The impact of eco-friendly marketing by sportswear brands in response to climate change awareness on the intention to continue use: The mediating effects of social value and corporate reputation

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ABSTRACT

This study investigates the structural relationships between eco-friendly marketing, social value, corporate reputation and the intention to continue using sportswear brands grounded in climate change awareness. Moreover, it aims to explore the mediating effects of social value and corporate reputation within the relationship between eco-friendly marketing and intention to continue use. It explores the mediating effects of social value and corporate reputation on sportswear brands’ eco-friendly marketing and intention to continue use. 240 sports enthusiasts relevant to eco-friendly marketing by sportswear brands were selected for a survey using convenience sampling. Data were analyzed using SPSS and AMOS for descriptive statistics, confirmatory factor analysis, reliability analysis, correlation analysis, structural equation modeling and bootstrapping. It was found that awareness of climate change positively influenced eco-friendly marketing. Eco-friendly marketing positively influenced intention to continue use, social value and corporate reputation. Social value positively influenced intention to continue use, corporate reputation positively influenced intention to continue use, social value showed a significant mediating effect in the relationship between eco-friendly marketing and intention to continue use and corporate reputation showed a significant mediating effect between eco-friendly marketing and intention to continue use. These results provide foundational data for sportswear brands to establish eco-friendly marketing strategies in response to climate change and offer practical insights for enhancing consumers’ intentions to continue using.

Contribution/ Originality: This study presents an innovative perspective by examining the ways in which athletic firms’ environmentally conscious marketing campaigns which consider not only environmental concerns but also consumer preferences and brand loyalty, affect the continuation of product consumption. Moreover, it enhances the originality of the research by addressing corporate reputation as a variable to encompass social value and overall evaluation from a consumer standpoint.

1. INTRODUCTION

One of the most pressing challenges in today’s world is rapid climate change. Climate change is causing ecological and human survival instability through phenomena such as droughts, abnormal temperatures and rising sea levels. These changes are anticipated to accelerate in the future [1]. The causes of historical climate change were essentially natural phenomena whereas the causes of current changes are directly associated with human
activity [2]. Global warming is the most representative phenomenon of climate change. It is intensified by human influence and impacts human life, which makes it a contentious issue. As global warming persists, climate change is accelerating faster than expected and the resulting damages are intensifying, necessitating ongoing efforts to mitigate these effects. The awareness of climate change has emerged as a critical issue in modern society with growing concerns about global warming and environmental issues.

Consumers’ expectations for sustainable corporate initiatives have increased as their social knowledge of climate change influences their attitudes towards eco-friendly goods and services. Many companies are adopting marketing strategies that reflect these new consumer values and emphasize environmental responsibility. This demonstrates that consumers’ eco-friendly needs are driving changes in corporate marketing direction, establishing eco-friendly management and marketing as essential values rather than optional ones. The need to increase market share through eco-friendly marketing of sportswear brands in the sports sector is emerging.

Sports have been one of the most actively globalizing industries among various sectors. Various brands are emerging and global sportswear brands are continuously growing along with the growth of the sports industry. In this environment, sportswear brands have been influencing consumers’ purchasing decisions through associations with athletes and teams, thereby expanding their economic impact [3]. Sportswear brands catering to a broad and diverse consumer base play a substantial role in the successful spread of eco-friendly marketing strategies [4]. Additionally, sportswear is being extended beyond its traditional role as athletic apparel to everyday wear leading to a global increase in demand for sportswear with millennials and Generation Z at the forefront. Sportswear brands are adapting to these changes by employing different eco-friendly marketing strategies to attract consumers.

For instance, Nike, through its “Move to Zero” campaign aims to reduce carbon emissions and waste by 2030 by introducing innovative materials that can effectively reduce carbon emissions by about 75% compared to traditional clothing. This remarkable achievement is showcased alongside the Sunburst logo which visually represents the company’s firm commitment to sustainability, symbolizing its steadfast efforts in sustainability (Nike). Additionally, Adidas aiming to reduce ocean pollution has collaborated with Parley to launch sneakers made from recycled ocean waste using 3D printing technology emphasizing the product’s features to promote an eco-friendly lifestyle and highlighting its environmental responsibility [5]. These eco-friendly efforts by sportswear brands are influencing various companies to transition to environmentally friendly management emphasizing brand sustainability.

In addition, consumers’ intention to use eco-friendly products from sportswear brands needs to increase to effectively resolve climate change and other environmental issues. Although consumers exhibit high interest and a positive attitude towards eco-friendly products and services, this interest and positive attitude do not frequently translate into actual purchases [6]. Most consumers have yet to form a consistent willingness to engage in eco-friendly consumption which suggests the need to enhance their intention to continuously use eco-friendly products and services especially considering the accelerating pace of climate change. Additionally, it is necessary to explore research in greater depth regarding the sustainability aspects of our society including consumers’ eco-friendly consumption culture.

In this context, numerous marketing studies have been actively investigating various antecedents affecting the intention to continue use. A review of previous studies reveals that they primarily focused on individual psychological and responsive aspects such as customer satisfaction, brand image and brand loyalty. However, these antecedents mostly evaluate brands based on individual experiences and attitudes overlooking aspects of sociability such as brand evaluations in interpersonal contexts. These are reliant on individual subjective experiences, thus limiting their ability to accurately reflect brand evaluations in various social contexts.

