchase intention affected by environmental concern?
3.Does environmental concern serve as a moderator of the effect of perceived brand authenticity on purchase intention?

This study addresses these questions by means of a quantitative survey of consumers residing in Finland and by testing the hypotheses with hierarchical multiple regression. This does so in three ways. First, it applies the concept of authenticity to the field of sustainable fashion in a high-awareness market setting. Second, it considers roles of environmental concern as the moderator and direct predictor of consumer behavior. Third, it offers insight into how consumers respond with intentions about sustainable perceptions.

This thesis continues as follows. The section 2 explores an existing literature and establishes the theory and proposes hypotheses. The section 3 explains the methods used. Section 4 presents the results. Section 5 presents the discussion and implications of the results, and the conclusions, limitations, and future research.

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2 Literature Review

2.1 Problem Context

The world fashion industry has also seen a great change following cumulative environmental and social pressure. Fashion, being one of the most resource-intensive industries, emits a significant amount of greenhouse gas emissions, water, and is linked to microplastic pollution, as well as waste of textiles, in addition to being linked with labor exploitation and unsafe working environments within global supply chains (Rahaman et al., 2024). Systemic environmental footprint of a textile and apparel industry is supported by Niinimäki et al. (2020), estimating that this sector emits a significant amount of carbon and consumes a lot of water worldwide. All these environmental and ethical issues have triggered a transition to sustainable fashion, which is generally described as fashion products that are designed, produced, distributed, and consumed in a manner that is both environmentally friendly and socially just.

In reaction to this, the fashion companies have started to utilize sustainability positioning strategies. These actions involve use of recycled and organic materials, application of the principles of a circular economy, including repair and resale, the issue of sustainability reports, and involvement in certification programs. Sustainability is no longer a functional issue but a key element in the brand communication and differentiation (Centobelli et al., 2022). Nevertheless, as the sustainability claims have become widespread, so have the questions about the credibility of these claims.

The skepticism of consumers towards corporate sustainability programs is not a new phenomenon, as described in the literature on management and marketing. Koch & Denner (2025) base the notion of greenwashing on the overlap between a bad environmental performance and an optimistic environmental communication, whereby companies might improve or lie about their sustainability initiatives to boost corporate image. This is increased in the case of fashion due to the opaque nature and the convolution of the global supply chain (Crandall & Parnell, 2021). Since many of the sustainability dimensions, like ethical labor practices or lowered carbon emissions,

cannot be seen by the end user, they are not easily verified. This creates conditions for misleading sustainability claims and, hence, an increased consumer distrust.

As sustainability communication increases, consumers face difficulty distinguishing between credible and misleading claims. When there is conditions of information asymmetry, signals become the necessary tools through which consumers evaluate trustworthiness and reduce uncertainty (Negash & Akhbar, 2024). The perceived brand authenticity can be considered as one of the most necessary processes by which consumers can determine whether these sustainability claims are arguments that are really motivated by organizational goals or merely an organizational methodology for the positioning.

2.2 Theoretical Foundations

Is it important to have theoretical knowledge on how information is presented and how information is processed in consumers' minds to understand their process of judging sustainability claims in the fashion. The research is based on Signaling Theory (ST), Elaboration Likelihood Model (ELM) and Value-Belief-Norm (VBN) theory, which explains why perceived brand authenticity as a credibility signal affects, depending on motivational factors at the consumer level. The perceived brand authenticity, environmental concern, and purchase intention are approached through theoretically distinct but complementary lenses in this study. Signaling Theory primarily explains why authenticity functions as a credibility signal under conditions of information asymmetry in sustainable fashion markets. The Elaboration Likelihood Model explains how consumers process authenticity-related sustainability information with different levels of cognitive scrutiny and involvement. Value-Belief-Norm Theory explains why environmentally concerned consumers may demonstrate stronger sustainability-oriented behavioral intentions grounded in ecological values and moral obligation. Accordingly, H1 is primarily grounded in Signaling Theory, H2 in VBN Theory, and H3 draws jointly on ELM and VBN perspectives to explain potential differences in the processing and behavioral relevance of authenticity signals.

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2.2.1 Signaling Theory and Sustainability Communication

The Signaling Theory is a theory first introduced by Spence (1973), used in the context of information asymmetry in the labor market, that elucidates how informed parties reveal information about at least one unobservable aspect using observable signals to the less-informed parties. It is only effective when the sender makes it costly: when signals can be easily duplicated by low-quality senders, they lose their discriminatory ability (Connelly et al., 2011). Sustainably, brands have access to confidential information about sourcing practices, supply chain integrity, and environmental obligations. These attributes cannot be directly verified by the consumers, providing information asymmetry and perceived risk. Authenticity can be seen as an expensive message, especially in the case of reorganizing the supply chain on a long-term basis, conducting audits of third-party certifications, or making ongoing sustainability affirmations across collections and activities, which involve financial expenditure and reputation risk, thereby increasing credibility. In modern fashion markets, sustainability communication has increased substantially, making it more demanding for the consumers to distinguish between credible and opportunistic claims. In such contexts of information asymmetry, consumers rely on signals to reduce uncertainty and evaluate the credibility of products and sellers under conditions of information asymmetry credibility (Negash & Akhbar, 2024). Perceived brand authenticity is therefore a meta-signal synthesizing continuity, credibility, integrity, and symbolism into an overall credibility perception.

2.2.2 Elaboration Likelihood Model and Signal Processing

An example of this is the Elaboration Likelihood Model (ELM) proposed by Petty & Cacioppo (1986), which classifies the two information processing pathways: the central pathway (meticulous systematic evaluation) and the peripheral pathway (based on heuristic information) (Shahab et al., 2021). The combination of ELM and Signaling Theory helps understand one important mechanism: expensive and truthful signals did not always have a positive effect; they do not have an impact in every case when the

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consumer is locally elaborating on the information about sustainability. Highly environmentally conscious consumers will tend to increase scrutiny of authenticity cues, consistency across brand behavior, and inconsistencies between communication and behavior, which result in increased purchase intentions (El Hedhli & Zourrig, 2023). Lowly concerned consumers, on the other hand, are likely to process sustainability signals peripherally, in which authenticity signals are relative to price or value.

2.2.3 Value-Belief-Norm Theory and Environmental Concern

Value-Belief-Norm (VBN) Theory, which was established by (Stern et al., 1999) and later refined by (Stern, 2000), suggests that a pro-environmental behavior is an outcome of a causal relationship between basic value and ecological belief and finally, personal moral norms which catalyze the behavioral intentions. VBN Theory is used in the current study to explain why there is a moderation of the authenticity-intention relationship by the environmental concern. With greater environmental concern, consumers have turned on more vigorous personal norms on sustainable consumption (Hong et al., 2024). When they receive markers of authenticity, the markers created are congruent with their normative commitments and values, enhancing their behavioral salience. To low-concern consumers, there is attenuation in the authenticity-intention relationship in which authenticity cues have a weak motivational connection, irrespective of the credibility of the cues used.

2.3 Construct Development

2.3.1 Perceived Brand Authenticity

The perceived brand authenticity means how much consumers believe they see a brand as authentic, truthful, sincere, and consistent in its values and actions (Beverland, 2005; Morhart et al., 2015). Morhart et al. (2015) conceptualize brand authenticity as a multidimensional construct that includes, The Continuity (historical consistency), The Credibility (believability of claims), The Integrity (moral responsibility), and The Symbolism (identity expression). This current study is based on the measurement using

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this four-dimensional model. Authenticity is deeply connected to congruence between the sustainability communication and the reality of the corporate practices in terms of sustainability (Bulmer et al., 2024). Through perceived authenticity, Bruhn et al. (2012) show that brand trust and emotional brand attachment increase with perceived risk and willingness to buy. Although the operationalization of authenticity is largely prevalent through psychometric scales, authenticity is inherently socially constructed and culturally embedded Beverland & Farrelly (2010), which is why context-specific research is needed into it, which will be carried out within the Finnish sustainable fashion market within the framework of this study.

