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# The Relative Importance of Values, Social Norms, and Enjoyment-Based Motivation in Explaining Pro-Environmental Product Purchasing Behavior in Apparel Domain

Insook Ahn <sup>1,\*</sup>, Soo Hyun Kim <sup>2</sup> and Munyoung Kim <sup>3</sup> 

<sup>1</sup> Department of Family and Consumer Sciences, New Mexico State University, Las Cruces, NM 88003-8003, USA

<sup>2</sup> Retailing and Consumer Sciences, University of Arizona, Tucson, AZ 85721-0078, USA; sookim@email.arizona.edu

<sup>3</sup> Department of Fashion Marketing, Keimyung University, Daegu 42403, Korea; munyoung@kmu.ac.kr

\* Correspondence: iahn@nmsu.edu

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**Abstract:** Changing consumption behavior can offer co-benefits in reduction of environmental issues and encouraging improvements to environmentally friendly or sustainable production. We propose a novel value-social norm-enjoyment-based motivation (VSE) model and test the factors that influence individual pro-environmental apparel purchasing behavior. Data were obtained from 353 college students in Korea and analyzed by using SEM. Our results show that individuals who endorse bio-altruistic values who engage in eco-friendly environmental behavior in apparel domain are influenced by descriptive norms and injunctive norms. Further, enjoyment-based motivation was found to be a key mediator among bio-altruistic value, descriptive norms, and injunctive norms on pro-environmental purchasing behavior. However, injunctive norms do not directly influence purchasing behavior, but rather, are integrated to enjoyment-based intrinsic motivation, then indirectly affect purchasing behavior.

**Keywords:** bio-altruistic value; descriptive norms; injunctive norms; enjoyment-based motivation; sustainable consumption

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## 1. Introduction

The world faces environmental issues such as climate change, biodiversity loss, lack of water resources, air pollution, and hazardous chemical waste. To address the negative environmental and human health effects of pollution, consumers need to change their consumption behaviors, in addition to governmental actions.

Changing consumption behavior can provide benefits in terms of alleviating environmental issues and encouraging sustainable production. In addition, sustainable consumption behavior can help address global, regional, and foreign environmental issues. For example, when consumers buy environmentally friendly clothing, they can pressure the apparel companies to transition from conventional production methods to eco-friendly production methods by using less water and producing less industrial waste. This in turn improves local water usage and reduces water pollution during production in developing countries. Avoiding fast-fashion products and buying used or environmentally friendly apparel products can reduce landfill, soil pollution, and greenhouse gas emissions. Small changes in everyday behavior can open the way to a more sustainable future.

A substantial body of research guided by the norm-based theories such as Norm Activation Model (NAM) [1,2], Value-Belief-Norm (VBN) [3], and Value-Identity-Personal Norm (VIP) [4], measures personal norms using mixed items such as obligation, guilt, and pride to explain an individual's pro-environmental behavior. Pro-environmental behaviors are often associated with costs (e.g., money, time, effort, inconvenience) and are considered boring or tedious [5]. Majority of personal norms-based environmental behavioral models have discussed that people behave environmentally friendly because of moral obligations, but this does not explain why people purchase environmentally friendly products that are aesthetically pleasing, such as clothing [6]. Moreover, most of the prior studies did not test another route of intrinsic motivation—enjoyment-based—because it was considered less relevant in the environmental domain [5]. However, the question remains as to whether people who act environmentally friendly are happy and satisfied in their lives.

Self-interested individuals engage in ethical consumption, even though the practical benefits of buying environmentally friendly products are less than what they paid for [7]. This indicates that these individuals are finding other values, such as enjoyment, from purchasing eco-friendly products. Therefore, this study argues that individuals may buy eco-friendly clothing due to hedonic motivation in addition to obligation-based personal norms.

Social norms play an important role on an individual's behavior. Thøgersen [8] suggested that people behave more pro-environmentally when social norms are deeply integrated into personal values. Social norms also influence personal norms to act more pro-environmentally [9,10], and the relationship between social norms and pro-environmental behavior is mediated by personal norms [10].

The theory of normative conduct [11] divided social norms into two types that independently affect consumer behavior: descriptive norms and injunctive norms [12–14]. While there is a strong indication that descriptive and injunctive norms strongly predict pro-environmental behaviors, little attention has been paid to how two types of social norms, descriptive and injunctive norms, differently influence an individual's pro-environmental behavior in the apparel domain [15]. In addition, no research has investigated the relationship between values and enjoyment-based intrinsic motivation, and the relationship between social norms and enjoyment-based intrinsic motivation in purchasing eco-friendly apparel behavior. Therefore, in this study, we aim to test (1) to what extent the proposing value-social norms-enjoyment-based motivation (VSE) model is predictive of specific pro-environmental behavior such as purchasing eco-friendly clothing; and (2) how descriptive norms and injunctive norms impact enjoyment-based motivation and pro-environmental behavior in apparel area.