Therefore, this study focuses on the variable of social value. Recent studies have suggested that consumers prioritize social values in their purchasing decisions and emphasize the social benefits they can gain [7], demonstrating that social value in product sales can enhance trustworthiness and is recognized as an important
factor positively connected to the intention to continue use [8]. Thus, the social value variable established in this study is expected to provide insights into consumers’ concerns about climate change and their consumption decisions considering it.

Moreover, previous research has segmented consumers’ perspectives on brands into variables such as brand image, attitude and commitment. However, these segmented variables lack a comprehensive connection while contributing to evaluating brands from various perspectives. These antecedents evaluate and understand brands from a limited viewpoint whereas consumers make final brand choices based on a comprehensive evaluation necessitating a broader perspective on brands.

Hence, this study aims to make a comprehensive evaluation of companies and brands by treating corporate reputation as a variable. Researchers have stated that when consumers positively evaluate a company’s reputation it induces positive responses to its products which plays a crucial role in corporate growth regarding the effects of corporate reputation [9]. Moreover, corporate reputation has been noted as a factor enabling differentiation from competitors [10] and is presented as an antecedent influencing purchase intention. Therefore, the corporate reputation variable set in this study is expected to enable a comprehensive consideration of companies and brands.

This research aims to empirically ascertain whether social value and corporate reputation play mediating roles in the relationship between eco-friendly marketing of sportswear brands in response to climate change awareness and intention to continue use. This study provides foundational data for strategizing eco-friendly marketing of sportswear brands and contributes to enhance consumers’ sustainability in eco-friendly consumption, thereby aiding in mitigating environmental problems caused by climate change.

2. THEORETICAL BACKGROUND AND HYPOTHESIS SETTING

2.1. Relationship between Climate Change Awareness and Eco-Friendly Marketing

Climate change awareness refers to the recognition of climate change through knowledge or experience encompassing the perception of potential negative consequences and the importance of climate change for individuals, society and ecosystems [11]. Although eco-friendly marketing by sportswear brands is considered a significant variable in inducing eco-friendly behavior, no research on it has been conducted in the context of climate change awareness. This study defines climate change awareness empirically as consumers' perceptions and attitudes influenced by climate change consistent with other research [12].

Eco-friendly marketing is the term for businesses' sustainable and ecologically friendly marketing initiatives in today's world. It has become a crucial component for businesses and brands [13]. The use of eco-friendly marketing variables is generally limited to broad approaches targeting general companies and industries with research on eco-friendly marketing in the continuously expanding sportswear market still insufficient despite its importance. In this context, eco-friendly marketing in this study is operationally defined as a single-dimensional concept emphasizing the brand’s efforts to minimize negative environmental impacts and promote sustainability in the sportswear consumer market.

Eco-friendly marketing in this study is operationally defined as a strategy by companies and brands to address environmental issues raise consumer awareness of environmental protection and induce eco-friendly consumer behavior.

Many companies are adopting eco-friendly marketing practices in consideration of consumers due to the increase in global warning and climate change [14] or they are devising strategies through eco-friendly products as consumers show interest in various problems surrounding the environment and climate change [15]. The demand for eco-friendly products and services is expected to increase and companies are making substantial efforts to gain a competitive advantage through eco-friendly marketing with the growing awareness of environmental issues among consumers due to climate change. Additionally, companies promoting their products through eco-friendly marketing are gaining more popularity and eco-friendly marketing is permeating various industrial sectors.
This suggests that companies align with the eco-friendly tendencies and values sought by consumers leading to positive consumer attitudes towards strategic corporate responses by reflecting consumers' awareness of climate change in their marketing activities. The first hypothesis of this research is established as follows based on these prior studies:

H1: Climate change awareness positively influences eco-friendly marketing.

2.2. Relationship between Eco-Friendly Marketing and the Intention to Continue Use

Intention to continue use is defined as an individual’s autonomous, active willingness and intention to continuously use a particular brand’s products or services [17-19]. Intention to continue use has often been understood similarly to concepts such as intention to repurchase or reuse. It is considered a more in-depth variable as it encompasses the concept of continuity [19]. In this study, intention to continue use is operationally defined as a single-dimensional concept representing the willingness to continuously use eco-friendly products and services. People who purchase eco-friendly products and are aware of environmental issues through eco-friendly marketing are more likely to buy eco-friendly products [20]. Moreover, if the product a consumer intends to purchase has eco-friendly marketing characteristics, this influences the consumer’s purchase intention and awareness of eco-friendly marketing affects their purchase intention [21]. Thus, eco-friendly marketing elevates consumer awareness of eco-friendly consumption leading to continuous purchase intention. Furthermore, it can have various practical impacts on climate change [22] which suggests that consumers can delay the acceleration of climate change through eco-friendly actions influenced by eco-friendly marketing. The second hypothesis of this research is thus set as follows:

H2: Eco-friendly marketing positively impacts the intention to continue use.