2.3.2 Environmental Concern

The environmental concern is how much people are conscious about environmental issues and the desire to find a solution to them (Dunlap et al., 2000). An environmental concern is operationalized with the New Ecological Paradigm (NEP) scale Dunlap (2008) based on a scale of beliefs about human-environment relations, the ecological limits, and anthropocentrism. A substantial body of empirical evidence shows that the environmental concern positively predicts green purchase intention (Dangelico et al., 2022; Ogiemwonyi et al., 2023). However, attitude-behavior gap is high in fashion as consumers who reported great environmental concern often buy fast fashion driven by price-sensitive, appearance, and social behaviors (Carfora et al., 2024; McNeill & Moore, 2015). The question of whether environmental concern is mostly a direct predictor or a boundary condition, which is controlling the effects of others, like authenticity, is also an essential theoretical question (Paul et al., 2016).

2.3.3 Purchase Intention

The purchase intention can be defined as a self-reported possibility or readiness of the consumer to purchase the given product or brand (Ajzen, 1991). The purchase intention is considered a common dependent variable in use in sustainable fashion research, as an observational method of purchase behavior is impractical. There is also well-reported

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evidence of the attitude-behavior gap in this area Carrington et al. (2010): consumers show positive intentions but fail to buy premium-priced products or, where there is a shortage, or aesthetic trade-offs. This explains why it is important to investigate mechanisms that enhance intention formation, like the perception that a brand is genuine. 3-Item scales derived based on existing study of green consumption Paul et al. (2016) have been shown to have a sufficient reliability and validity in previous study.

2.4 Contextual Positioning: Finland

Finland is an object of study with theoretical interest in terms of this investigation due to several related factors. Finland boasts a high environmental awareness and is one of the most sustainability-focused societies on the planet, coupled with a high level of institutional trust and sustainability-focused public discussion Raza et al. (2024) as a Nordic welfare state. Nevertheless, consumers in Finland have high pro-environmental attitudes, and characteristics of willingness to pay premiums on sustainable products are above average (Strömgård, 2023). The domestic fashion market in Finland features brands with authenticity-positioned, such as Marimekko, Globe Hope, Pure Waste, and Papu, as well as foreign fast-fashion players, and, therefore, in which the evaluation of authenticity is of specific consequence.

The Finnish regulatory environment is becoming much more favorable towards transparency on sustainability. The Green Claims Directive and the Corporate Sustainability Reporting Directive by the European Union are an indication of a changing institutional environment where greenwashing is increasingly having legal implications. Here, consumers can become increasingly sensitive to the credibility of sustainability signals.

2.5 Hypotheses Development

2.5.1 Perceived Brand Authenticity and Purchase Intention

Authenticity has consistently been shown to predict consumer behavioral intentions. The systematic review of authenticity research that Södergren (2021) carried out over 25 years confirms the positive impact of authenticity on purchase intentions across

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different product types. Turker et al. (2023) established that corporate authenticity reinforces positive consumer reactions in the field of CSR. Chen et al. (2020) demonstrate that the green brand authenticity has a positive impact on purchase intention through a green trust and brand equity in explicitly green contexts. The identity-driven, trend character of the fashion industry, however, could shift the authenticity-intention relation. Since greenwashing issues are especially widespread in the fashion sector, authenticity could be quite consequential as one of the credibility systems that enable customers to differentiate between the sincere sustainability assertions and those that are souped up.

H1: Perceived brand authenticity is positively associated with purchase intention toward sustainable fashion brands among consumers residing in Finland.

2.5.2 Environmental Concern and Purchase Intention

One of the predictors of sustainable consumption studies is environmental concern. Ogiemwonyi et al. (2023) determine that consumers with concerns about the environment demonstrate a stronger intent to buy green products, and Dangelico et al. (2022) confirm such an association in the framework of sustainable fashion. Depicted by Sudbury-Riley & Kohlbacher (2016) ethical concern forecasts consumer behavior towards ethical purchasing, and Andreica Mihuț et al. (2025) illustrate how concern reinforces sustainability-related behavioral intentions among consumers. Although the gap between attitude and behavior is challenging the relationship, recordings that have been carried out by Carfora et al. (2024) show that pro-environmental self-identity does not predict purchase behavior, thus even in the field of empirical research, the environmental concern is strong direct predictor of pro-environmental purchase intention.

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H2: Environmental concern is positively associated with purchase intention toward sustainable fashion brands among consumers residing in Finland

2.5.3 Moderating Role of Environmental Concern

Drawing on Signaling Theory, ELM, and VBN Theory, the environmental concern was hypothesized to moderate the relationship between perceived brand authenticity and purchase intention. From an ELM perspective, consumers with a higher environmental concern are expected to engage in deeper elaboration and scrutiny of sustainability-related authenticity cues, while VBN Theory suggests that stronger ecological values increase the behavioral relevance of such signals. Wang et al. (2019) show that the connection between green perceived value and purchase intention is moderated by environmental concern, with a greater impact on highly concerned consumers. Andreica Mihuț et al. (2025) hypothesize that environmental concern enhances the relationship between sustainability perceptions and behavioral intention. In theory, highly concerned consumers are more attentive toward sustainability information and eager to judge the authenticity claims further and are more inclined to include judgments of authenticity to make buying decisions (El Hedhli & Zourrig, 2023; Hong et al., 2024). Sustainability signals might not have a normative relevance to low-concern consumers and thus less impact on their behavioral response (Stern et al., 1999).

H3: Environmental concern positively moderates the relationship between the perceived brand authenticity and purchase intention, such that the relationship is stronger among consumers with higher levels of environmental concern.

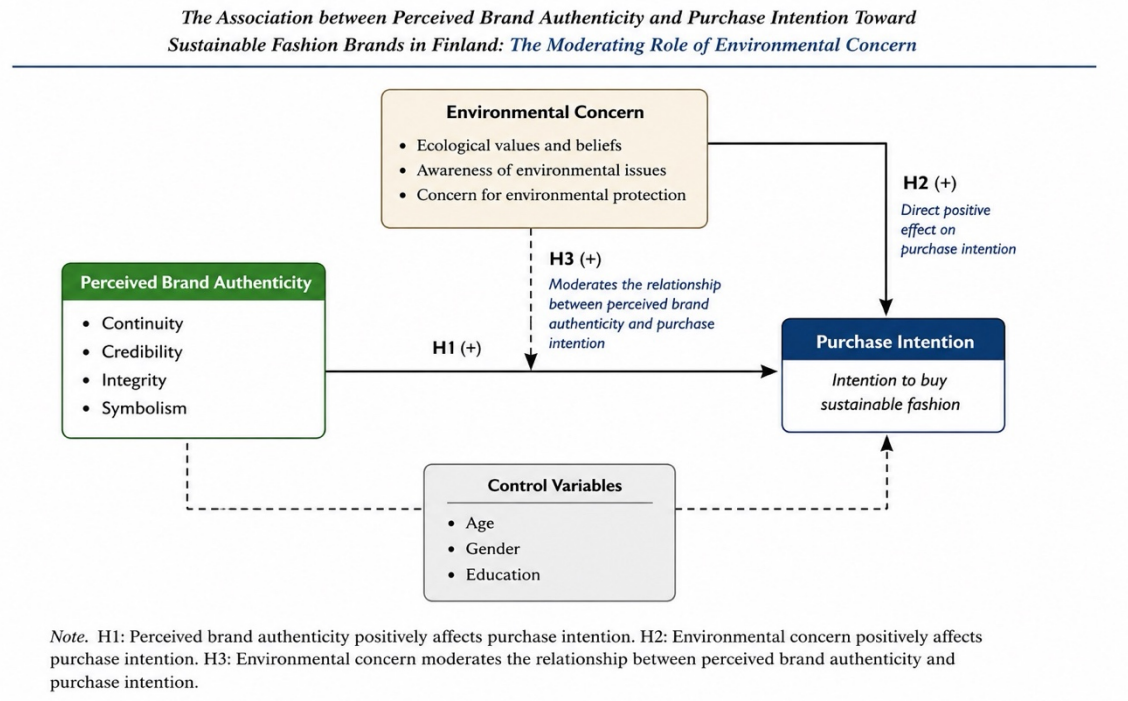
2.6 Integrated Research Gap

The synthesis of the literature unveils four gaps interrelated with each other. To start with, even though authenticity predicts purchase intention in the general green markets, its role in sustainable fashion has hardly been investigated. Second, environmental concern has mostly been researched more as a predictor circumstantially than as a moderator of the effects of authenticity. Third, Nordic contextual factors are underdeveloped in the empirical studies of sustainable fashion. Fourth, Signaling Theory has not been adequately incorporated with authenticity constructs when it comes to fashion. All these four gaps are addressed in this research with theoretically based and empirically grounded research in the context of Finnish market.