The paper is organized as follows. Section 2 discusses the main constructs and sets up the hypothesis among constructs based on literature review. Section 3 explains the methodology, including sample and instrument development. Section 4 presents the results, including descriptive statistics, CFA (Confirmatory Factor Analysis), and hypothesis tests. Section 5 delves into the meaning and relevance of the results with discussion, and presents managerial implications and limitations of the study.

## 2. Literature Review

### 2.1. Pro-Environmental Consumer Behavior

Pro-environmental consumer behavior refers to the purchase of environmentally friendly products that reduce a negative environmental impact; products from environmentally reputable companies; or biodegradable, carbon neutral or recycled products [16,17]. In this study, we limit our focus on eco-friendly clothing consumption.

Previous studies have shown that consumers who are aware of how apparel products negatively impact the environment are more interested in need-based environmental apparel acquisition [18]. When purchasing clothes, these consumers are meticulous in checking for organic contents and environmentally preferable sources, and they purchase durable and long-lasting items [18,19]. Therefore, this study uses the definition of pro-environmental consumer behavior used by Kim and Seock [10],

which is “proactive choices toward purchasing apparel produced in an environmentally friendly manner.” In the next sections, we discuss values, social norms, and enjoyment-based motivation, then set up hypotheses to study the main factors affecting consumers’ pro-environmental consumption behavior.

## 2.2. Values

Values are individuals’ desirable trans-situational goals and guiding principles of life [20], thus affecting one’s beliefs, attitudes, knowledge, norms, intentions, and behaviors in the realm of the pro-environmental [3,21]. The concept of values includes several key features. First, values are beliefs related to feeling. When certain conditions endorse one’s value, that value is activated with feelings such as happiness, which in turn influence subsequent actions [21,22]. Second, values are abstract and distal, surpassing specific actions and situations [3,23]. Third, values guide the selection or evaluation of actions or objects. People decide what is good or not based on possible consequences for their endorsed values [21]. Fourth, values are presented in hierarchical order according to the most important value of an individual [23,24]. Finally, any attitude or behavior can be influenced by one or more values. Values play an important role in explaining certain beliefs, attitudes, and behavior and can be used to determine factors of pro-environmental beliefs or intentions [3,25]. For example, self-transcendent values, especially those in the universalism category, predict an individual’s environmentally friendly attitudes and behaviors [25–28].

Schwartz [20,29] developed a value inventory through cross-national research that grouped 56 human values into 10 motivational domains and later into two-dimensional higher structures comprised of opposite and competing values: self-enhancement versus self-transcendence and openness to change versus conservation. Empirical studies using the Schwartz value surveys have confirmed that environmental behavior is related to biospheric and altruistic values [28,30,31].

There are well-cited measures that demonstrate three values affecting environmental attitudes, norms, and behaviors. These measures on egoistic, altruistic, and biospheric values are validated and the reliability of those measures is also established in prior research on the pro-environmental behaviors [21,30]. The three value orientations (egoistic, altruistic, and biospheric) have been widely adopted to explore the relationship among values, self-identity, attitude, norms and behavior in the environmental domain [5,32–34]. Alternatively, Kim and Seock [10] reported that in their factor analysis, the measurement items for biospheric and altruistic values were loaded into a single factor called bio-altruistic values. They argued that people value human beings and non-humans (e.g., animals and environment) equally and empirically showed the effect of bio-altruistic values on personal norms and eco-friendly clothing purchasing behavior. Thus, this study defines bio-altruistic values as those that reflect concerns about the conservation of the planet and non-human species; the welfare of other human beings; and appreciation for social justice [10].

## 2.3. Enjoyment-Based Intrinsic Motivation

The goal framing theory [35] suggests that people’s environmental behavior is driven by three different types of goals: hedonic, gain, and normative. This study does not focus on gain or normative goals, but instead focuses on intrinsic motivations that are exclusively related to enjoyment or hedonic goals to explain why people engage in pro-environmental product purchasing behavior, such as purchasing eco-friendly apparel. The intrinsic motivation explains the situation where people do something because something is interesting, enjoyable, or challenging [36,37].

Van der Werff et al. [5] claimed that there are two types of intrinsic motivation: obligation-based and enjoyment-based. Steg et al. [38] defined enjoyment-based intrinsic motivation as one of the intrinsic motivations that compels individuals to perform pro-environmental actions because it is enjoyable. Enjoyment is referred to as an emotion related to improving one’s condition and is a strong response to self-approval. It is achieved multi-functionally through activities that lead to physical and social well-being [39]. Therefore, the greater the response to widespread improvement and self-approval, the higher the enjoyment [39,40]. Most literature on pro-environmental behavior,

especially those guided by the VBN or VIP model, focus on obligation-based intrinsic motivation, rather than enjoyment-based intrinsic motivation [4,35]. The main reason for only focusing on an obligation-based approach is that pro-environmental behavior is more closely related to costs (e.g., money, time, effort, and discomfort) [41,42]. However, Stern [3] argued that perceived moral obligation to cooperation is generally not the only factor affecting pro-environmental behavior.