2.3. Relationship between Eco-Friendly Marketing and Social Value

Social value is a type of consumer value defined as the utility derived from a product’s ability to enhance the social self-concept [23, 24]. Social value refers to the perception of a product or service’s social image, norms and relevance to a group allowing consumers to express their symbolic values by choosing specific brands or services [7]. In this study, social value is operationally defined as a single-dimensional concept representing the value of forming a social consensus and portraying oneself as an eco-friendly consumer through eco-friendly products and services.

Prior studies related to eco-friendly marketing and social value have found that demand for eco-friendly products and services increases. It is necessary to establish more effective green marketing strategies considering the heightened social value among consumers [25]. Moreover, Nekmahmud and Fekete-Farkas [26] stated that eco-friendly products possess significant social value leading to eco-friendly purchase intentions referencing the theory of consumption values. Additionally, public consensus on the social value of being eco-friendly is growing as consumer environmental knowledge such as concerns about severe air pollution and weather anomalies caused by climate change becomes more sophisticated [27]. As environmental issues due to climate change gain social prominence, consumers’ social concerns and awareness are increasing. In this context, many companies are strategically adopting eco-friendly marketing to meet these social needs indicating a shift in the marketing paradigm that necessitates further academic exploration from a social perspective. The third hypothesis of this research is established as follows based on these prior studies:

H3: Eco-friendly marketing positively impacts social value.

2.4. Relationship between Eco-Friendly Marketing and Corporate Reputation

Corporate reputation is defined as the overall evaluation of an organization based on its activities over a long period reflecting the comprehensive perception of stakeholders formed over time [28-30]. Furthermore, corporate
reputation is one of the key criteria for consumers to subjectively evaluate a company’s products and services [31]. Consumers choose products and services with a positive reputation associated with trustworthy and socially beneficial companies [32]. In this study, corporate reputation is operationally defined as a single-dimensional concept encompassing the overall evaluation of an organization including consumers' subjective assessments.

Prior studies on eco-friendly marketing and corporate reputation have shown that companies’ eco-friendly marketing strategies positively affect their reputation and business [33] and proper utilization of eco-friendly marketing can simultaneously promote quality environmental practices and enhance corporate reputation [34]. Additionally, eco-friendly management activities can directly affect trust formation and corporate reputation [35] as part of environmental, social and governance (ESG) management strategies. This can be interpreted as consumers positively evaluating a company’s social contribution activities under the umbrella of “eco-friendly.” Therefore, the fourth hypothesis of this study is set as follows:

H4: Eco-friendly marketing positively impacts corporate reputation.

2.5. Relationship between Social Value and Intention to Continue Use

Previous studies on the relationship between social value and intention to continue use have found that differentiated value delivery emphasizing unique benefits of products or services positively influences consumer purchase decisions and increases satisfaction, thus inducing continuous usage intention [36-38]. Additionally, distinctive consumption values impact purchases and usage [39] and social value positively affects intention for continued use. Conversely, consumers’ consumption of green products is unaffected by social value [40]. In this regard, it is necessary to consider that social value is a combination of socially oriented communal values and individual subjective values. Thus, it can reflect subjectivity and vary depending on the situation [41, 42]. This study aims to analyze consumption values from a more specific social perspective leading to the fifth hypothesis as follows:

H5: Social value positively impacts the intention to continue use.

2.6. Relationship between Corporate Reputation and the Intention to Continue Use

According to studies on the relationship between corporate reputation and intention to use, companies with a good reputation can attract relatively loyal customers which can motivate them to use their products in the future [43]. One study considered corporate reputation as a key to long-term commercial success [44] and another found that high-quality corporate reputation positively stimulates consumers, increases satisfaction and provides a competitive advantage to the organization [45]. Thus, consumer views are formed by a company’s reputation which affects their intention to continue. Therefore, the sixth hypothesis of this study is set as follows:

H6: Corporate reputation positively impacts the intention to continue use.

2.7. Mediating Effect of Social Value in the Relationship between Eco-Friendly Marketing and Intention to Continue Use

Research has indicated that consumption values such as social value could act as mediators in consumers' continuous consumption intentions towards eco-friendly products. This is evident in the relationship between eco-friendly marketing and the desire to continue using eco-friendly products [46]. Moreover, the rising social value of environmental protection influences eco-friendly practices highlighting the need for effective eco-friendly marketing design [25]. Additionally, value-belief-norm (VBN) theory can be referenced to explain the causal relationships between the variables set in this study. It elucidates eco-friendly behavioral intentions based on five factors (values, the new ecological paradigm [NEP], awareness of consequences, ascription of responsibility and personal norms) and suggests that various values within the theory encourage people to engage with value-consistent information which then impacts environmentally friendly tendencies or behaviors [47-49]. This is
expected to easily lead to the VBN theory in line with previous studies indicating that eco-friendly marketing impacts social value, as proposed in H3. Therefore, the seventh hypothesis of this study is established as follows:

\[ H_7: \text{Social value plays a mediating role in the relationship between eco-friendly marketing and the intention to continue use.} \]

