A Sustainability Perspective-The Influence of Green Marketing on Mongolian Consumer Attitudes

Joshua C. Chang¹ and Munkhsoyol Bayardalai²

Abstract

Globally, mounting environmental concerns such as pollution, climate change, and global warming have propelled companies into adopting green marketing strategies. This shift is a response to the burgeoning demand for safe and eco-friendly products and the burgeoning green market. Consequently, there’s a growing imperative to investigate consumer perceptions and attitudes towards green products. Marketing encompasses a spectrum of tools and activities, from branding to advertising. We used a quantitative survey to delve into consumer attitudes, aiming to understand how green marketing influences their behaviors, particularly in the Mongolian context. Our research unequivocally establishes that consumer attitudes towards green marketing tools – including green products, eco-conscious packaging, sustainable labels, and environmental advertisements – have a significant and favorable impact. Therefore, companies should not only diversify their eco-friendly product offerings but also actively engage in green marketing initiatives. This approach not only positively influences consumer attitudes but also enhances their comprehension of sustainability, enabling them to make greener choices. In sum, the global paradigm shift towards green marketing is instrumental in fostering a more eco-conscious society, with companies serving as key agents in promoting sustainable choices and environmental awareness.

JEL classification numbers: M3, M30, M31, M37, M38, M39.
Keywords: Sustainability, Green Marketing, Consumer Attitude, Mongolia.

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1. Introduction

Throughout history, cultures worldwide have emphasized the intrinsic importance of respecting and cherishing nature. Despite this long-standing ethos, recent times have witnessed a troubling shift toward the wanton exploitation of natural resources, driven not by essential needs but by insatiable desires. This shift has precipitated a multitude of interconnected social, economic, and environmental challenges. A particularly alarming consequence is the exponential rise in carbon emissions, which have surged by an astonishing 90% since 1970, primarily due to industrial activities. These emissions have significantly exacerbated the urgent and escalating concerns of climate change and global warming. Moreover, over two billion people globally grapple with the sobering reality of water scarcity, underscoring the critical need for a fundamental reassessment of our consumption patterns.

In response to these formidable challenges, an unwavering commitment to sustainability has become imperative, forming the bedrock of ethical responsibility. Industries, facing the diminishing abundance of natural resources, are compelled to innovate to meet the burgeoning demands of consumers. This necessity has given rise to the concept of green marketing, which has ascended to paramount significance as individuals, governments, and businesses alike awaken to the acute awareness of environmental issues. The burgeoning valuation of the green market, projected to reach trillions of dollars, underscores the transformative potential of green marketing. It not only meets consumer needs but also aligns with the overarching objectives of organizations.

Traditionally, marketing has been viewed as a powerful influencer of consumer attitudes and intentions. However, in contemporary perspectives, its role extends beyond mere influence to encompass the vital function of education and value-shaping. This study serves as a vanguard in elucidating the far-reaching impact of green marketing tools and activities on consumer attitudes and purchase intentions, particularly amidst pressing environmental concerns. Evidently, consumer behavior has been sculpted by marketing practices that have, at times, favored short-term gains over environmental responsibility. Green marketing emerges as a sincere solution, championing the cause of less harmful products and processes, thereby ameliorating the deleterious social and environmental ramifications inherent in modern manufacturing practices.