People tend to believe that they live for their ultimate happiness and quality of life [43]. Most modern discussions of humans' well-being are based on Parfit's good life classification, which distinguishes three theories of self-interest: hedonic, desire-fulfillment, and objective list theories [44]. According to Parfit, hedonistic theories describe anything that makes an individual happy; the desire-fulfillment theories explain anything that best meets an individual's intrinsic desire; and the objective list theories explain objective goods that benefit the individuals regardless of how they may feel about them.

Later, Waterman et al. [45] distinguished two happiness concepts: hedonic enjoyment and eudaimonia. Hedonic enjoyment is defined as the positive feelings associated with getting material objects that one wants to possess and behavior that one wants to experience [45,46]. Eudaimonia refers to the subjective experiences associated with doing something and having something worthwhile [45–48]. Eudaimonia suggests that the goal of human function is to act and live consistently with an individual's real self, representing the best potential or self-realization. Acting to realize such life goals and personal potentials is worth doing [47]. Therefore, an individual's intrinsically motivated activities should bring not only hedonic enjoyment but also eudaimonia [45]. According to Waterman and his colleagues, if an individual experiences eudaimonic life, he or she will experience hedonic enjoyment. Eudaimonia has been considered sufficient, but not a necessary condition for hedonic enjoyment [45,48]. However, some activities are motivated by hedonic enjoyment alone. For example, a person may enjoy riding a bicycle to work instead of using a car or enjoy a meal at a fine dining restaurant. Both activities involve positive feelings and enjoyment for the sake of him/herself. Unlike dining, cycling is costly to self, mainly due to a longer commute time. However, cycling encourages the individual to be intrinsically motivated to stay healthy and committed to eco-friendly values. Therefore, riding a bike to work is likely to be a hedonic enjoyment and eudaimonia, whereas having a fine meal at the luxurious restaurant is likely just a hedonically enjoyed experience.

De Young [22] argued that people evaluate some environmental actions as worthy because participating in pro-environmental behaviors is consistent with the transcendent values that make them feel good and enjoy performing those behaviors. Indeed, studies have shown that people are inclined to act pro-environmentally when they believe that it is in their own interest [49,50]. Therefore, acting pro-environmentally is not only a moral obligation, but also an enjoyable or hedonistic experience [24,51].

This study argues that consumers who endorse bio-altruistic values are more likely to avoid regular products and instead opt for more eco-friendly products [52]. When choosing eco-friendly products over regular products, consumers can derive feelings of pleasure not only from the purchase itself, but also from the belief that it can bring benefits to others [53,54].

The value theory [2], the self-determination theory [37], and the well-being theory [45,55] suggest that people can achieve intrinsic satisfaction and experience—eudaimonia—from purchasing eco-friendly clothing that fits their own main values and refrain from purchasing conventional and fast fashion apparel that can harm nature, wildlife, and other people. Therefore, this study proposes the following hypotheses:

**Hypotheses 1 (H1).** *Bio-altruistic values significantly influence enjoyment-based intrinsic motivation in eco-friendly apparel purchasing behavior.*

**Hypotheses 2 (H2).** *Enjoyment-based intrinsic motivation positively influences eco-friendly apparel purchasing behavior.*

#### 2.4. Social Norms

People are greatly influenced by the defined norms in the context of everyday life. Prior studies on social norm and pro-environmental behavior established that the social environment greatly influences people's behaviors [56,57]. Therefore, social norms have been considered as a major factor driving people's motivation and behavior [58]. Indeed, social norms are powerful factors that can explain and predict green consumption behaviors, such as recycling [59], littering [60], energy conservation [61], pro-environmental behavior in tourism [62], and water conservation [63].

Two different aspects related to social norms affect human behavior in an independent and interactive way: descriptive norm and injunctive norm information [11,13,64]. Descriptive norms refer to the perception that most other people usually do or do not perform a specific action, affecting the way people behave in a given situation. They provide evidence of effective behavior and are adaptable to individuals in ambiguous or uncertain situations that can promote effective behavior, especially in a variety of circumstances [11,13,14].

Injunctive norms, however, are described as perceptions of what people should or ought to do in relation to the performance of an action and provide informal rules and standards for acceptance or rejection in certain cultures [11,65]. People tend to follow social norms to get social approval or avoid social sanctions [66,67]. Thus, injunctive norms have a greater effect in guiding people's behavior than the descriptive norms [13].

The hedonic principle, in which people promote pleasure and avoid pain has received a lot of attention in motivation research [68]. Consumers tend to believe that others have better knowledge in navigating through social situations than themselves [11] and that others behave in the most effective way in certain situations [14]. Thus, other people's behaviors serve as a powerful cue for consumers to act in a socially desirable way [69]. Unlike the influence of descriptive norms, consumers tend to confirm their behavior according to the positive expectation of others. This is driven by the consumers' desire to meet inter-personal goals or avoid social disapproval by complying with standards [70].