2.7 Conceptual Model

The conceptual model of this study integrates Signaling Theory, the Elaboration Likelihood Model, and Value-Belief- Norm Theory, to explain how consumers evaluate sustainable fashion brands operating in Finland. Signaling Theory explains perceived brand authenticity as a credibility signal that helps consumers reduce uncertainty regarding sustainability claims under conditions of information asymmetry. The Elaboration Likelihood Model explains differences in how consumers process authenticity-related sustainability information depending on their level of involvement and motivation to evaluate sustainability claims. Value-Belief-Norm Theory explains how environmental concern reflects broader ecological values and moral orientations that may influence sustainable purchase-related evaluations.

Perceived brand authenticity is the main independent variable in the model that explains the purchase intention (H1). Environmental concern is directly linked to purchase intention (H2) and is also used as a moderating variable in the relationship between perceived brand authenticity and purchase intention (H3). The dependent variable is the purchase intention for sustainable fashion brands in Finland.



Note. H1: Perceived brand authenticity positively affects purchase intention. H2: Environmental concern positively affects purchase intention. H3: Environmental concern moderates the relationship between perceived brand authenticity and purchase intention.

Figure 1: The Conceptual Model

3 Methodology

3.1 Research Design

In this paper, a self-administered online survey is used as a quantitative cross-sectional study, in a self-administered questionnaire. It is a deductive, theory-driven methodology that attempts to test the theoretically assumed relationship between the perceived brand authenticity, environmental concern and purchase intention in the context of a sustainable fashion market in Finland in an empirical manner. A survey approach suits since the focal constructs are latent psychological variables that need multi-item measurement scales that have been validated in the previous consumer studies (Dangelico et al., 2022). The main sustainable consumption research designs for studying attitudes, perceptions and behavioral intentions at one time are cross-sectional survey designs.

3.2 Sampling Strategy and Brand Selection

The target market was adult customers (over 18 years of age) residing in Finland who have been aware and have a purchase experience with at least one sustainable fashion brand that has been operating within the Finnish market. Nationality was not used as a screening criterion; the sample therefore reflects consumers residing in Finland and participating in its sustainable fashion market. The screening question confirmed eligibility by asking if the clothing was made with “environmentally friendly materials” or “ethical working practices” or “circular production.” People were asked if they bought at least one product of sustainable fashion in the last year. Only those respondents who answered “Yes” were included in the analysis.

Data were collected through a self-administered online questionnaire distributed using non-probability snowball sampling via WhatsApp and other social media platforms. The survey link was initially shared within personal and university-related networks and subsequently redistributed by participants within their own networks. The respondents were asked to think of a sustainable fashion brand they had personally purchased from

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a non-exhaustive illustrative list (e.g., Marimekko, Pure Waste, Globe Hope, Papu); however, the specific brand evaluated was not recorded as a discrete survey item. As a result, the observed relationship between the perceived brand authenticity and purchase intention may partially reflect unobserved brand-level characteristics, including brand familiarity, market positioning, perceived quality, pricing, or pre-existing reputation differences across brands. Accordingly, the findings interpreted reflections as generalized consumer perceptions of sustainable fashion brand authenticity within the Finnish market context, rather than isolated evaluations of a single specific brand. The screening question confirmed sustainable fashion purchase behavior in the past 12 months. The G*Power analysis ($f^2 = .15$, $\alpha = .05$, power = .80, four predictors) indicated a minimum of 85 respondents; a final analytical sample of N = 160 substantially exceeds this threshold and provides adequate power for the moderation test (Dangelico et al., 2022).

3.3 Measurement of Constructs

Each construct is assessed with the help of already tested scales specific to the context of sustainable fashion. Each item has a 7-point Likert scale (1 = Strongly Disagree, 7 = Strongly Agree), which is chosen to maximize variance on responses and statistical sensitivity, and to ensure some consistency in the way the responses are phrased. The respondents were instructed to evaluate a sustainable fashion brand they had personally purchased from within the Finnish market context (e.g., Marimekko, Pure Waste, Globe Hope, Papu). The goal was to embed the perception of authenticity in authentic marketplace activity and experiences, not in hypothetical activities and evaluations. The specific brand choices however, made by each respondent was not captured as a separate survey variable which reduces the capacity to differentiate the perceived authenticity effects from the potential brand level difference for instance, reputation, visibility, positioning, sustainability profile etc.

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3.3.1 Perceived Brand Authenticity

The perceived brand authenticity was measured using an 11-item adapted version of the scale designed by Morhart et al. (2015), which reflects the four dimensions: Continuity, Credibility, Integrity, and Symbolism. Four items from the original 15-item scale were excluded at the questionnaire design stage to reduce respondent burden and improve survey completion in the online survey format Item selection prioritized maintaining conceptual representation across all four theoretical dimensions to preserve content coverage while reducing redundancy and survey length. Items were only minimally adapted to reference sustainable fashion brands operating in Finland while preserving the original conceptual wording and theoretical meaning of the scale. Although the scale reflects four conceptual dimensions of authenticity, the items were operationalized as a single composite perceived brand authenticity construct in the present study. The final 11-item scale demonstrated strong internal consistency (Cronbach's $\alpha = .903$). Examples of retained items include: "This brand has a long-standing commitment to its values" (Continuity), "This brand is honest in its communication" (Credibility), and "I can identify with this brand" (Symbolism).

3.3.2 Environmental Concern

The 6-item modified version of the New Ecological Paradigm (NEP) scale Dunlap (2008) was adopted to measure the environmental concern which includes all key concerns of ecological belief without making the survey too long. Initial reliability analysis of the six-item adapted NEP scale indicated weak internal consistency ($\alpha = .407$). Two reverse-scored items (EC5 and EC6) were first reverse coded in SPSS prior to reliability testing. Subsequent reliability diagnostics of the six-item scale indicated problematic psychometric behavior, including weak or negative corrected item-total correlations and inconsistent covariance patterns with the remaining items. Following reliability analysis using Cronbach's alpha, corrected item-total correlations, and "alpha if item deleted" diagnostics in SPSS, these two items were excluded from the composite environmental concern score, resulting in a modest improvement in internal consistency (4-item α

= .598). However, the revised scale remained below conventional reliability thresholds, and the exclusion of reverse-coded items may have reduced the scale's ability to detect response-set bias. Accordingly, findings involving environmental concern should be interpreted cautiously, as the modest reliability of the revised scale limits the strength and precision of environmental concern-related interpretations. These retained items primarily reflect stronger eco-centric and pro-environmental beliefs, and therefore the revised scale may capture a narrower form of environmental concern rather than the full breadth of the original NEP construct.

3.3.3 Purchase Intention

The three-item scale adapted from existing green consumption studies was used to measure purchase intention (Chen et al., 2020; Paul et al., 2016). The exact items used, matching the survey instrument, are: "I would consider purchasing products from this brand," "I intend to purchase products from this brand in the future," and "The likelihood that I would buy from this brand is high." The scale demonstrated strong internal consistency in the present study and had (Cronbach's α = .894).

Table 1: Construct Measurement Summary

Construct	Dimension(s)	Scale Source	Items	Mean	SD	Minimum	Maximum	Skewness	Kurtosis	Cronbach's α
Perceived Brand Authenticity	Continuity, Credibility, Integrity, Symbolism	Morhart et al. (2015)	11	5.41	0.80	2.82	7.00	-0.726	1.064	.903
Environmental Concern	Ecocentric Beliefs	Dunlap (2008)	4	5.56	0.96	2.00	7.00	-0.727	0.919	.603
Purchase Intention	Purchase Intention	Chen et al. (2020); Paul et al. (2016)	3	5.46	0.94	1.00	7.00	-1.288	3.759	.894

Note. *All constructs were measured on a 7-point Likert scale (1 = Strongly Disagree, 7 = Strongly Agree).*

Detailed item-level descriptive statistics for all retained measurement items are provided in Appendix 4.