Enterprises that align their endeavors with the principles of green marketing not only contribute to heightened societal welfare but also address the burgeoning environmental consciousness among consumers. Recent studies substantiate a discernible predilection for green products and underscore a heightened global awareness of individual actions and their pivotal role in addressing climate change. The Global Sustainability Study 2021, an extensive cross-border investigation spanning 17 countries, highlights the prodigious potential of marketing as a formidable channel for molding consumer behaviors, augmenting overall well-being, and nurturing environmental responsibility. Marketers occupy a pivotal position in influencing consumer choices, championing sustainability, and
propagating awareness about pressing environmental concerns, resulting in mutually beneficial outcomes for society and industry. These proactive initiatives also yield consequential cost savings, which can be redirected to support endeavors aimed at mitigating carbon emissions and reducing environmental footprints. While earlier research has predominantly focused on affluent nations, there is now a clarion call for analogous investigations in less developed regions, such as Mongolia. This study aims to explore the impact of green marketing on Mongolian consumer attitudes, thereby bridging an existing research gap. The findings are anticipated to serve as a foundation for future studies, kindling scholarly interest in green marketing. Furthermore, it will provide invaluable insights to marketers, enabling the formulation of effective strategies designed to resonate with the eco-conscious choices of consumers. Ultimately, this research aspires to guide our trajectory towards a more sustainable, verdant, and pristine planet.

2. Literature Reviews and Hypotheses Development
Green marketing, interchangeably known as ecological marketing, environmental marketing, or sustainable marketing, fundamentally aims to mitigate the adverse environmental impacts of business activities while facilitating exchanges that meet customer needs and desires. As Zinkhan and Carlson (1995) highlight, green marketing addresses customer desires and concerns regarding environmental and health issues from multiple angles, including ecology, sustainability, and pollution reduction. Practically, it refers to the process through which a company develops, promotes, and distributes environmentally friendly products (Pride & Ferrell, 1993). Soonthonsmai (2007) defines green marketing as businesses' efforts to address environmental or 'green concerns' while satisfying consumer and societal needs. Welford (2000) offers a comprehensive definition, characterizing green marketing as 'the management process responsible for recognizing, foreseeing, and serving the consumers' needs and society financially and sustainably.' This process includes creating green products, adjusting manufacturing processes, changing product packaging, and updating marketing materials (Murthy, 2010). Moreover, green marketing encourages businesses to make ethically responsible choices in their operations (Widyastuti, et al. 2019). Seth & Khan (2015) emphasize that green marketing integrates ethics and corporate social responsibility, assisting companies in becoming socially responsible organizations. The American Marketing Association (AMA) provides three distinctive definitions of green marketing: Retail Definition: Green marketing involves promoting environmentally beneficial goods. Social Marketing Definition: It encompasses creating and promoting products aimed at reducing adverse environmental impacts or enhancing their quality. Environmental Definition: Green marketing comprises initiatives by businesses to develop, market, package, and repurpose products while considering and responding to environmental concerns. Compared to traditional marketing, green marketing encompasses activities related to producing, differentiating, and promoting products or services that are environmentally safe
and meet consumer environmental demands (Ansar, 2013). The ultimate objective is to promote eco-friendly products while actively encouraging consumers to support and preserve the environment (Stern & Ander, 2008). Gail (2010) argues that green marketing techniques can enhance environmental protection compared to generic or conventional marketing. According to Polonsky (2011), green marketing includes any strategy employed by businesses to meet customer demands while minimizing adverse environmental impacts. Welford (2000) and Peattie (2001) present a comprehensive definition of green marketing as a management process that identifies, anticipates, and fulfills customer needs profitably and sustainably. Green marketing actions encompass modifications to the production process, changes to the product itself, adjustments to packaging and labeling, and adaptations to advertising (Sharma & Trivedi, 2018). Hasan and Ali (2015) suggest that green marketing can help businesses establish corporate identities reflecting their social responsibility. Ethical green marketing, according to Chabowski, et al. (2011), can enhance a company's performance. Incorporating green business practices not only improves a company's competitive edge but also helps it comply with stringent government regulations and standards (Cronin, et al. 2011). Enterprises are increasingly recognizing their responsibilities towards the environment and society, emphasizing long-term sustainability and environmental protection.