2.8. Mediating Effect of Corporate Reputation in the Relationship between Eco-Friendly Marketing and the Intention to Continue Use

Finally, studies on the mediating effect of corporate reputation in the relationship between eco-friendly marketing and intention to continue use have found that corporate reputation plays a significant role in influencing consumer perspectives and purchase intentions in the relationship between eco-friendly marketing and purchase intention \[50\]. Furthermore, a significant relationship exists between eco-friendly management activities, corporate reputation and customer loyalty \[31\]. This suggests that business reputation influences consumers' attitudes and behaviours serving as a mediator between the two variables in the process where eco-friendly marketing motivates consumers to have intentions of ongoing usage or repurchase. Therefore, the eighth hypothesis of this study is set as follows:

\[ H_8: \text{Corporate reputation plays a mediating role in the relationship between eco-friendly marketing and the intention to continue using.} \]

2.9. Research Model

This study was conducted based on eight hypotheses formulated from previous research. The research model is shown in Figure 1.

![Figure 1. Research model.](image)

3. RESEARCH METHOD

3.1. Research Subjects

This study examined the structural relationship between eco-friendly marketing of sportswear brands in response to climate change awareness, social value, corporate reputation and the intention to continue use. This study chose sports enthusiasts aged 20 and above located in Busan, South Korea as the target population to select participants with a deep understanding of and close relevance to sportswear brands' eco-friendly marketing. The
sampling method employed was convenience sampling. Self-administered questionnaires were used to obtain the participants’ responses. Out of 250 distributed questionnaires, 240 were used for final analysis after excluding 10 that had been responded to insincerely or deemed unreliable. Table 1 shows the demographic characteristics of the study participants.

Table 1. Demographic characteristics of subjects.

<table>
<thead>
<tr>
<th>Classification</th>
<th>Participants</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>118</td>
<td></td>
<td>49.2</td>
</tr>
<tr>
<td>Female</td>
<td>122</td>
<td></td>
<td>50.8</td>
</tr>
<tr>
<td>Age</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>20–29 years</td>
<td>71</td>
<td></td>
<td>29.6</td>
</tr>
<tr>
<td>30–39 years</td>
<td>65</td>
<td></td>
<td>27.1</td>
</tr>
<tr>
<td>40–49 years</td>
<td>57</td>
<td></td>
<td>23.7</td>
</tr>
<tr>
<td>50 years and above</td>
<td>47</td>
<td></td>
<td>19.6</td>
</tr>
<tr>
<td>Total</td>
<td>240</td>
<td></td>
<td>100</td>
</tr>
</tbody>
</table>

3.2. Research Instruments

The survey questionnaire was used as the measurement tool in this study and all survey items except for demographic characteristics were measured using a 5-point Likert scale. Appendix 1 presents the detailed questionnaire items used in this study.

The factor of climate change awareness in this study comprised six items modifying and supplementing [12] the questionnaire restructured from previous studies [51-54] to suit the purpose of this study.

The eco-friendly marketing factor was constructed with four items, modifying and supplementing the [53] questionnaire used in previous studies [55-58] to suit the purpose of this study.

The social value factor comprised four items, modifying and supplementing the [57] questionnaire based on previous studies [23, 24, 58-64] to suit the purpose of this study.

The corporate reputation factor comprised six items, modifying and supplementing the [65] questionnaire based on previous research [29, 66] to suit the purpose of this study.

Last, the intention to continue use factor comprised four items, modifying and supplementing the [67] questionnaire restructured from previous research [17, 68-70] to suit the purpose of this study. Table 2 presents the results of the confirmatory factor analysis and reliability validation for the measurement tools used in this study. Hair et al.’s [71] fit criteria were satisfied and convergent validity was demonstrated by the latent variables whose AVE values varied from 0.941 to 0.961 and their CR values from 0.987 to 0.993. Furthermore, the reliability validation of the measurement items used in this study revealed that all factors exceeded the 0.70 standard proposed by Nunnally and Bernstein [72] thereby confirming their reliability.

Table 2. Confirmatory factor analysis and reliability validation.

<table>
<thead>
<tr>
<th>Factor</th>
<th>Measurement item</th>
<th>Estimate</th>
<th>Standard error</th>
<th>C.R.</th>
<th>AVE</th>
<th>CR</th>
<th>α</th>
</tr>
</thead>
<tbody>
<tr>
<td>Climate change awareness</td>
<td>6. I think that the recent and rapid climate change will have tragic consequences.</td>
<td>1.000</td>
<td>0.047</td>
<td>14.320</td>
<td>0.941</td>
<td>0.989</td>
<td>0.910</td>
</tr>
<tr>
<td></td>
<td>5. I think that climate change has been progressing rapidly recently.</td>
<td>0.668</td>
<td>0.047</td>
<td>14.320</td>
<td>0.941</td>
<td>0.989</td>
<td>0.910</td>
</tr>
<tr>
<td></td>
<td>4. I think that recent and rapid climate change is threatening.</td>
<td>0.959</td>
<td>0.056</td>
<td>17.040</td>
<td>0.941</td>
<td>0.989</td>
<td>0.910</td>
</tr>
<tr>
<td></td>
<td>3. I feel the negative impact of climate change on the ecosystem.</td>
<td>1.001</td>
<td>0.068</td>
<td>14.767</td>
<td>0.941</td>
<td>0.989</td>
<td>0.910</td>
</tr>
<tr>
<td></td>
<td>2. I personally feel the effects of climate change in everyday life.</td>
<td>0.603</td>
<td>0.049</td>
<td>12.291</td>
<td>0.941</td>
<td>0.989</td>
<td>0.910</td>
</tr>
<tr>
<td></td>
<td>1. I feel the impact of climate change on modern society.</td>
<td>0.861</td>
<td>0.060</td>
<td>14.276</td>
<td>0.941</td>
<td>0.989</td>
<td>0.910</td>
</tr>
<tr>
<td>Eco-friendly marketing</td>
<td>9. The sportswear brand I mainly use actively makes environmental donations.</td>
<td>1.000</td>
<td>0.056</td>
<td>14.767</td>
<td>0.941</td>
<td>0.989</td>
<td>0.910</td>
</tr>
</tbody>
</table>