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3.4 Data Analysis Plan

Preliminary analyses included descriptive statistics, reliability analysis, Pearson bivariate correlation analysis, and normality assessment. Skewness and kurtosis values, together with histogram and Q-Q plot inspection, indicated no severe deviations from approximate normality, supporting the use of parametric analyses with the present sample size (N = 160). Common method variance (CMV) was assessed using Harman's single-factor test, although the limitations of this diagnostic approach are acknowledged (Kock, 2015; Podsakoff et al., 2003). No procedural separation of predictor and outcome measures was applied in the cross-sectional survey instrument, which represents a limitation discussed in Chapter 7. The main analytical tool was hierarchical multiple regression (HMR), which was done using IBM SPSS Statistics 29. The two continuous predictors (PBA_MC and EC_MC) were mean centered before creating PBA×EC interaction. Mean-centering was applied to facilitate interpretation of regression coefficients in the presence of interaction effects. Mean-centering does not remove multicollinearity but helps to remove non-essential collinearity between the interaction terms and the lower order predictors, making the coefficients easier to understand. Four fitted sequential regression models were:

Model 1 (Controls):

$$PI = \beta_0 + \beta_1(Controls) + \varepsilon$$

Model 2 (Main Effect – Authenticity):

$$PI = \beta_0 + \beta_1(Controls) + \beta_2(PBA) + \varepsilon$$

Model 3 (Main Effects – Authenticity + Environmental Concern):

$$PI = \beta_0 + \beta_1(Controls) + \beta_2(PBA) + \beta_3(EC) + \varepsilon$$

Model 4 (Moderation Model):

$$PI = \beta_0 + \beta_1(Controls) + \beta_2(PBA) + \beta_3(EC) + \beta_4\,(PBA \times EC) + \varepsilon$$

- Model 1 (Controls): Age, Gender, Education entered as baseline covariates.
- Model 2 (Main Effect – PBA): Mean-centered PBA added to test H1.
- Model 3 (Main Effects – PBA + EC): Mean-centered EC added to test H2.
- Model 4 (Moderation): PBA×EC interaction term added to test H3.

Using Variance Inflation Factors (VIF), the multicollinearity was evaluated. Values below 10 were considered acceptable.

4 Results

4.1 Sample Profile and Screening Variable

The final analytical sample comprised of 160 respondents. The complete sample profile is given in Table 2. The gender distribution was unevenly skewed to women, with 73.5% (n = 117) being female and 26.5% (n = 42) male, with women once again being over-represented, similar to previous research on sustainable fashion (Carfora et al., 2024; Dangelico et al., 2022). The participants aged between 18 to 58 years (M = 31.1, SD = 6.8), and the sample was completed by highly educated, with 57.5% holding a master's degree and 29.4% holding at least a bachelor's degree.

For a screening variable, all 160 respondents included in the final analysis reported having purchased at least one sustainable fashion product in the previous year. In the survey, the screening question, "Have you bought at least one sustainable fashion product in the last 12 months?" was coded as binary (Yes / No). From the initial pool of of 196 non-blank raw responses, 31 respondents provided a "No" to the screening question hence they were excluded from any analysis. The additional five more responses were removed during a data-cleaning stage due to invalid or substantially incomplete response patterns, resulting in the final analytical sample of 160 respondents. The screening variable was not used in the regression analysis; it was used only as a check to determine the eligibility of the respondents and whether they had the purchase experience required to assess sustainable fashion brand authenticity.

Table 2: Sample Profile (N = 160)

Characteristic	**Category**	**N**	**%**
Gender	Female	117	73.5%
	Male	42	26.5%
Age (Groups)	≤24	23	14.4%
	25–34	86	53.8%
	35–44	46	28.7%

	45–54	3	1.9%
	55–58	1	0.12%
Education	Bachelor's	47	29.4%
	Master's	92	57.5%
	PhD	13	8.1%
	Other	8	5.0%
Sustainable Fashion Purchase (past 12 months)	Yes	160	100.0%
	No	31	Excluded

Note. *Gender: 1 = Female, 2 = Male. Education: 1 = Bachelor, 2 = Master, 3 = PhD, 4 = Other.*

4.2 Reliability and Descriptive Statistics

The reliability coefficients and descriptive statistics of all constructs are shown in Table 3. The Perceived Brand Authenticity scale demonstrated a high degree of internal consistency (α = .903, 11 items), which is consistent with prior applications of the Morhart et al. (2015) scale in branding research. The Purchase Intention scale has also shown a great level of reliability (α = .895, 3 items), which corresponds with the data provided by (Chen et al., 2020; Paul et al., 2016). The Environmental Concern scale returned a Cronbach's alpha of .598 following the exclusion of two reverse-coded items during reliability diagnostics. Though this value is below the normal standard of .70, it was decided to keep the scale because of exploratory nature of this study and theoretical importance of this construct. Results related to the issue of environmental concern should, therefore be interpreted with caution. Also, descriptive statistics indicated that respondents generally reported relatively positive perceptions of sustainable fashion brands (PBA: M = 5.41, SD = 0.79), comparatively high levels of environmental concern (EC: M = 5.57, SD = 0.97), and moderately strong purchase intentions (PI: M = 5.46, SD =

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0.94). A relatively high mean and limited variability observed for the environmental concern recommend that responses were concentrated toward the upper end of the scale within this sample.

Table 3: Reliability Statistics and Descriptive Statistics for Scale Composites

Construct	Items	Mean	SD	α (Cronbach)
Perceived Brand Authenticity (PBA)	11	5.41	0.79	0.903
Environmental Concern (EC) — 4 items	4	5.57	0.97	0.598
Purchase Intention (PI)	3	5.46	0.94	0.895

Note. *All the constructs were measured on 7-point Likert scale (7 = Strongly Agree, 1 = Strongly Disagree). The Environmental Concern scale demonstrated lower internal consistency and should therefore be interpreted with caution.*

4.3 Normality and Common Method Bias

The formal tests of that all the composites w normality using the Kolmogorov-Smirnov and the Shapiro-Wilk tests indicated statistically significant deviations from a normality across the study variables (all $p < .001$). However, given the sample size (N = 160), these tests are highly sensitive to relatively small distributional deviations. An Item-level skewness and kurtosis statistics remained within generally acceptable ranges for regression analysis and are presented in Table 4 and Appendix 4. Overall, the distributions were considered sufficiently acceptable for hierarchical multiple regression analysis.

Table 4: Item-Level Descriptive Statistics and Normality Indicators

Item	Mean	SD	Min	Max	Skewness	Kurtosis
PBA1	5.34	1.147	1	7	-1.028	1.686

PBA2	5.48	1.066	2	7	-1.180	1.769
PBA3	5.41	1.154	1	7	-1.253	2.261
PBA4	5.39	1.102	1	7	-1.330	2.457
PBA5	5.56	0.976	1	7	-1.491	4.138
PBA6	5.41	1.103	1	7	-1.724	3.778
PBA7	5.35	1.087	1	7	-1.366	3.367
PBA8	5.35	1.087	1	7	-1.366	3.367
PBA9	5.47	1.006	1	7	-1.411	3.968
PBA10	5.54	1.036	1	7	-1.465	4.221
PBA11	5.30	1.165	1	7	-1.336	2.284
EC1	5.69	1.431	1	7	-1.303	1.248
EC2	5.61	1.323	1	7	-1.230	1.300
EC3	4.93	1.654	1	7	-0.908	0.095
EC4	6.03	1.291	1	7	-1.706	2.824
PI1	5.45	0.966	1	7	-1.485	5.191
PI2	5.51	1.044	1	7	-1.550	4.284
PI3	5.45	1.034	1	7	-0.840	1.463

The common method variance was evaluated using a Harman's single-factor test. The single factor extracted from all retained scale items accounted for 34.9% of the total variance, below the 50% threshold commonly associated with severe common method bias (Podsakoff et al., 2003). However, a Harman's single-factor test is recognized as a limited diagnostic tool because it cannot fully detect moderate levels of common method variance (Kock, 2015). Thus, the common bias cannot be totally ruled out by a reason of self-reporting and cross sectional design of the study.