The interaction of the environment with the innate ability of the individual is essential to the development of intrinsic motivation [36]. Individuals tend to adapt their behavior to social expectations by obtaining social approval or internalizing social norms for self-defining purposes [71]. Internalization refers to an active process by which an individual learns attitudes, beliefs, or behavioral rules, accepts those values and translates them into personal values or goals [36]. Thøgersen [8] suggested that as social norms become deeper and more integrated into individuals' values, norms have a greater impact on their environmental behavior. Social norms are considered as antecedents of personal norms, and the relationship between those two variables have been investigated [9,72]. For example, Klöckner [73], claimed that social norms have a profound effect on personal norms in her meta-analysis. Kim and Seock [10] also demonstrated empirically that social norms directly affect consumers' eco-friendly clothing purchasing behavior and indirectly through personal norms.

Based on the focus theory of normative conduct [64], self-determination theory (SDT) [37], and regulatory focus theory [68], we assume that social norms influence intrinsic motivation and an individual's behavior. As far as we know, there is no empirical study investigating the relationship between enjoyment-based intrinsic motivation and environmental behavior. Thus, we assume the relationships between enjoyment-based intrinsic motivation, social norms, and behavior are similar to those with personal norms (obligation-based), and propose the following hypotheses:

**Hypotheses 3 (H3).** *Descriptive norms significantly influence eco-friendly apparel purchasing behavior.*

**Hypotheses 4 (H4).** *Injunctive norms significantly influence eco-friendly apparel purchasing behavior.*

**Hypotheses 5 (H5).** *Descriptive norms significantly influence enjoyment-based intrinsic motivation in eco-friendly apparel purchasing behavior.*

**Hypotheses 6 (H6).** *Injunctive norms significantly influence enjoyment-based intrinsic motivation in eco-friendly apparel purchasing behavior.*

### 3. Methods

#### 3.1. Sample

Researchers conducted a paper-based survey. Participants were recruited using convenience sampling and were students in classes at three universities in South Korea. Classes were selected based on the universities' decision, and permission was obtained from professors prior to administering the survey. The sample size for this study was 353 college students, which had 39.7% of male students ( $n = 140$ ) and 60.3% of female students ( $n = 213$ ). The average age of the respondents was 22.8 years.

#### 3.2. Instrument Development

The questionnaire for our study consists of five sections: pro-environmental purchasing behavior, values, descriptive norms, injunctive norms, enjoyment-based motivation, and demographic information. To reduce any negative order effects, the evaluation of purchasing behavior was asked first, followed by items on values, descriptive norms, injunctive norms, and enjoyment-based motivations. Additionally, an attention check was included in the middle of the questionnaire to control for unengaged respondents. The measurement items for each construct used in the survey were adopted from previous studies and were revised for our use in the study.

Six items for eco-friendly apparel purchasing behavior were adopted from Hiller Connell [18] and Kim and Damhorst [74], which were: (1) Buy clothing made from recycled material; (2) Buy second-hand clothing; (3) Select clothing that I can wear over a longer term as opposed to trendy apparel that goes out of style quickly; (4) Buy clothing made of organically grown natural fibers such as cotton, hemp, and bamboo; (5) Buy clothing with an eco-label that is awarded by a third party; and (6) Buy clothing from eco-conscious companies. Respondents rated each item on a Likert scale, ranging from 1 ("never") to 5 ("always") to indicate how frequently they have bought eco-friendly clothing within the last 12 months.

We adopted items from the values scale from De Groot and Steg's paper [30] to measure bio-altruistic values. The bio-altruistic values were measured using eight items: equality, world peace, social justice, helpfulness, environmental protection, respect for the earth, unity with nature, and pollution prevention in a randomized order in the survey. Subjects rated the importance of each item as a guiding principle in their lives ranging from 1 ("strongly unimportant") to 5 ("strongly important").

Social norms were measured using two dimensions: descriptive norm and injunctive norm. All of the measurement items for descriptive norms and injunctive norms were adopted from Kim and Seock [10] for this study and put in a randomized order. Respondents completed the items on a Likert scale, ranging from 1 ("strongly disagree") to 5 ("strongly agree"). The five items measuring the descriptive norm were as follows: (1) Most of my family members engage in pro-environmental behaviors on a regular basis; (2) Most of my family members engage in purchasing eco-friendly clothing; (3) Most of my friends I value engage in purchasing eco-friendly clothing; (4) The residents in my city engage in purchasing eco-friendly clothing; and (5) The general public engages in purchasing eco-friendly clothing.