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3.3. Data Processing Method

The data collected in this study were analyzed using SPSS 29.0 and AMOS 29.0. First, a frequency analysis was conducted to understand the general characteristics of the study participants. A descriptive statistical analysis was performed to assess the normality of the measurement items. Second, Cronbach’s alpha coefficients were checked to verify the reliability of the measurement items. Third, confirmatory factor analysis was conducted to ensure the validity of the measurement tools verifying convergent and discriminant validity by examining C.R. and AVE values. Fourth, correlation analysis was conducted to assess the interrelationships between the variables. Fifth, structural equation modeling was conducted to verify the causal relationships between each factor. Finally, SPSS Process Macro (v4.2) model 4 was used along with a bootstrapping method to examine the mediating effects of social value and corporate reputation in the relationship between eco-friendly marketing of sportswear brands and intention to continue use. In this study, all statistical significance levels were tested at alpha of .05.

4. RESULTS

4.1. Descriptive Statistics and Correlation Analysis

A descriptive statistical analysis and correlation analysis were conducted to examine the basic statistics of the variables used in this study and the correlations between each variable and the results as shown in Table 3. The results of the descriptive statistics for each variable showed that the average distribution ranged from 4.07 to 4.67, and the standard deviation ranged from .435 to .614. Additionally, the absolute values of skewness for all variables were less than 3. The absolute values of kurtosis were less than 10 indicating that the distribution of the variables met the assumptions of normality.
All of the variables in the correlation study had significant positive correlations with correlation coefficients ranging from .261 to .739 indicating that multicollinearity problems were not prevalent. Furthermore, the AVE values were all greater than the squared values of the correlations among latent variables satisfying the criteria for discriminant validity.

4.2. Hypothesis Testing Verification of Research Hypotheses

The results of the hypothesis testing in this study are shown in Table 4. The fit of the structural model was satisfactory, with \( \chi^2 = 673.085 \text{ (df } = 245, p < .001) \), \( \chi^2/\text{df} = 2.747 \), IFI = .921, TLI = .911, CFI = .913 and RMSEA = .086. According to the equation model analysis, climate change awareness had a statistically significant positive effect on eco-friendly marketing \( (\beta = .307, p < .001) \); thus, Hypothesis 1 was accepted. Eco-friendly marketing had a statistically significant positive effect on the intention to continue use \( (\beta = .166, p < .05) \); thus, Hypothesis 2 was accepted. Eco-friendly marketing had a statistically significant positive effect on social value \( (\beta = .639, p < .001) \); thus, Hypothesis 3 was accepted. Eco-friendly marketing had a statistically significant positive effect on corporate reputation \( (\beta = .675, p < .001) \); thus, Hypothesis 4 was accepted. Social value had a statistically significant positive effect on the intention to continue use \( (\beta = .154, p < .05) \); thus, Hypothesis 5 was accepted. Corporate reputation had a statistically significant positive effect on the intention to continue use \( (\beta = .559, p < .001) \); thus, Hypothesis 6 was accepted.

4.3. Results of Mediating Effect Analysis

Table 5 presents the analysis to verify the mediating effects. Bootstrapping was conducted to determine whether the mediating effects of social value and corporate reputation were statistically significant in the relationship between eco-friendly marketing and the intention to continue use. First, the correlation coefficients of the latent variables were examined as the correlation coefficient must be over .30 for the possibility of bootstrapping analysis. The correlation coefficient ranges for eco-friendly marketing were .602 or higher with social value \( (r = .617) \), corporate reputation \( (r = .641) \) and intention to continue use \( (r = .602) \). Additionally, the social value and corporate reputation correlation coefficient was .706. The social value and intention to continue using