In psychology, an 'attitude' is a predisposition to assess something with favor or disfavor (Eagly & Chaiken, 1993). The American Marketing Association (AMA) defines it as a cognitive process comprising positive or negative feelings and sensations (marketingpower.com). Essentially, an individual's attitude toward something reflects their satisfaction level (Ludwikowski, 2009). Kotler (1994) characterizes an attitude as a person's inclination to behave favorably or unfavorably towards an object or idea, influenced by their knowledge, beliefs, values, perceptions, and experiences. An individual's attitude is one of the indicators of their environmental responsibility (Thompson & Gasteiger, 1985). Chisnall (1995) suggests that factors like environment, information exposure, or group dynamics can influence an individual's attitude. Organizations carefully cultivate attitudes to align with customer demands. Understanding customer attitudes is essential as it helps individuals overcome purchase decision barriers (Smith & Paladino, 2010). Khoiriyah, et al. (2018) assert that values shape attitudes, which strongly influence behavior. Chen and Chang (2012) emphasize that consumers are increasingly mindful of ecological challenges, and their actions often reflect concern for environmental conservation. Comprehending consumer attitudes toward eco-friendly products and their willingness to buy is invaluable for organizations (Allport, 1935). Attitudes wield influence over an individual's behavioral model (Kotler, 1994). A positive attitude towards green products is the starting point for sustainable consumption. Assessing attitudes is pivotal for understanding how marketing strategies impact consumers. Consumer attitudes are the best predictor of willingness to pay a premium for sustainable products (Chyong, et al. 2006). Consequently, consumers are willing to pay more for green products when they hold positive attitudes (Hamid, 2014).
2.1 Hypotheses Development

2.1.1 Environmental Awareness

Xu, et al. (2018) assert that environmentally conscious individuals are more likely to purchase eco-friendly products as it aligns with their desire to preserve the environment. Research by Aytekin and Büyükahraz (2013) demonstrates a strong correlation between environmental awareness and consumer intentions to purchase green products. A similar sentiment is echoed in the study by Sharma and Trivedi (2018). Notably, consumer behavior increasingly leans towards green purchases with heightened environmental awareness. Shabecoff (1993) suggests that environmentally concerned consumers are more likely to engage in green buying practices. Furthermore, Saxena's (2008) research with a sample of 180 respondents affirms the positive relationship between consumers' awareness and their inclination to purchase green products. Soonthonsmai’s study (2007) reinforces the pivotal role of consumer awareness in shaping behaviors related to environmental protection. Aman, Harun, and Hussein's investigation (2012) underscores that ecological knowledge and concerns significantly influence consumers' intentions to make green purchases. This aligns with research conducted in 17 nations, which found that 73 percent of Australians are increasingly inclined to invest in environmentally beneficial products (Bodger & Monks, 2010). Research across various sectors consistently highlights the impact of environmental concerns on consumer attitudes and purchasing behavior (Mayer, et al. 2012).

**H1:** Environmental awareness is positively related to consumer attitudes.

2.1.2 Green Product

Consumer demographics, knowledge, beliefs, and attitudes influence the propensity to purchase green products (Laroche, et al. 2001). Green product consumers exhibit a dedication to eco-friendly choices, a heightened ecological concern, a preference for eco-friendly industries, intelligent environmental practices, and a continual interest in environmental issues (Ryan, 2006). These environmentally conscious consumers actively seek ecologically friendly products. However, it's important to note that consumers' attitudes towards green products do not always directly correlate with their environmental concern (Kim & Choi, 2005). Environmental awareness plays a significant role in shaping the preference for green products, and a positive environmental attitude strongly influences consumer attitudes towards these products (Chen, 2009). Ottman's research (1992) highlights the importance of meeting immediate demands for performance, affordability, convenience, and cost to encourage the adoption of eco-friendly products. Quality perception, environmental attitude, and personal health and cleanliness awareness all contribute to favorable attitudes toward green products. A positive attitude towards environmental conservation significantly promotes the purchase of green products (Tanner & Kast, 2003).