4.4 Bivariate Correlations

The Pearson bivariate correlations amongst the study variables are given in Table 5. The Perceived Brand Authenticity was positively correlated with r = .638, p < .001). Environmental concern also shows the positive correlation with Purchase Intention (r = .163, p =.039). The correlation between Perceived Brand Authenticity and Environmental Concern was positive but not statistically significant (r = .132, p = .096). None of the control variables demonstrated statistically significant correlations with Purchase Intention (all p > .05).

Table 5:Pearson Bivariate Correlations Among Study Variables

Variable	M	SD	1	2	3	4	5	6
1. PBA	5.41	0.79	—					
2. EC	5.57	0.97	0.132	—				
3. PI	5.46	0.94	0.638**	0.163*	—			
4. Age	31.08	6.76	0.091	-0.012	0.108	—		
5. Gender	1.26	0.44	0.083	-0.208**	0.141	-0.051	—	
6. Education	1.89	0.75	-0.011	0.068	0.020	0.124	0.014	—

Note. *N = 160. * p < .05 (two-tailed). ** p < .01 (two-tailed).*

4.5 Hierarchical Multiple Regression

The results of the hierarchical multiple regression analysis of all four sequential models are given in Table 6. Multicollinearity diagnostics determined that there is no issue with problematic collinearity: all Variance Inflation Factors (VIF) are less than 1.10, representing no evidence of problematic multicollinearity, and all the tolerance values exceed 0.92, suggesting that the predictors are sufficiently independent.

Table 6: Hierarchical Multiple Regression Results Predicting Purchase Intention (N = 160)

Predictor	**Model 1**		**Model 2**		**Model 3**		**Model 4**	
	B	**β**	**B**	**β**	**B**	**β**	**B**	**β**
(Constant)	5.460		5.460		5.460		5.474	
AGE	.016	.115	.007	.053	.008	.058	.006	.046
GENDER	.314	.147	.195	.091	.247	.115	.270	.126*
EDU	.005	.004	.024	.019	.014	.011	.017	.013
Perceived Brand Authenticity_ Environmental Concern (PBA_MC)			.744***	.626***	.724***	.609***	.727***	.611***
Environmental Concern and Mean Centering					.105	.107	.109	.112
Perceived Brand Authenticity x Environmental Concern							−.139	−.111
R^2	.033		.418		.429		.441	

ΔR^2	.033		.385		.011		.012	
F Change	1.781		102.527***		2.859		3.297	

Note. *Standardized coefficients (β) reported. B = unstandardized coefficient. PBA_MC and EC_MC are mean-centered composites. PBA×EC is the mean-centered interaction term. All VIF < 1.09. * p < .05. *** p < .001. Model 4 R^2 = .441, Adjusted R^2 = .419.*

4.5.1 Model 1, Control Variables

In Model 1, age, gender, and education level were used as baseline covariates. The control block only explained 3.3% of the variance in the purchase intention (R^2 =.033, F = 1.781, p=.153), and this was not statistically significant. None of the individual control variables reached significance (Age: β = .115, p = .15; Gender: β = .147, p = .065; Education: β = .004, p = .96). This trend aligns with prior research suggesting that demographic factors often have limited explanatory power in sustainable fashion purchase intention.

4.5.2 Model 2, H1: Perceived Brand Authenticity → Purchase Intention

The Model 2 introduced a mean-centered perceived brand authenticity (PBA_MC) as the main predictor. The increment in explained variance was substantial and statistically significant (ΔR^2 = .385, ΔF (1, 155) = 102.527, p < .001). The perceived brand authenticity showed a strong, positive, and highly significant effect on the purchase intention (B = .744, β = .626, t = 10.126, p < .001, 95% CI [0.599, 0.889]). H1 is therefore supported. This finding suggests that the consumers who perceive sustainable fashion brands as more authentic also report stronger purchase intentions. This effect (β = .626) is large by the standard of consumer behavior survey research and is generally consistent with Signaling Theory, which could be used to suggest that the authenticity perceptions are acting as credibility cues which lead to reduced perceived uncertainty in the consumer evaluations (Connelly et al., 2011; Spence, 1973). Some transparency is needed to as to

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what this coefficient can and cannot support because the respondents evaluated different brands and the specific brand was not recorded, hence, β = .626 cannot be read as the clean within-brand authenticity effect. The four illustrative brands in this study, Marimekko, Pure Waste, Globe Hope, and Papu, differ significantly in the price positioning, market visibility, sustainability profile, and the brand recognition. The respondent rating Marimekko is operating from very distinctive baseline of the brand familiarity than one rating Pure Waste. This means that part of what is captured in PBA scores may be pre-existing brand reputation rather than authenticity perception in the isolation. Because the respondents evaluated different sustainable fashion brands and the specific brand evaluated by each respondent was not documented, the observed association may partly reflect differences in the brand familiarity, reputation, or market positioning across brands. This does not invalidate this finding, but it does mean the effect size should be treated with caution and that future research would benefit from controlling for brand identity as a discrete variable.

4.5.3 Model 3, H2: Environmental Concern → Purchase Intention

In Model 3, mean-centered environmental concern was added to Model 2. The addition of environmental concern did not produce a statistically significant increase in explained variance (ΔR^2 = .011, ΔF (1,154) = 2.859, p = .093), raising the total R^2 to .429. Environmental concern was not a statistically significant predictor of purchase intention after controlling for perceived brand authenticity and demographic variables (B = .105, β = .107, t = 1.691, p = .093, 95% CI [−0.018, 0.227]). Therefore, H2 was not supported.

While prior sustainable consumption studies have reported associations between environmental concern and green purchasing behavior (Dangelico et al., 2022; Ogiemwonyi et al., 2023), such a relationship was not statistically supported in the present study after controlling for perceived brand authenticity. One possible explanation is that the relatively low reliability and convergent validity of the environmental concern measure reduced its explanatory precision within the regression model. In contrast, perceived brand authenticity remained statistically significant in Model 3 (β = .609, p < .001).

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4.5.4 Model 4, H3: Moderation by Environmental Concern

H3 was not supported. The interaction term between perceived brand authenticity and environmental concern did not significantly predict purchase intention (B = −.139, β = −.111, p = .071), and the accumulation of the interaction term did not produce a statistically significant increase in the explained variance. Consequently, the environmental concern was not found to moderate the relationship between perceived brand authenticity and purchase intention within this sample.

One possible explanation is that the relatively low reliability and convergent validity of the environmental concern measure may have reduced the correctness of the moderation analysis. Future research using more robust measures of environmental concern and greater variability in moderator responses may help clarify whether moderation effects exist in this context.

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5 Discussion

This paper has discussed a relationship between the perception of the brand authenticity and the intention to purchase a sustainable fashion brand operating in Finland, among consumers residing in the Finnish market, and it also studied whether there is moderating effect of environmental concern between these two. The analysis gives rise to three major results that are of theoretical and practical importance.

5.1 Perceived Brand Authenticity as Key Purchase Driver

The most noteworthy discovery of this research is the uniformity and strength of the authenticity in the purchase intention relationship. The Perceived brand authenticity, with a standardized coefficient of $\beta = .626$ and an incremental $R^2 = .385$, is by far the strongest predictor of sustainable fashion purchase intention in the Finnish context. This finding contributes to understanding of how credibility signals function in saturated sustainability markets in two respects.

To begin with, it is broadly coherent with the Signaling Theory (Connelly et al., 2011; Spence, 1973) applies to the field of sustainable fashion. The authenticity may help reduce perceived uncertainty in markets considered by the information asymmetry and concerns about greenwashing. The scale of the authenticity effect, which is bigger than the related effects identified in general studies on green consumption (Chen et al., 2020; Wang et al., 2019), recommends that the consumers in this sample may place particular importance on authenticity perceptions when evaluating sustainable fashion brands. This aligns with Lindgren (2024) observation that consumers in Nordic markets place particular weight on transparency and ethical consistency when assessing fashion brands.

From the managerial perspective, the findings propose that sustainable fashion brands may benefit from communicating sustainability commitments consistently and transparently across branding, messaging, and operational practices. With high consumers awareness and sustainability scrutiny, authenticity could serve as a key credibility signal and drive purchase-related evaluations.