<table>
<thead>
<tr>
<th>Variable</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Climate change awareness</td>
<td>1</td>
<td>(0.941)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Eco-friendly marketing</td>
<td>0.293**</td>
<td>1   (0.961)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Social value</td>
<td>0.409**</td>
<td>0.617**</td>
<td>1   (0.960)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Corporate reputation</td>
<td>0.261**</td>
<td>0.641**</td>
<td>0.706**</td>
<td>1   (0.959)</td>
<td></td>
</tr>
<tr>
<td>Intention to continue use</td>
<td>0.326**</td>
<td>0.602**</td>
<td>0.636**</td>
<td>0.739**</td>
<td>1   (0.953)</td>
</tr>
<tr>
<td>M</td>
<td>4.61</td>
<td>4.07</td>
<td>4.12</td>
<td>4.47</td>
<td>4.67</td>
</tr>
<tr>
<td>SD</td>
<td>0.435</td>
<td>0.614</td>
<td>0.610</td>
<td>0.553</td>
<td>0.471</td>
</tr>
<tr>
<td>Skewness</td>
<td>-1.005</td>
<td>-0.165</td>
<td>-0.464</td>
<td>-0.794</td>
<td>-1.463</td>
</tr>
<tr>
<td>Kurtosis</td>
<td>0.309</td>
<td>-0.547</td>
<td>-0.376</td>
<td>-0.243</td>
<td>1.103</td>
</tr>
</tbody>
</table>

Note: *p<0.01, **p<0.05, ***p<0.001.
the correlation coefficient was .636 and the corporate reputation and intention to continue using the correlation coefficient was .739. These correlation coefficients indicate that bootstrapping analysis for mediating effect verification is feasible.

Subsequently, bootstrapping was conducted with a sample size of 5,000 and a 95% confidence interval, resulting in a mediating effect coefficient of .20 for social value in the relationship between eco-friendly marketing and intention to continue use. This mediation effect explained 20.0% of the relationship between the independent and dependent variables. The lower and upper limits of the 95% confidence interval were .14 and .28, respectively, not including 0, thus confirming the statistical significance of the mediating effect. Therefore, hypothesis 7 of this study was accepted. Furthermore, the mediating effect coefficient of corporate reputation in the relationship between eco-friendly marketing and intention to continue use was .30 explaining 30.0% of the mediating effect of the mediating variable in the relationship between the independent and dependent variables. The mediating effect was statistically significant leading to the acceptance of hypothesis 8 with the 95% confidence interval’s lower limit at .22 and upper limit at .37 not including 0.

Table 5. Mediating effect analysis.

<table>
<thead>
<tr>
<th>Latent variable path</th>
<th>Mediating effect</th>
<th>Standard error</th>
<th>95% Bias-corrected</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>Lower limit</td>
<td>Upper limit</td>
</tr>
<tr>
<td>H7: Eco-friendly marketing → Social value → Intention to continue use</td>
<td>0.20</td>
<td>0.04</td>
<td>0.14</td>
<td>0.28</td>
</tr>
<tr>
<td>H8: Eco-friendly marketing → Corporate reputation → Intention to continue use</td>
<td>0.30</td>
<td>0.04</td>
<td>0.22</td>
<td>0.37</td>
</tr>
</tbody>
</table>

5. DISCUSSION AND CONCLUSION

This study analyzed the structural relationship between eco-friendly marketing of sportswear brands in response to climate change awareness, social value, corporate reputation and intention to continue use focusing on sports enthusiasts with a high understanding of and relevance to the topic. Additionally, it looked at the possibility of moderating the relationship between eco-friendly marketing and the intention to continue using it through social values and business reputation. The main results, discussion and conclusion are as follows:

First, climate change awareness positively influences the eco-friendly marketing of sportswear brands. One of the leading theories in environmental psychology is the stimuli-organism-response (SOR) theory. SOR theory explains how environmental stimuli lead to internal and external emotional responses and behaviors in humans. A previous study suggested that an individual’s perception of environmental issues can influence their behavior applying this theory [74]. This theory appears to be a meaningful academic foundation for understanding the results of this study. Furthermore, these findings relate to previous research showing that higher awareness of climate change influences eco-friendly behavior [12, 75]. The increasing awareness is leading to eco-friendly behavioral intentions particularly in the context of accelerating climate change. This suggests that sportswear brands need to focus on eco-friendly marketing to influence consumers to purchase eco-friendly products and services. Consequently, sportswear brands should emphasize ongoing environmental responsibility and develop more eco-friendly products and services that are likely to be positively received by consumers. Additionally, sportswear brands should effectively use digital marketing to strengthen their eco-friendly brand image and transparently communicate their eco-friendly efforts through various forms of social media to enhance consumer awareness and reflect current trends.

Second, eco-friendly marketing by sportswear brands positively impacts the intention to continue use. Protection motivation theory which explains this result by increasing protection motivation through risk
assessment and coping appraisal in response to negative emotional stimuli, ultimately results in beneficial behavioural changes [76]. According to this concept, eco-friendly marketing strategies used by sportswear companies to promote environmental protection increase consumer knowledge which in turn causes them to favour sustainable products and make plans to remain with them. This result partially supports research emphasizing eco-friendly marketing as a strategy for sustainable management [35]. It aligns with previous findings that participation in eco-friendly public services can promote future eco-friendly consumption intentions [77]. Modern consumers prefer brands that are more sustainable and environmentally conscious which is a key reason why sportswear brands gain consumer attention through eco-friendly marketing. Therefore, sportswear brands should enhance their efforts towards sustainability and adopt marketing strategies that emphasize this to gain consumers’ interest and trust.