**H2:** Green product is positively related to consumer attitudes.
2.1.3 Green Package
Consumer preferences are shaped by their environmental attitudes, which, in turn, impact their choice of products (Blackwell, et al. 2006). According to Agyeman (2014), the packaging plays a crucial role in influencing consumers' decisions to purchase green products. If a green product and its packaging align with cost-effectiveness, consumers are more likely to choose them (Hartmann & Ibanez, 2006). Consumers, especially women, scrutinize the labels of green products to identify whether they are made using recycled materials (Laroche, et al. 2001). Thogersen (1999) posits that moral considerations in packaging decisions become prominent when anticipated environmental impacts are significant, and no other essential factors are at play. Consumers' willingness to support environmental conservation significantly encourages the purchase of green packaged products (Tanner & Kast, 2003). Packaging affects consumers' perceptions of the product through its presentation. Scientific research shows that packaging attracts customers' attention, conveys essential product information, positions the product in the market, and sets it apart from competitors (Zakersalehi & Zakersalehi, 2012). Consequently, numerous businesses are investing in research related to green packaging, recognizing its potential impact (Rao & Bhargav, 2016). A study conducted by Stora Enso (2015) on Millennials indicates that sustainable packaging positively affects brand sales, demonstrating the importance of eco-friendly packaging in the consumer experience. For many surveyed individuals, environmentally friendly packaging is a vital consideration in their purchasing decisions.

H3: Green package is positively related to consumer attitudes.

2.1.4 Green Labels
Eco-labels serve as a mechanism to attract consumers by conveying information about the environmental impact of a product (Cherion & Jacob, 2012). D'Souza (2004) asserts that labeling significantly influences consumer purchasing behavior. Labels such as "Energy Star" and "EU labels," designed to reduce energy costs, impact consumer intentions to choose green products, often leading them to pay a premium (Bratt, et al. 2011). The use of eco-labels aids consumers in making sustainable choices, saving them time and effort (Grunert & Wills, 2007). Isa & Yao's questionnaire-based research (2013) involving 180 Tesco consumers highlights the importance of pricing but also reveals consumers' attraction to product labeling when making green purchases.

H4: Green label is positively related to consumer attitudes.

2.1.5 Green Advertisement
Consumers suggest that environmental marketing effectively enhances their understanding of green products and aids in making informed choices (Akehurst, et al. 2012). Environmental advertising boosts consumer motivation to purchase eco-
friendly products (Neft and Thompson, 2007). According to Haytko and Matulich (2008), environmentally conscious consumers respond more positively to green advertising. As consumers engage more in pro-environmental behaviors, their demand for eco-friendly advertising increases (Purohit, 2011). Notably, advertisements positively influence consumer attitudes toward green purchases (Ansar, 2013). Promotions, including public relations, direct marketing, sales promotion, advertising, and sales force, play a crucial role in shaping consumer perceptions (Kotler and Keller, 2009). Research conducted among 107 Elon University students and faculty members demonstrated a positive view of eco-friendly products and their association with reliable, affordable, wholesome, and ecologically responsible companies.

**H5:** Green advertisement is positively related to consumer attitudes.

### 2.1.6 Consumer Attitude

The study recognizes the significant impact of consumer awareness of eco-labels on attitudes toward green products (Taufique, et al. 2016). Green labels validate the authenticity of products and enhance consumer perceptions (Erdem & Swait, 1998). As consumers engage in pro-environmental actions, they become more inclined to appreciate eco-labels (Thøgersen, et al. 2010). A more favorable view of green products directly correlates with an increased likelihood of purchasing them.

### 3. Research Methodology

#### 3.1 Data collection

The data collection process involved administering questionnaires to survey participants, utilizing a combination of mono-method and cross-sectional strategies. For primary data collection, we employed survey questionnaires created using Google Forms and distributed online to Mongolian consumers. Social media platforms, including Facebook, Twitter, LinkedIn, and Clubhouse, served as effective channels for recruiting respondents. The data collection period spanned from April 9th to May 19th, 2022. The questionnaire was meticulously structured into seven sub-sections, comprising a total of 36 questions. The initial section collected demographic information, such as gender, age, student or alumni status, education, and income level. Section two, encompassing questions 1 to 30, focused on the five independent variables and one dependent variable. The final section, section three, provided respondents with the opportunity to furnish their contact details and offer comments or clarifications regarding any unclear questions.