The injunctive norm was measured by the extent to which respondents agreed with the following five items regarding purchasing eco-friendly clothing: (1) Family members whose opinion I value would approve of my engagement in pro-environmental behavior; (2) Family members whose opinion I value would approve of my engagement in purchasing eco-friendly clothing; (3) Close friends who are important to me would support my engagement in purchasing eco-friendly clothing; (4) The residents in my community would support my engagement in purchasing eco-friendly clothing; and (5) The general public would endorse my engagement in purchasing eco-friendly clothing.

Enjoyment-based intrinsic motivation was measured with five items which were adopted and modified for this study. These five measurement items were as follows: (1) When I consider purchasing new clothing, I would be pleased to prioritize selecting eco-friendly clothing; (2) I would be delighted to purchase eco-friendly clothing, regardless of what others say [75]; (3) I would enjoy searching for

eco-friendly labels for clothing purchases; (4) It would be my pleasure to have eco-friendly clothing that is in style; and (5) Trying and evaluating eco-friendly clothing items is pleasurable [18]. Respondents rated the strength of their agreement or disagreement on a Likert scale, ranging from 1 (“strongly disagree”) to 5 (“strongly agree”).

## 4. Results

### 4.1. Descriptive Statistics

Exploratory factor analysis (EFA) was performed using Maximum Likelihood extraction approach and Promax rotation to investigate factors’ structure which refers to the intercorrelations among the constructs. We removed some items because of cross loading (e.g., two items for bio-altruistic values, one item for enjoyment-based motivation, three items for descriptive norm, and two items for purchasing). This was done to achieve adequate discriminant validity. Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy was 0.875 and Bartlett’s test of sphericity was significant ( $\chi^2 = 3590.082$ ,  $df = 210$ ,  $p = 0.000$ ), indicating that EFA was deemed to suitably analyze the data on all constructs in our study [76]. This five-factor solution explained 56.04% of the variance. All correlations between factors were less than 0.60, showing discriminant validity. Factor loadings for each of the five factors were greater than 0.40 and averaging out to greater than 0.64 for each factor with a sample size of 353 (see Appendix A for Pattern Matrix). Table 1 shows that all constructs of Cronbach’s alpha were above 0.70 indicating internal consistency of each construct. The strongest factor correlation existed between injunctive norms and enjoyment-based motivation ( $r = 0.57$ ). The least strong relationship was between bio-altruistic value and purchasing behavior ( $r = 0.100$ ).

**Table 1.** Means, standard deviations, Cronbach’s alpha reliability, factor correlations ( $n = 353$ ).

Variables	<i>M</i>	<i>SD</i>	$\alpha$	PU	BAV	EM	DN	IN
PU	2.43	0.98	0.85	1				
BAV	3.68	0.63	0.80	0.10 ***	1			
EM	2.67	0.62	0.81	0.42 ***	0.36 ***	1		
DN	2.70	0.75	0.78	0.46 ***	0.13 ***	0.45 ***	1	
IN	3.16	0.76	0.85	0.43 ***	0.34 ***	0.57 ***	0.49 ***	1

\*\*\*  $p < 0.001$ . PU = purchasing behavior; BAV = bio-altruistic value orientation; EM = enjoyment-based motivation; DN = descriptive norm; IN = injunctive norm.

### 4.2. Confirmatory Factor Analysis

Confirmatory Factor Analysis (CFA) using a Maximum Likelihood approach in AMOS 25 was conducted to assess the adequacy of construct measure. The CFA confirmed that measurement model of the proposed theoretical relationships among the included observed and unobserved variables showed an excellent fit to the data, with  $\chi^2/df = 2.179$ ,  $p < 0.001$ , SRMR = 0.056, RMSEA = 0.058, CFI = 0.945, PClose = 0.058 [77]. A composite reliability was calculated using factor loadings, which were all significant at the 0.001 level. Internal consistency among multiple measurement items for each latent construct was evident in that all values for composite reliability (CR) exceeded the suggested threshold of 0.60 [78]. Next, construct validity was tested. As shown in Table 2, AVE (average variance extract) values range from 0.518 to 0.637. In addition, Maximum Shared Variance (MSV) of latent variables for each construct were less than AVE of the same constructs, and the square root of the AVE values for each construct exceeded the correlations with another construct. Accordingly, convergent and discriminant validity were fully demonstrated [78].

Prior to creating composite variable for a path analysis, a common latent factor (CLF) was employed in order to detect the common method bias among all observed variables in the model by running the zero-constrained test with common latent factor (CLF) and equal-constrained model test with CLF. The chi-square difference test for the zero-constrained model was significant ( $\chi^* = 112.970$ ,  $df = 20$ ,  $p < 0.001$ ). Therefore, a bias distribution test was made using equal constraint test. The chi-square

test is significant as well ( $\chi^2 = 88.448$ ,  $df = 19$ ,  $p < 0.001$ ), indicating that our data set had a significant shared bias, and demonstrating bias was unevenly distributed [79]. Thus, we retained the CLF and imputed factor scores for the structural model to adjust for common method bias.