Third, eco-friendly marketing by sportswear brands positively impacts social value. This can be grounded in the theory of corporate social responsibility (CSR). CSR theory emphasizes the importance of companies fulfilling their responsibilities towards society and the environment in addition to economic goals [78]. The contribution of sportswear brands to sustainability through eco-friendly marketing can be interpreted as part of this social responsibility. This result is similar to previous findings suggesting that eco-friendly marketing enhances the brand’s social value promoting positive environmental perceptions among consumers [79]. Furthermore, it aligns with the conclusions of another study in which greenwashing perspectives can be strengthened through eco-friendly marketing that incorporates social value [80]. Sportswear brands need to emphasize the social value contributions of choosing eco-friendly products and services for consumers to maximize these positive effects and achieve continuous growth. Using social media, websites, blogs and the like to provide content that highlights eco-friendliness and social values can be an effective approach. Such improvements and measures can be expected to enhance the impact of sportswear brands’ eco-friendly marketing on social value.

Fourth, eco-friendly marketing by sportswear brands positively impacts corporate reputation. This result can be explained based on attribution theory which is used when individuals seek to explain the causes of specific events or behaviors. This suggests that the meaning attributed to an event can vary depending on whether its cause is seen as internal or external [81]. In this study, consumers interpret the brand’s contribution to sustainability through eco-friendly efforts as an internal or external cause leading to positive evaluations of the brand. This finding is consistent with previous research that verified a positive relationship between eco-friendly corporate management and corporate reputation [82, 83]. Eco-friendly marketing emphasizes CSR conveying a positive image to consumers which can promote brand differentiation in the competitive sportswear market. Furthermore, consumers’ positive attitudes towards sustainable brands are likely to contribute to forming corporate reputations. Therefore, sportswear brands should use this positive image to continuously strengthen eco-friendly marketing and emphasize their role as sustainable brands thereby further enhancing their corporate reputation.

Fifth, social value positively impacts the intention to continue use. This result can be explained through social exchange theory which posits that individuals consider social relationships in all areas of life and interactions in social relationships can influence outcomes in performance and attitudes [84]. In this context, the positive impact of social value on the intention to continue use can be interpreted as a benefit derived from interaction. Moreover, this finding aligns with previous research suggesting that social value affects customer purchase intentions for eco-friendly products [85-88]. Furthermore, it echoes the findings of another study in which social value perception leads to positive consumption experiences and purchase intentions [89]. Therefore, it is important to highlight the positive impact of social value emphasizing that individual consumer choices have social implications. Sportswear brands should communicate the message that these consumer behaviors contribute to environmental protection and social participation.

Sixth, corporate reputation positively influences the intention to continue use. This result can be explained through trust-transfer theory which describes how trust in one entity can be transferred to and applied to another...
related entity. This suggests that high consumer trust in corporate reputation fosters continued use intention which can be interpreted as a process where corporate reputation positively impacts consumers' intention to continue use. Additionally, this finding found a positive impact of corporate reputation on customer satisfaction \([90]\) as well as research by which customer satisfaction mediates the relationship between corporate reputation and repurchase intention \([91]\). Strategies should be developed to enhance customer experience and service quality, so that efforts to increase customer satisfaction can also lead to improved corporate reputation considering the positive impact of corporate reputation on customer satisfaction. Furthermore, modern consumers value CSR in their product and service choices \([92]\). Therefore, brands should consider this trend and build marketing strategies that emphasize social responsibility and enhance environmentally friendly product lineups to increase consumers' intention to continue use them.

Seventh, social value has a mediating effect on the relationship between the eco-friendly marketing of sportswear brands and the intention to continue using them. Moreover, this study is unique as few studies have approached the topic from this perspective focusing on the mediating effect of social value among consumption values. In contrast, a study by Wang, et al. \([93]\) included consumption value and social value as a mediating effect between environmental knowledge (an independent variable) and visit intention (a dependent variable) which shares similarities in verifying the mediating effect of social value and suggesting a high likelihood of leading to continued use intentions. Thus, sportswear brands should consider enhancing social value to improve eco-friendly marketing and the intention to continue use. As a result, they should work to develop and promote environmentally friendly goods and services emphasizing social value in their marketing techniques to attract customers and communicate their natural sustainability. Moreover, sportswear brands can foster interaction with consumers by harmoniously blending the brand’s objectives with consumers’ values, thereby strengthening the brand’s image and inducing continued use intentions by hosting campaigns and events that highlight eco-friendly efforts and social value creation. Such comprehensive efforts are expected to not only increase eco-friendly marketing and continued use intentions but also contribute to enhancing social value.

Eighth, corporate reputation has a mediating effect on the relationship between the eco-friendly marketing of sportswear brands and their intention to continue use. This result echoes previous findings that corporate reputation acts as a mediating factor in the relationship between CSR (including eco-friendly marketing) and purchase intentions \([50]\). It also aligns with other findings by which corporate reputation mediates the relationship between CSR activities including eco-friendly marketing and repeat visit intentions \([94]\). Thus, it is essential to consider effective ways to convey eco-friendly marketing and corporate reputation strategies. Sportswear brands are expected to effectively communicate their eco-friendly efforts and corporate reputation to consumers using social media channels that align with the latest consumer trends. They should develop creative and engaging content and strengthen collaborations with influencers to induce strong interactions with consumers. Such proactive and innovative strategies are expected to help foster consumers’ continued use intentions.