The questionnaire incorporated statements that required participants to assess their responses using a 5-point Likert scale, ranging from 1 (strongly disagree) to 5 (strongly agree). Data analysis, a pivotal stage of research, involved a blend of analytical and logical reasoning for data evaluation. We conducted data analysis using the Statistical Package for Social Sciences (SPSS) software. Various statistical tests, including ANOVA, t-tests, correlations, and factor analysis, were
employed to assess data reliability and determine the relationship between green marketing activities and consumer attitudes. The use of 5-point Likert scales in this research was guided by recommendations, considering that such scales enhance response rates and response quality while minimizing respondent frustration. This scale provided respondents with a clear set of statements for evaluation. Questionnaires were distributed using online survey methods, facilitating data collection from a geographically diverse population. However, for research necessitating heightened awareness or in-depth understanding, face-to-face interviews may be more appropriate, as this method facilitates the conveyance of complex concepts and provides respondents with a comprehensive list of options.

Language played a vital role in the survey process. A Mongolian version of the survey was provided to participants, enhancing accessibility. The survey included comprehensive explanations and incorporated visual aids, such as sample pictures and videos with Mongolian subtitles, to ensure better understanding of the questionnaire. These visual aids provided context; for instance, the promotion of eco-friendly products by IKEA was used to convey an understanding of environmental advertising. To enhance participant engagement, a feedback section was included in the questionnaire. This section allowed participants to express their opinions, providing valuable insights. As an incentive, two participants were randomly selected to receive a $20 gift card from a sustainable green food restaurant, and modest donations were made to a rescue team as a gesture of gratitude for their participation in the survey.

3.2 Questionnaire Arrangement

The questionnaire was systematically arranged into three distinct sub-sections, containing a total of 36 carefully crafted questions. The first section focused on gathering essential demographic information from participants, including gender, age, student or alumni status, education level, and income. Section two, comprising questions 1 to 30, was dedicated to examining the five independent variables and one dependent variable central to our research objectives. This survey aimed to explore consumer attitudes towards eco-friendly products and their impact on environmental consciousness and purchasing decisions. The questionnaire consisted of statements, each followed by the source of the research or author. Participants were requested to indicate their level of agreement with each statement on a scale from 1 (strongly disagree) to 5 (strongly agree).

Green Product Items: Green products benefit both the environment and human health (Govender & Govender, 2016). My awareness of my obligation to the environment motivates me to purchase eco-friendly products (Ghauri, et al. 2010). Green products are simple to reuse, recycle, and deconstruct (Chang & Fong, 2010). Buying environmentally friendly products can help solve environmental issues (Chan & Lau, 2002). Green products use the fewest resources and energies (Chang & Fong, 2010).

Green Label Items: I make sure a product has an organic label before buying it (D’Souza, 2004). It’s vital to me that my purchases don’t damage the environment (Mkik et al., 2017). When advertising directly impacts me, I become more environmentally conscious (Mkik et al., 2017). Green advertising is successful in influencing customer behavior (Mkik et al., 2017). Environmental protection is a concern of mine (Mkik et al., 2017).


The final section provided respondents with an opportunity to furnish their contact information and offer comments or clarifications regarding any ambiguous questions. To ensure robust and meaningful data, the questionnaire incorporated statements that demanded participants to assess their responses using a meticulously calibrated 5-point Likert scale. The scale ranged from 1 (strongly disagree) to 5 (strongly agree).