**Table 2.** Results of the final measurement model.

Variables	CR	AVE	MSV	PU	BAV	EM	DN	IN
PU	0.853	0.597	0.278	0.773				
BAV	0.846	0.524	0.180	0.120 *	0.724			
EM	0.811	0.518	0.464	0.465 ***	0.424 ***	0.720		
DN	0.778	0.637	0.416	0.527 ***	0.216 ***	0.576 ***	0.798	
IN	0.879	0.595	0.464	0.461 ***	0.336 ***	0.681 ***	0.645 ***	0.772

\*  $p < 0.1$ , \*\*\*  $p < 0.001$ . PU = purchasing behavior; BAV = bio-altruistic value orientation; EM = enjoyment-based motivation; DN = descriptive norm; IN = injunctive norm; CR = composite reliability; AVE = average variance extract; MSV = maximum shared variance. All construct values are common method bias adjusted. Square root of the AVE on the diagonal. Goodness-of-fit statistics:  $\chi^2 = 348.678$  ( $df = 160$ ,  $p < 0.001$ ,  $\chi^2/df = 2.178$ ), RMSEA = 0.058, CFI = 0.945, SMRI = 0.056, PClose = 0.058.

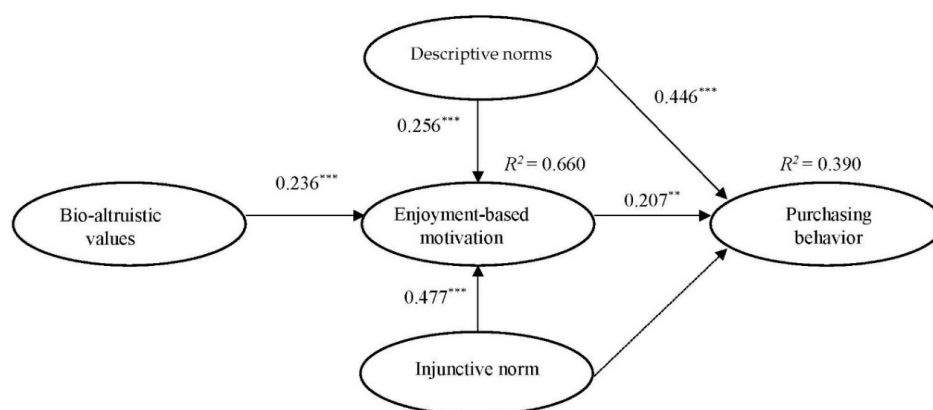
#### 4.3. Hypothesis Tests

Structural Equation Modeling (SEM) with a maximum likelihood method was performed. The structural model was found to have an excellent fit for the data mentioned above.

Subsequently, the proposed relationship among constructs in the theoretical model were evaluated. The theoretical model depicted in Figure 1 shows the standardized weights of the relationship between variables. First, bio-altruistic values, descriptive norms and injunctive norms explained 66% of the total variance in enjoyment-based intrinsic motivation. The findings showed that the more respondents endorsed bio-altruistic values, the greater the enjoyment-based motivations to purchase pro-environment apparel they felt ( $\beta = 0.24$ ,  $p < 0.001$ ), supporting H1. In addition, descriptive norms were statistically significantly related to the enjoyment-based motivations ( $\beta = 0.27$ ,  $p < 0.001$ ), and injunctive norms were statistically significantly related to the enjoyment-based motivations ( $\beta = 0.48$ ,  $p < 0.001$ ). Thus, H4 and H5 were supported. Social norm factors had a greater influence on enjoyment-based motivation than bio-altruistic values, and the strongest predictor of enjoyment-based motivation was injunctive norms. Finally, descriptive norms and enjoyment-based intrinsic motivation explained 39% of the variance in eco-friendly apparel purchasing behavior. The finding showed that enjoyment-based motivations and descriptive norms were statistically significantly associated to pro-environment apparel purchasing behavior ( $\beta = 0.21$ ,  $p = 0.002$ ;  $\beta = 0.45$ ,  $p < 0.001$  respectively), supporting H2 and H3. Injunctive norms, however, did not predict eco-friendly clothing purchasing behavior. Thus, H4 was rejected. These results showed that descriptive norms as an external force had much stronger influence on consumers' eco-friendly apparel purchasing behavior than enjoyment-based intrinsic motivation. Conversely, injunctive norms did not directly influence but indirectly influenced on eco-friendly apparel purchase through enjoyment-based motivation.