6. LIMITATIONS AND FUTURE RESEARCH

This study has substantial implications as it identifies the impact relationships between eco-friendly marketing of sportswear brands in response to climate change awareness and social value, corporate reputation and intention to continue using offering insights for establishing eco-friendly marketing strategies linked with social issues like climate change. However, the methodological limitations and suggestions for future research are several.

First, this study was conducted by considering Korean consumers' perceptions of climate change. Thus, it may have limitations in applying these perceptions directly to overseas consumers. Climate change varies regionally and perceptions may vary accordingly. Therefore, future research could adopt a more macroscopic perspective by examining climate change perceptions using overseas consumers as samples.
Additionally, this study focused on empirically analyzing the relationships between variables such as climate change awareness, eco-friendly marketing, intention to continue use, social value and corporate reputation. However, it did not emphasize the impact of demographic characteristics such as occupation and average monthly income, on consumers' intentions to continue using sportswear brands. Future research could incorporate these aspects to present more concrete marketing data.

The mediating variables set in this study were expected to positively impact the intention to continue use. However, sportswear brands need to develop strategies to address not only the positive but also the negative effects of marketing. Analyzing the impact of negative variables can help establish more effective and sustainable brand marketing strategies. Future research could set negative variables to consider at the corporate brand level for a more comprehensive interpretation and the development of new marketing strategies.

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**Transparency:** The author states that the manuscript is honest, truthful, and transparent, that no key aspects of the investigation have been omitted, and that any differences from the study as planned have been clarified. This study followed all writing ethics.

**Competing Interests:** The author declares that there are no conflicts of interests regarding the publication of this paper.

**REFERENCES**


## APPENDIX

### Appendix 1. List of survey items.

<table>
<thead>
<tr>
<th>Items</th>
<th>Measurement items</th>
<th>References</th>
</tr>
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<tbody>
<tr>
<td>Climate change awareness</td>
<td>1. I feel the impact of climate change on modern society.</td>
<td>Song [12]</td>
</tr>
<tr>
<td></td>
<td>2. I personally feel the effects of climate change in everyday life.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>3. I feel the negative impact of climate change on the ecosystem.</td>
<td></td>
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<td></td>
<td>4. I think the recent rapid climate change is threatening.</td>
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<td></td>
<td>5. I think climate change has been progressing rapidly recently.</td>
<td></td>
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<td></td>
<td>6. I think the recent rapid climate change will lead to tragic consequences.</td>
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<tr>
<td>Eco-friendly marketing</td>
<td>1. The sportswear brand I mainly use markets using natural green energy.</td>
<td>Kwon [53]</td>
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<td></td>
<td>2. The sportswear brand I mainly use supports environmental preservation activities of environmental groups.</td>
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<tr>
<td></td>
<td>3. The sportswear brand I mainly use conducts various campaigns for environmental conservation.</td>
<td></td>
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<td></td>
<td>4. The sportswear brand I mainly use actively makes environmental donations.</td>
<td></td>
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<tr>
<td>Social value</td>
<td>1. I think the sportswear brand I mainly use offers socially meaningful products.</td>
<td>Cho, et al. [57]</td>
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<td></td>
<td>2. The sportswear brand I mainly use gives a feeling of social recognition.</td>
<td></td>
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<td></td>
<td>3. The sportswear brand I mainly use will be a good example for others.</td>
<td></td>
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<tr>
<td></td>
<td>4. Using products from the sportswear brand I mainly use will express a spirit of philanthropy and contribution to society.</td>
<td></td>
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<tr>
<td>Corporate reputation</td>
<td>1. I believe the sportswear brand I mainly use has potential for future growth.</td>
<td>Back and Kim [65]</td>
</tr>
<tr>
<td></td>
<td>2. I think the sportswear brand I mainly use has good management practices.</td>
<td></td>
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<tr>
<td></td>
<td>3. The sportswear brand I mainly use conducts innovative management activities.</td>
<td></td>
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<td></td>
<td>4. I have a good impression of the sportswear brand I mainly use.</td>
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<td></td>
<td>5. I think the sportswear brand I mainly use is a trustworthy company.</td>
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<td></td>
<td>6. I think the sportswear brand I mainly use is very concerned about environmental protection.</td>
<td></td>
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<tr>
<td>Intention to continue use</td>
<td>1. I intend to continue using this sportswear brand in the future.</td>
<td>Lee [67] and Choo and Nah [68]</td>
</tr>
<tr>
<td></td>
<td>2. I intend to prioritize using this sportswear brand.</td>
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<td></td>
<td>3. I will recommend this sportswear brand to others.</td>
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<td></td>
<td>4. I will continue to use this sportswear brand even if the prices increase.</td>
<td></td>
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</tbody>
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