3.3 Sampling Design and Pre-Test

Sampling design is a cornerstone of our research, meticulously crafted to ensure that our target audience, encompassing all Mongolian citizens above the age of 18 who are general consumers, was effectively and efficiently engaged. In this regard, we selected the convenience non-probability sampling technique. The choice of this technique was deliberate, guided by the imperative of managing a manageable sample from the expansive general Mongolian population.

Data analysis is a pivotal stage in our research endeavor, marked by the skillful fusion of analytical and logical reasoning in evaluating the collected data. In this study, we executed data analysis using the latest Statistical Package for Social Sciences (SPSS) software, specifically version 25. A comprehensive array of statistical tests, including ANOVA, t-tests, correlations, and factor analysis, were methodically applied to assess data reliability and establish the intricate relationship between green marketing activities and consumer attitudes.

Ensuring clarity and precision, a meticulous pre-test was executed following established protocols and best practices to ascertain the clarity and comprehensibility of the questionnaire. As advocated by Visser, et al. (2000), pre-testing questionnaires carry the potential to deliver several advantages, including the reduction of measurement errors and the mitigation of non-response risks. The pre-test, conducted from April 9th to April 11th, 2022, enlisted the participation of
30 individuals, predominantly aged over 18, who adhere to eco-friendly lifestyles. The valuable feedback gleaned from this pre-test underscored the questionnaire's clarity for eco-conscious individuals while highlighting areas of ambiguity for those less versed in eco-friendly practices. In response, we took proactive measures to enhance comprehension by posting an informative article on green marketing and green consumerism on the website "www.mongolovegan.com." This article also featured a direct link to the questionnaire, thereby facilitating simultaneous learning and participation.

4. Results and Analysis

4.1 Demographic Characteristics and Factor Analysis

The respondents included Mongolian consumers within Ulaanbaatar, the capital city, other cities or rural areas, and even other countries. And a total of 323 respondents participated. Every single question was required to answer, and not able to skip any of them; thus, each respondent completed all sections. Summary of participants’ demographic characteristics as shown in Table 1.

<table>
<thead>
<tr>
<th>Items</th>
<th>Category</th>
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<th>Items</th>
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<tbody>
<tr>
<td>Gender</td>
<td>Male</td>
<td>48</td>
<td>14.86</td>
<td>Age</td>
<td>18-24</td>
<td>23</td>
<td>7.12</td>
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<td></td>
<td>Female</td>
<td>275</td>
<td>85.14</td>
<td>25-34</td>
<td>26.63</td>
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<td>35-44</td>
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<td>45-54</td>
<td>26.01</td>
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<td>Living area</td>
<td>UB city</td>
<td>264</td>
<td>81.73</td>
<td>55+</td>
<td>11.76</td>
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<td></td>
<td>Out of UB city</td>
<td>41</td>
<td>12.69</td>
<td>Employed</td>
<td>71.21</td>
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<td></td>
<td>Abroad</td>
<td>18</td>
<td>5.57</td>
<td>Unemployed</td>
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<td>Educational level</td>
<td>Junior high and</td>
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<td>Status</td>
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<td></td>
<td>High school</td>
<td>28</td>
<td>8.67</td>
<td>Retired</td>
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<td></td>
<td>2-year college</td>
<td>6</td>
<td>1.86</td>
<td>Up to 250 USD</td>
<td>30.69</td>
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<tr>
<td></td>
<td>Bachelor</td>
<td>164</td>
<td>5.77</td>
<td>251- 400 USD</td>
<td>21.05</td>
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<td>Master</td>
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<td>34.06</td>
<td>401- 500 USD</td>
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<td>Ph.D.</td>
<td>14</td>
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<td>501- 650 USD</td>
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<td>650 USD+</td>
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In our analysis, we obtained a Kaiser-Meyer-Olkin (KMO) value of 0.932, an approximate Chi-Square value of 5981.148, 435 degrees of freedom (df), and a significance level less than .000. These results indicate a significant degree of overlap in information and a strong partial correlation among the variables. Consequently, it is reasonable to proceed with factor analysis. An essential step in this process is Bartlett's test, which examines the null hypothesis that the known correlation matrix matches the identity matrix. Rejection of this null hypothesis suggests that the matrix is factorable. In our study, Bartlett's test statistic is both
extensive and highly significant, with a p-value near 0, in line with our expectations (Pett, Lackey & Sullivan, 2003). The Kaiser rule guides us to eliminate components with eigenvalues less than 1.0, signifying that they capture an amount of information typically covered by a single item. Principal Component Analysis (PCA) applies the Kaiser Criterion after extracting the total variance (Pett et al., 2003). For a concept to be considered valid, the component analysis must explain at least 60 percent of the variance (Hair, Black, Babin, Anderson, 2010). The analysis indicates the percentages of various criteria where six components need to satisfy the requirement of explaining 60% or more of the total variance. For instance, applying the Kaiser Criterion explains 65.320% of the total variance with six variables in our study. In determining how many significant components or factors to consider, a principal component or factor analysis utilizes a scree plot. The first component contains the largest eigenvalue, measuring the highest variance value and resulting in a graph with an "elbow" shape. In a scree plot, the eigenvalues are always presented in a descending order, from highest to lowest. The screen test suggests that factors or components to the left of the "elbow" in the graph, where eigenvalues appear to level out, should be retained as significant (Dmitrienko, Chuang-Stein & D'Agostino, 2007).