In addition to hypothesis tests, we performed indirect effect analyses on the SEM to deliver a more accurate explanation for the causal effect which the antecedent has on the dependent variable. The results showed that there were five indirect paths which were found to be statistically significant in all paths. The bootstrapping analysis found that bio-altruistic values indirectly affected enjoyment-based motivation through injunctive norms and descriptive norms ( $\beta = 0.253$ , 95% Bca CI [0.163, 0.349];  $\beta = 0.330$ , 95% Bca CI [0.089, 0.224], respectively). Bio-altruistic values indirectly affected purchasing behavior through descriptive norms ( $\beta = 0.160$ , 95% Bca CI [0.093, 0.247]). Further, descriptive and injunctive norms were significant in indirectly predicting eco-clothing purchasing behavior through enjoyment-based motivation ( $\beta = 0.155$ , 95% Bca CI [0.081, 0.237];  $\beta = 0.251$ , 95% Bca CI [0.148, 0.363], respectively) (see Table 3).





**Figure 1.** Results for structural equation modeling. \*\*  $p = 0.002$ , \*\*\*  $p < 0.001$ ,  $n = 353$ .

**Table 3.** Indirect effects.

Indirect Path	Indirect Effect ( $\beta$ )	Boot SE	95% Bca CI [LLCI-ULCI]
BAV > IN > EM	0.253	0.047	0.163–0.349
BAV > DN > EM	0.330	0.346	0.089–0.224
BAV > DN > PU	0.160	0.037	0.093–0.247
IN > EM > PU	0.251	0.055	0.148–0.363
DN > EM > PU	0.155	0.039	0.081–0.237

PU = purchasing behavior; BAV = bio-altruistic value orientation; EM = enjoyment-based motivation; DN = descriptive norm; IN = injunctive norm. Number of bootstrap samples is 5000. All construct values are common method bias adjusted.

## 5. Discussion and Conclusions

### 5.1. Discussion

In this study, we proposed a novel and parsimonious value-social norm-enjoyment-based motivation (VSE) model to explain the causal relationship among values, social norms, enjoyment-based intrinsic motivation, and eco-friendly apparel purchasing behavior. We argued that individuals guided by self-transcendent values may buy eco-friendly clothing because of hedonic motivation in addition to obligation-based personal norms.

For the intrinsic motivations in eco-friendly apparel purchasing behavior, this study questioned whether people act environmentally friendly and are simultaneously happy in life by doing so. This is because some self-interested individuals engage in ethical consumption despite receiving fewer tangible benefits than what they paid for. Therefore, this study assumed that when individuals who endorse bio-altruistic values have a strong enjoyment-based intrinsic motivation, they are more likely to purchase eco-friendly apparel because of personal enjoyment.

Many studies based on VBN theory have reported that self-transcendent values or bio-altruistic values are a significant factor in understanding pro-environmental behavior [3,10,25]. Prior studies found that there are positive and direct effects of these values on personal norms [10,26]. Our results showed that bio-altruistic values statistically predicted enjoyment-based intrinsic motivations. Additionally, people with strongly activated bio-altruistic values feel pleasure from purchasing eco-friendly apparel. The reason why bio-altruistic values influence intrinsic motivations is that enjoyment or happiness is strongly related to the self-concept or connected with an individual's self-expectations [2]. Lindenberg [39] asserted that enjoyment tends to be strongly activated to the degree of self-approval. Thus, if individuals who value environmentally friendly behavior and/or altruism as a part of their life's principles, they may behave pro-environmentally. Active representation of what people value or believe about themselves significantly affects [80] their eudaimonic feelings [45].

The most recent literature on pro-environmental behavior has described such acts as costly and not enjoyable. For instance, van der Werff et al. [5] claimed that pro-environmental behaviors are generally not enjoyable due to environmental behaviors being associated with less pleasure and engaging in those behaviors requires more costs and sacrificing comfort. Our findings, however, contradict prior explanation. Bio-altruistic values strengthen enjoyment-based motivation. When consumers engage in pro-environmental behavior, not only does it fulfill their social or moral obligation [81,82], it also contributes to their eudaimonia [45,83]. Our findings also support that people are happy when promoting their bio-altruistic values, which in turn influences their eco-friendly purchase intentions [21].

A positive relationship between value and enjoyment also suggests that consumers not only wear and purchase sustainable clothing products to express their environmental values [53,84,85], but also to express their self-identity [85,86].

We hypothesized that both descriptive norms and injunctive norms would directly influence enjoyment-based motivation. As the interaction of the external environment and individual's innate capabilities are fundamental to the development of intrinsic motivation [36], individuals tend to conform their behaviors by internalizing norms to gain social approval or to avoid social punishment [71]. Our results showed that both descriptive and injunctive norms significantly influence enjoyment-based motivation. However, the roles of descriptive and injunctive norms differently influence eco-friendly apparel purchasing behavior. Our results showed that descriptive norms directly influence pro-environmental behavior and indirectly influences eco-friendly apparel purchasing behavior through enjoyment-based intrinsic motivation. However, injunctive norms did not directly influence pro-environmental behavior, but indirectly affected pro-environmental behavior through enjoyment-based intrinsic motivation. Thus, our findings support prior studies that social norms are powerful factors to explain and predict green consumption [61,63], and the two different social norms independently influence consumer behavior [12–14,87].