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One important interpretive constraint on this finding must be acknowledged directly. Because the specific brand evaluated by each respondent was not recorded as a survey variable, brand-level variance is uncontrolled in the regression model. The four example brands (Marimekko, Pure Waste, Globe Hope, Papu) vary widely in terms of size, price, market reach and sustainability communication. Therefore, the observed β = .626 can only partly be interpreted as within-consumer authenticity perceptions as it can also be seen because of systematic between-brand differences in perceived authenticity. The coefficient should therefore be viewed as an estimate of the relationship between authenticity and intention to buy the brand in this sample, given an uncontrolled brand covariate.

5.2 Environmental Concern and Purchase Intention

H2 was not statistically supported (β = .107, p = .093). After controlling for perceived brand authenticity and demographic variables, environmental concern did not significantly predict purchase intention within this sample. This finding differs from several prior sustainable consumption studies that have reported positive relationships between environmental concern and green purchasing behavior (Dangelico et al., 2022; Ogiemwonyi et al., 2023). One possible explanation is that the relatively low reliability and convergent validity of the environmental concern measure may have reduced its explanatory precision in the regression analysis.

5.3 The Non-Significant Moderation

The results of this study did not support the moderating role of environmental concern in the relationship between perceived brand authenticity and purchase intention. The interaction term was not statistically significant (β = −.111, p = .071, 95% CI [−.289, .012]), and H3 is therefore not supported. Because the confidence interval includes zero, no reliable directional effect can be inferred from this result.

One contextual factor worth noting is the distributional constraint of environmental concern in the sample. With EC_Mean = 5.57 on a 7-point scale (SD = 0.97), the

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moderator occupies the high end of its range with limited spread. McClelland and Judd (1991) demonstrate that restricted moderator variance reduces statistical power to detect interaction effects even when a true moderation exists in the population. This distributional constraint, combined with the weak reliability and convergent validity of the EC scale documented in Section 3.2.2, means the absence of a significant moderation effect cannot be understood as definitive evidence against H3. The measurement and distributional conditions were not adequate to test the hypothesis cleanly.

H3 therefore remains an open empirical question rather than a refuted one. Future research with a more reliable EC measure and a sample with greater variance in environmental concern would be needed to test this relationship under conditions that give the moderation hypothesis a fair test.

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6 Conclusion

The goal of this study was to study the direct effect of the both the brand authenticity and environmental concern on purchase intention of sustainable fashion brands as well as the moderating effect of environmental concern on the authenticity-intention relationship in the case of Finland. The hypotheses were tested using hierarchical multiple regression on 160 consumers living in Finland and based on the Signaling Theory and the Integration of the Value-Belief-Norm Theory and the Elaboration Likelihood Model. Within this framework, Signaling Theory primarily explains the direct role of authenticity as a credibility cue, VBN Theory explains environmentally oriented purchase motivations, and ELM explains potential differences in the processing of sustainability-related authenticity information.

The analysis reveals three insights, which are important theoretically and practically. First, perceived brand authenticity was the strong predictor in the Finland's market for sustainable purchase intention of fashion brands ($\beta = .626$; $\Delta R^2 = .385$), consistent with the argument that authenticity perceptions may function as credibility-related signals in sustainable consumption contexts. This implies that authenticity (continuous, credible, integral, symbolic) is the main campaign strategy through which sustainable fashion brands in Finland can strengthen purchase-related evaluations among consumers within this sample. Second, Environmental concern showed no statistically significant relationship with purchase intention ($\beta = .107$, $p = .093$, 95% CI [−0.018, 0.227]), providing no reliable evidence in support of H2 within this sample. Environmental concern was not found to significantly predict purchase intention after controlling for perceived brand authenticity and demographic variables. Third, the moderation hypothesis was not supported ($\beta = -.111$, $p = .071$, 95% CI [−.289, .012]). The confidence interval includes zero, and no reliable conclusion about the direction or nature of the interaction can be drawn from this result. Future research may benefit from examining moderation effects in samples with greater variability in environmental concern.

The full model explained 44.1% of the variance in purchase intention (Adjusted $R^2 = .419$), a substantial level of explanatory power for survey-based consumer behavior

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research. The results indicate that this sample was more likely to intend purchasing a product that was perceived as authentic than one that was perceived as environmentally concerned.

The practical takeaway for the managers of sustainable fashion brands, who operate in Finland and similar Nordic markets, is clear: the perceived brand authenticity which is grounded in the demonstrated the continuity, credibility, integrity and identity congruence, is an important credibility cue that plays the major role in influencing purchase intention in this sample. Whereas declarative green claims are under greater legal review and examination with the EU Green Claims Directive, and consumers in the Finnish market conduct complex checks of authenticity beyond eco-labelling, green and sustainable practices are more than a moral decision.

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7 Limitations

There remain limitations of the study that need to be considered after drawing conclusions from this study. First, it is based on a survey cross-sectional design that does not permit inferences about causality. The theorized hypotheses and regression findings aligned with the presumed directional effects but are based on correlations rather than causality. To understand causal mechanisms, longitudinal or experimental designs that manipulate perceptions of authenticity are needed.

Second, the research is based on consumer intention to purchase, rather than actual behavior. This may lead to an attitude-behavior gap, in which customers may display favorable attitudes towards environmental causes but may not always act accordingly by purchasing sustainable fashion (Carrington et al., 2010). Also, the research is hindered by social desirability bias that may result in socially desirable intentions to purchase sustainable fashion when environmentally sustainable practices are desirable in Finland.

Third, there is potential for sampling bias. The sample was obtained using snowball sampling by various social media channels, which may have introduced a bias towards younger, highly educated, and highly eco-conscious participants. This sample of the survey showed highly educated respondents, with 95% having at least a bachelor's degree, which hampers our ability to simplify the consequences to the broader population of consumers residing in Finland.

Fourth, limitation concerns the definition of the study population. The study population is defined as adults residing in or operating within the Finnish sustainable fashion market. Nationality was deliberately not used as a screening criterion, as the research interest lies in consumer behavior within this market context rather than Finnish national identity specifically. Consequently, findings reflect the experiences of consumers engaging with the Finnish sustainable fashion market and cannot be generalized to Finnish nationals as a distinct population group.

Fifth, there are issues with the measurement of environmental concern (EC). The measure had a reliability coefficient (Cronbach's alpha) of .598, less than the recommended level of .70. While composite reliability (CR = .713) is above .70, it shows

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limited convergent validity (below the acceptable level of .50). This implies the adapted four-item NEP scale accounts for less than half of the variance in the construct of environmental concern. This could lead to a weaker association between environmental concern and purchase intention, and likely to undermine the detection of moderation effects. In addition to measurement limitations, the distribution of environmental concern in the sample presents a further constraint. The related concern is that the exclusion of reverse-scored items EC5 and EC6 may have introduced response-set bias into the environmental concern measure. Response-set bias occurs when respondents answer items consistently in one direction regardless of item content, producing artificially inflated agreement scores rather than genuine attitude variation. Reverse-scored items serve as a methodological check against this tendency, because a respondent answering genuinely must shift direction when responding to negatively worded items. By removing EC5 and EC6 on reliability grounds, the remaining four-item scale consists entirely of positively worded items, which means any systematic tendency toward agreement in this sample would go undetected. Given the near-ceiling mean (M = 5.57/7) observed in the EC scores, this possibility cannot be ruled out. If response-set bias is present, the EC scores may overestimate the true level of environmental concern in the sample, which would artificially compress variance and further weaken the ability to detect moderation effects in H3. This represents a substantive construct validity concern for any conclusion drawn about the role of environmental concern in this study.
Sixth, the distribution of environmental concern in the sample represents both a contextual and methodological limitation. The mean level of environmental concern is relatively high (M = 5.57 on a 7-point scale, SD = 0.97), indicating limited variability across respondents. As noted by McClelland & Judd (1991), restricted variance in a moderating variable reduces the statistical power to detect interaction effects. Therefore, the non-significant moderation result (H3) should be interpreted considering this limitation rather than as conclusive evidence against the hypothesized relationship.
Seventh, common method bias may have influenced the study, because of all variables were assessed via one survey instrument. While Harman's single factor test suggested that the first factor explained only 34.9% of the total variance (less than 50%, which is

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indicative of serious bias), this method has been shown to be insufficient in detecting more refined forms of common method variance (Kock, 2015; Podsakoff et al., 2003). Also, no procedural measures like psychological or temporal spacing of the variables were taken. So, the estimates of relationships between variables cannot be fully exempted of some inflation.