Table 2: Correlation between each variable

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<th>EA</th>
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<td>.601**</td>
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<td>.554**</td>
<td>.626**</td>
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<tr>
<td>Sig. (2-tailed)</td>
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<tr>
<td>Pearson Correlation</td>
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<td>.625**</td>
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<tr>
<td>Sig. (2-tailed)</td>
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</tr>
</tbody>
</table>

**. Correlation is significant at the 0.01 level (2-tailed).

Table 2 shows the component matrix illustrates the Pearson correlations between the items and the components, typically grouping items with high loadings on the same factors based on their loading coefficients. A higher factor loading signifies a more robust connection between the items and the components. As per the rotated component matrix, our initial component is characterized by the following items: Q19 - Green labels significantly influence my purchasing decisions, Q20 - I'm
willing to invest extra in products bearing green labels, Q18 - Relatively, I have a preference for purchasing products featuring green labeling, Q17 - I consider green-labeled items to be particularly attractive, Q21 - Advertisements promoting green products effectively enhance public awareness of environmental issues, Q23 - Advertising for eco-friendly products encourages me to make eco-conscious purchases to safeguard the environment, and Q30 - I am ready to allocate extra funds for eco-friendly products. Further details regarding the component determinations are available in Table 3.

<table>
<thead>
<tr>
<th>Component</th>
<th>1</th>
<th>2</th>
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<tr>
<td>Q22</td>
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<tr>
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<tr>
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<td>Q11</td>
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<td></td>
<td></td>
<td></td>
<td>.729</td>
</tr>
<tr>
<td>Q4</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>.483</td>
</tr>
</tbody>
</table>