The analysis of the SEM indicated that the prediction power of two distinct social norms, descriptive norms and injunctive norms, on enjoyment-based intrinsic motivations, are greater than that of bio-altruistic values, and the most powerful predictor of enjoyment-based motivations are injunctive norms (see Figure 1). This does not mean that the individual value has less predictive power than descriptive or injunctive norms. One of the reasons may be due to bio-altruistic values indirectly influencing enjoyment-based motivation through descriptive norms and injunctive norms (see Table 3), in addition to having a direct effect on enjoyment-based motivations.

Descriptive norms are based on observations of how people behave in a given situation. As what others commonly do in a given situation often suggests behavior that would be in one's immediate best interest, descriptive norms provide evidence of effective action and are adaptive to individuals, especially in ambiguous or uncertain situations [11,13,14,88]. Consumers are inclined to believe that others have better knowledge than themselves [11,13] and behave in the most effective way in a given situation [14]. Descriptive norms guide people to behave effectively in a given social situation and provide social proof of people's desire to conform to others [65,69]. Descriptive norms that better fit the promotional focus require a simpler cognitive assessment. As they lead consumers to comply more easily with such norms through simple behavioral imitation because they reflect the behavior of others, they make it easier for consumers to comply with those norms [89,90]. Thus, descriptive norms function as a heuristic and act as a strong influencer for eco-friendly apparel purchasing behavior.

Alternatively, injunctive norms (i.e., perception of what ought to be done) reflect the society's moral rules, provide guidelines of the social group, and motivate or constrain individuals' actions by highlighting social rewards and disapproval for acting or not acting in a socially desirable manner. Thus, injunctive norms may relate to prevention focus in interpersonal aspects [89]. Our results suggest that injunctive norms are paired and internalized or integrated into ought self, and it may bring enjoyment or happiness by purchasing eco-friendly apparel products.

This study sheds light on pro-environmental behavior theory by proposing and validating the novel value-social norm-enjoyment-based motivation (VSE) model. However, this study was conducted using data collected from university students in Korea. For this model to have a more robust generalizability, a future study needs to be conducted with samples that better represent the thoughts and values of the general public. Additionally, environmental self-identity mediated personal values on personal norms [4,5,34]. The relationship among values, environmental self-identity, and enjoyment-based motivation in eco-friendly apparel purchasing needs to be investigated.

## 5.2. Conclusions

In conclusion, this study demonstrated that enjoyment-based motivation is another key influencing factor on pro-environmental behavior in apparel domain. Individuals who are linked to bio-altruistic values engage in eco-friendly purchasing behavior because of descriptive norms, injunctive norms, or enjoyment-based intrinsic motivations. However, injunctive norms do not directly influence purchasing behavior, but are internalized or integrated to enjoyment-based intrinsic motivation, then indirectly affect purchasing behavior. Therefore, when marketers, policy-makers, and non-profit organizations develop communication strategies to promote eco-friendly apparel products purchase, they should accordingly address the consumers' bio-altruistic values, descriptive norms, injunctive norms, and enjoyment-based motivation. More specifically, when they are targeting consumers who hold bio-altruistic values using strategies involving injunctive norms, they should make sure that their messaging triggers consumers' enjoyment-based intrinsic motivation to increase purchasing intention.

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## Appendix A

**Table A1.** Pattern Matrix.

	BAV	IN	Factor DN	EM	PU
Environmental protection	0.856				
Unity with nature	0.773				
Pollution prevention	0.667				
Respect for the earth	0.661				
Equality	0.502				
World peace	0.418				
Close friends who are important to me would support my engagement in purchasing eco-friendly clothing		0.875			
The residents in my community would support my engagement in purchasing eco-friendly clothing		0.846			
The general public would endorse my engagement in purchasing eco-friendly clothing		0.754			
Family members whose opinion I value would approve of my engagement in purchasing eco-friendly clothing		0.657			
Family members whose opinion I value would approve of my engagement in pro-environmental behavior		0.634			
The residents in my city engage in purchasing eco-friendly clothing			0.692		
The general public engages in purchasing eco-friendly clothing			0.679		
Trying and evaluating eco-friendly clothing items is pleasurable				0.815	
I would enjoy searching for eco-friendly labels for clothing purchases				0.726	
It would be my pleasure to have eco-friendly clothing that is in style				0.602	
When I consider purchasing new clothing, I would be pleased to prioritize selecting eco-friendly clothing				0.409	
I have bought clothing with an eco-label that is awarded by a third party					0.882
I have bought clothing from eco-conscious companies					0.873
I have bought clothing made of organically grown natural fibers such as cotton, hemp, and bamboo					0.708
I have bought clothing made from recycled material					0.542

Note. Maximum likelihood extraction with Promax rotation. BAV = bio-altruistic values; IN = injunctive norms; DN = descriptive norms; EM = enjoyment-based motivation; PU = purchasing behavior.

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