Eighth, variability at the brand level was not explicitly accounted for. Though the respondents were asked to assess their attitude towards a sustainable fashion brand, the brand was not captured as a variable. The example brands listed (e.g., Marimekko, Pure Waste, Globe Hope, Papu) vary widely in scale, price points and marketing strategies. Therefore, possible brand variability may have affected the outcome, impacting the perceived brand authenticity coefficient. The model does not include certain potentially relevant control variables, such as price sensitivity, fashion involvement, and brand familiarity.

Lastly, there are theoretical constraints as well since multiple conceptual views are integrated. Although the study utilizes Signaling Theory, the Elaboration Likelihood Model and Value-Belief-Norm Theory to account for various components of the consumer evaluation of sustainability, there is an overlap of the theories in terms of the information that consumers process and their behavioral motivation. While the theories were tried on different parts of the proposed model, further research could involve tests on more tightly defined theory or direct tests of the explanations of different theories.

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8 Future Research Directions

This research has multiple limitations and results that provide several fruitful leads in the way to future research. First, the moderation hypothesis might be tested more conclusively by replicating in more heterogeneous markets in environmental concern, like emerging economies, Southern European markets, or multi-country comparative designs, where they can provide the distributional variance in the moderator that the Finland-based sample was unable to provide (McClelland & Judd, 1991). A comparative design between Finland and a lower environmental awareness market would provide the distributional variance in the moderator that the current sample could not, enabling a cleaner test of the moderation hypothesis."

Second, longitudinal designs that monitor the co-evolution of authenticity perceptions and how they filter into actual purchase behavior over time would mitigate the limitation of the attitude-behavior gap and would offer evidence of the temporal variation of the impact of authenticity on sustainable fashion consumption.

Third, alternative designs that simply manipulate authenticity cues, such as by using brand profiles in different degrees of supply chain transparency, third-party certification, or historical sustainability commitment, would enable causal investigation of authenticity impacts and could determine which particular dimensions of authenticity (continuity, credibility, integrity, or symbolism) have the most significant effects when applied in the perspective of sustainable fashion.

Fourth, the research in future should incorporate additional periphery conditions for environmental concern. The relationship between authenticity and intention may be moderated by constructs such as consumer skepticism towards greenwashing (Koch and Denner, 2025), sustainability knowledge Andreica Mihuț et al. (2025), brand familiarity (Södergren, 2021), and fashion involvement (Vassalo et al., 2024).

Fifth, quantitative and qualitative and mixed-methods studies assessing the brand authenticity construction and evaluation process by consumers in the Finnish sustainable fashion market, the role of institutional trust and cultural sustainability norms, and engagement with brand communications via online forms would yield rich

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theoretical contributions to supplement the quantitative findings of this research (Gurova, 2024).

Lastly, the current longitudinal research on the influence of regulatory change on consumer understandings of authenticity and purchase intentions would be helpful, given that the EU Green Claims Directive and Corporate Sustainability Reporting Directive introduce new demands on sustainability transparency in market brands.

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Appendices

Appendix 1. Full Survey Instrument

Survey Title: Consumer Perceptions of Sustainable Fashion Brands in Finland

This survey is administered as part of a master's thesis in Strategic Business Development at the University of Vaasa. All responses are anonymous and used solely for academic research purposes. The survey takes approximately 5–7 minutes to complete.

SECTION 1: SCREENING QUESTION

S1. Have you purchased at least one sustainable fashion product in the past 12 months?

Yes (continue to survey)

No (survey ends here, thank you)

SECTION 2: DEMOGRAPHIC AND CONTROL VARIABLES

D1. What is your age? (Please enter a number) _____

D2. What is your gender?

Female

Male

Other / Prefer not to say

D3. What is your highest level of education completed?

High school or below

Bachelor's degree

Master's degree

PhD or higher

Other

SECTION 3: BRAND SELECTION INSTRUCTION

For the following questions, please think of a sustainable fashion brand you are familiar with and have purchased from. Examples: Marimekko, Pure Waste, Globe Hope, Papu, or another brand of your choice.

Keep this brand in mind when answering all questions in Sections 4 and 6.

SECTION 4: PERCEIVED BRAND AUTHENTICITY (PBA)

Source: Adapted from Morhart et al. (2015). Scale: 7-point Likert (1 = Strongly Disagree, 2 = Disagree, 3 = Somewhat Disagree, 4 = Neither Agree nor Disagree, 5 = Somewhat Agree, 6 = Agree, 7 = Strongly Agree).

Thinking of the brand you selected, please indicate your level of agreement with each statement.

Continuity sub-dimension

PBA1. This brand has a long-standing commitment to its values.

PBA2. This brand has remained consistent over time.

PBA3. This brand stays true to its principles.

Credibility sub-dimension

PBA4. I find this brand's claims believable.

PBA5. This brand delivers what it promises.

Integrity sub-dimension

PBA6. This brand is honest in its communication.

PBA7. This brand is morally responsible.

PBA8. This brand genuinely cares about its customers.

PBA9. This brand acts according to its stated values.

Symbolism sub-dimension

PBA10. This brand represents values that are important to me.

PBA11. I can identify with this brand.

SECTION 5: ENVIRONMENTAL CONCERN (EC)

Source: Adapted from Dunlap (2008) New Ecological Paradigm (NEP) scale. Scale: 7-point Likert (1 = Strongly Disagree to 7 = Strongly Agree). Items EC5 and EC6 are reverse-coded in analysis (score = 8 − response).

Please indicate your level of agreement with each statement about the environment.

EC1. Humans are severely abusing the environment.

EC2. The balance of nature is very delicate and easily upset.

EC3. We are approaching the limit of the number of people the Earth can support.

EC4. Plants and animals have as much right as humans to exist.

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EC5. The Earth has plenty of natural resources if we just learn how to develop them. (reverse-coded in analysis)

EC6. The so-called “ecological crisis” facing humankind has been greatly exaggerated. (reverse-coded in analysis)

SECTION 6: PURCHASE INTENTION (PI)

Source: Adapted from Chen et al. (2020) and Paul et al. (2016). Scale: 7-point Likert (1 = Strongly Disagree to 7 = Strongly Agree).

Thinking of the brand you selected in Section 3, please indicate your level of agreement with each statement.

PI1. I would consider purchasing products from this brand.

PI2. I intend to purchase products from this brand in the future.

PI3. The likelihood that I would buy from this brand is high.

Note. EC5 and EC6 were collected but excluded from the EC composite score following reliability analysis (see Section 3.2.2 or Appendix 2).

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Appendix 2. Environmental Concern Scale, Item-Total Statistics

Panel A: 6-Item Scale (all items including EC5 and EC6 reverse-coded)

Item	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's α if Item Deleted
EC1	21.919	13.270	.395	.234
EC2	22.012	13.409	.423	.224
EC3	22.656	14.038	.216	.349
EC4	21.544	16.300	.145	.391
EC5_R *(reverse-coded)*	25.725	19.119	−.093	.489
EC6_R *(reverse-coded)*	24.175	14.384	.115	.433

Cronbach's Alpha (6 items) = .407

Panel B: 4-Item Scale (EC5_R and EC6_R excluded)

Item	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's α if Item Deleted
EC1	16.606	9.259	.414	.500
EC2	16.700	8.714	.546	.401
EC3	17.344	9.145	.305	.598
EC4	16.231	10.896	.281	.594

Cronbach's Alpha (4 items) = .598

Appendix 3. Outputs of Table 3, 5 and 6

Regression

Variables Entered/Removed[a]

Model	Variables Entered	Variables Removed	Method
1	PBA_x_EC, Education, PBA_MC, Gender, Age, EC_MC[b]	.	Enter

a. Dependent Variable: PI_Mean

b. All requested variables entered.

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	,664[a]	,441	,419	,71983

a. Predictors: (Constant), PBA_x_EC, Education, PBA_MC, Gender, Age, EC_MC

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	62,471	6	10,412	20,094	<,001[b]
	Residual	79,279	153	,518		
	Total	141,749	159			

a. Dependent Variable: PI_Mean

IBM SPSS Statistics Pro

a. Predictors: (Constant), PBA_x_EC, Education, PBA_MC, Gender, Age, EC_MC

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	62,471	6	10,412	20,094	<,001[b]
	Residual	79,279	153	,518		
	Total	141,749	159			

a. Dependent Variable: PI_Mean

b. Predictors: (Constant), PBA_x_EC, Education, PBA_MC, Gender, Age, EC_MC

Coefficients[a]

Model		Unstandardized Coefficients B	Unstandardized Coefficients Std. Error	Standardized Coefficients Beta	t	Sig.
1	(Constant)	4,903	,344		14,244	<,001
	Age	,006	,009	,046	,742	,459
	Gender	,270	,134	,126	2,014	,046
	Education	,017	,077	,013	,217	,829
	PBA_MC	,727	,073	,612	9,901	<,001
	EC_MC	,109	,061	,112	1,777	,077
	PBA_x_EC	-,139	,076	-,111	-1,816	,071

a. Dependent Variable: PI_Mean

Reliability

Scale: PI

Case Processing Summary

		N	%
Cases	Valid	160	100,0
	Excluded[a]	0	,0
	Total	160	100,0

a. Listwise deletion based on all variables in the procedure.

Reliability Statistics

Cronbach's Alpha	N of Items
,895	3

Reliability

Scale: PBA

Case Processing Summary

		N	%
Cases	Valid	160	100,0
	Excluded[a]	0	,0
	Total	160	100,0

a. Listwise deletion based on all variables in the procedure.

Reliability Statistics

Cronbach's Alpha	N of Items
,912	11

Reliability

Scale: EC

Case Processing Summary

		N	%
Cases	Valid	160	100,0
	Excluded[a]	0	,0
	Total	160	100,0

a. Listwise deletion based on all variables in the procedure.

Reliability Statistics

Cronbach's Alpha	N of Items
,598	4

Correlations

Correlations

		PBA_MC	EC_MC	PI_Mean	Age	Gender	Education
PBA_MC	Pearson Correlation	1	,132	,638	,091	,083	-,011
	Sig. (2-tailed)		,096	<,001	,253	,296	,888
	N	160	160	160	160	160	160
EC_MC	Pearson Correlation	,132	1	,163	-,012	-,208	,068
	Sig. (2-tailed)	,096		,039	,878	,008	,395
	N	160	160	160	160	160	160
PI_Mean	Pearson Correlation	,638	,163	1	,108	,141	,020
	Sig. (2-tailed)	<,001	,039		,175	,076	,799
	N	160	160	160	160	160	160
Age	Pearson Correlation	,091	-,012	,108	1	-,051	,124
	Sig. (2-tailed)	,253	,878	,175		,518	,117
	N	160	160	160	160	160	160
Gender	Pearson Correlation	,083	-,208	,141	-,051	1	,014
	Sig. (2-tailed)	,296	,008	,076	,518		,863
	N	160	160	160	160	160	160
Education	Pearson Correlation	-,011	,068	,020	,124	,014	1
	Sig. (2-tailed)	,888	,395	,799	,117	,863	
	N	160	160	160	160	160	160

Descriptives

Descriptive Statistics

	N	Mean	Std. Deviation
PBA_Mean	160	5,4460	,79389
EC_Mean	160	5,5734	,96503
PI_Mean	160	5,4604	,94420
Age	160	31,08	6,755
Gender	160	1,26	,441
Education	160	1,89	,752
Valid N (listwise)	160		

Appendix 4 Table: Item-Level Descriptive Statistics for Measurement Scales

Construct	Dimension	Item	Scale Source	Scale	Mean	SD	Min	Max	Skewness	Kurtosis
Perceived Brand Authenticity	Continuity	PBA1	Morhart et al. (2015)	7-point Likert	5.34	1.15	1	7	-1.028	1.686
Perceived Brand Authenticity	Continuity	PBA2	Morhart et al. (2015)	7-point Likert	5.48	1.07	2	7	-1.180	1.769
Perceived Brand Authenticity	Continuity	PBA3	Morhart et al. (2015)	7-point Likert	5.41	1.15	1	7	-1.253	2.261
Perceived Brand Authenticity	Credibility	PBA4	Morhart et al. (2015)	7-point Likert	5.39	1.10	1	7	-1.330	2.457
Perceived Brand Authenticity	Credibility	PBA5	Morhart et al. (2015)	7-point Likert	5.56	0.98	1	7	-1.491	4.138
Perceived Brand Authenticity	Credibility	PBA6	Morhart et al. (2015)	7-point Likert	5.41	1.10	1	7	-1.724	3.778
Perceived Brand Authenticity	Integrity	PBA7	Morhart et al. (2015)	7-point Likert	5.35	1.09	1	7	-1.366	3.367
Perceived Brand Authenticity	Integrity	PBA8	Morhart et al. (2015)	7-point Likert	5.35	1.09	1	7	-1.366	3.367
Perceived Brand Authenticity	Integrity	PBA9	Morhart et al. (2015)	7-point Likert	5.47	1.01	1	7	-1.411	3.968

Perceived Brand Authenticity	Symbolism	PBA10	Morhart et al. (2015)	7-point Likert	5.54	1.04	1	7	-1.465	4.221
Perceived Brand Authenticity	Symbolism	PBA11	Morhart et al. (2015)	7-point Likert	5.30	1.17	1	7	-1.336	2.284
Environmental Concern	Ecocentric Beliefs	EC1	Dunlap (2008)	7-point Likert	5.69	1.43	1	7	-1.303	1.248
Environmental Concern	Ecocentric Beliefs	EC2	Dunlap (2008)	7-point Likert	5.61	1.32	1	7	-1.230	1.300
Environmental Concern	Ecocentric Beliefs	EC3	Dunlap (2008)	7-point Likert	4.93	1.65	1	7	-0.908	0.095
Environmental Concern	Ecocentric Beliefs	EC4	Dunlap (2008)	7-point Likert	6.03	1.29	1	7	-1.706	2.824
Purchase Intention	Purchase Intention	PI1	(Chen et al., 2020; Paul et al., 2016)	7-point Likert	5.45	0.97	1	7	-1.485	5.191
Purchase Intention	Purchase Intention	PI2	(Chen et al., 2020; Paul et al., 2016)	7-point Likert	5.51	1.04	1	7	-1.550	4.284
Purchase Intention	Purchase Intention	PI3	(Chen et al., 2020; Paul et al., 2016)	7-point Likert	5.45	1.03	1	7	-0.840	1.463

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Appendix 4. AI Usage Statement

This statement outlines the use of AI-assisted tools in the preparation of my thesis, in accordance with the University of Vaasa guidelines on the responsible use of AI in academic work.

AI-based tools were used in a limited and supportive capacity during the writing process. Specifically, they were used for:

- Improving language clarity and readability (Gemini and Grammarly)
- Rephrasing sentences for a more appropriate academic tone (Grammarly)
- Identifying and correcting grammatical errors (Grammarly)
- Brainstorming ideas and overall proofreading of document (Gemini and Grammarly)

All methodological decisions, statistical analyses, interpretation of findings, and final academic judgments remained the responsibility of the author. AI tools were occasionally used in a limited supportive capacity for language refinement, readability improvement, minor phrasing adjustments, and structural brainstorming during the writing process.

The following aspects of the research were conducted independently by the author:

- Research design and conceptual development (supported by independently prepared reading and brainstorming notes)
- Literature review and interpretation of academic sources (supported by reading notes)
- Data collection and survey design (the survey instrument is included in the Appendix, and data were collected via Google Forms)
- Data analysis conducted using SPSS
- Interpretation of results and development of conclusions

AI tools were not relied upon for statistical analysis, methodological decision-making, or independent generation of research conclusions.

I, Bushra Fazil, take full responsibility for the integrity of this work, including its analysis, arguments, and conclusions.