Extraction Method: Principal Component Analysis.
Rotation Method: Varimax with Kaiser Normalization.
The eigenvalue of a factor quantifies the extent to which it accounts for variance in the observable variables. Any component with an eigenvalue $\geq 1$ elucidates more variability compared to a single observed variable. Based on the table 4, the summary of reliability and validity information, the factors within our study demonstrate varying levels of reliability and validity. Environmental Awareness: This factor boasts the highest eigenvalue (4.580), elucidating a significant portion of the variance (42.109%). Although its reliability, as gauged by Cronbach's Alpha, is deemed acceptable at 0.75, it underscores the reasonably consistent nature of the items used to gauge environmental awareness. Green Products: Demonstrating a moderately high eigenvalue (3.324) and accounting for a noteworthy percentage of the variance (6.647%), this factor exhibits relatively robust reliability, with a Cronbach's Alpha of 0.82. This underscores the dependable measurement of the concept of green products. Green Packages: With an eigenvalue of 3.318, this factor explicates a substantial portion of the variance (5.342%). Furthermore, its reliability, denoted by Cronbach's Alpha (0.78), is commendably robust. Green Labels: The eigenvalue for this factor stands at 3.274, elucidating 4.336% of the variance. Notably, this factor presents high reliability, as evidenced by a Cronbach's Alpha of 0.87, indicative of the substantial robustness of the measurement items. Green Advertisements: Exhibiting an eigenvalue of 2.785, this factor unravels 3.604% of the variance. Moreover, it showcases a high level of reliability, signified by its Cronbach's Alpha of 0.88. Consumer Attitude: This factor yields an eigenvalue of 2.315, elucidating 3.281% of the variance. With a Cronbach's Alpha of 0.79, its reliability is considered acceptable. In summary, these findings underscore the variation in the reliability and validity of the factors under examination. Notably, "Environmental Awareness" emerges as the most reliable and influential factor in elucidating the variance within our study, closely followed by "Green Products" and "Green Packages." These results instill confidence in the precision of our construct measurements and affirm the validity of our research findings. Table 4 shows the summary of reliability and validity.
### Table 4: Summary of reliability and validity

<table>
<thead>
<tr>
<th>Variables and their items</th>
<th>Cumulative explained variance: 65.320%</th>
<th>Factor loading</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Structure 1: Eigenvalue = 4.580; Variance = 42.109%, Alpha = 0.75</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Environmental Awareness</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>The deterioration of the environment's quality worries me.</td>
<td></td>
<td>.730</td>
</tr>
<tr>
<td>It's vital to me that my purchases don't damage the environment.</td>
<td></td>
<td>.535</td>
</tr>
<tr>
<td>My eco-friendly purchase will lessen environmental issues</td>
<td></td>
<td>.523</td>
</tr>
<tr>
<td>Consumers need to be concerned about how they buy affect the environment.</td>
<td></td>
<td>.483</td>
</tr>
<tr>
<td>Environmental protection is a concern of mine.</td>
<td></td>
<td>.742</td>
</tr>
<tr>
<td><strong>Structure 2: Eigenvalue = 3.324; Variance = 6.647%, Alpha = 0.82</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Green products</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Green products benefit both the environment and human health</td>
<td></td>
<td>.725</td>
</tr>
<tr>
<td>My awareness of my obligation to the environment motivates me to purchase eco-friendly products.</td>
<td></td>
<td>.493</td>
</tr>
<tr>
<td>Green products are simple to reuse, recycle, and deconstruct.</td>
<td></td>
<td>.633</td>
</tr>
<tr>
<td>Buying environmentally friendly products can help solve environmental issues.</td>
<td></td>
<td>.742</td>
</tr>
<tr>
<td>Green products use the fewest resources and energies.</td>
<td></td>
<td>.704</td>
</tr>
<tr>
<td><strong>Structure 3: Eigenvalue = 3.318; Variance = 5.342%, Alpha = 0.78</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Green packages</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I like the way the packaging and design of the eco-friendly goods.</td>
<td></td>
<td>.729</td>
</tr>
<tr>
<td>I purchase the products because of the less packaging</td>
<td></td>
<td>.574</td>
</tr>
<tr>
<td>Packaging enables me to identify a green product.</td>
<td></td>
<td>.584</td>
</tr>
<tr>
<td>I think environmentally friendly packaging is more attractive than conventional packaging.</td>
<td></td>
<td>.538</td>
</tr>
<tr>
<td>I like purchasing goods packaged in environmentally friendly materials.</td>
<td></td>
<td>.676</td>
</tr>
<tr>
<td><strong>Structure 4: Eigenvalue = 3.274; Variance = 4.336%, Alpha = 0.87</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Green labels</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I make sure a product has an organic label before buying it.</td>
<td></td>
<td>.568</td>
</tr>
<tr>
<td>I find green-labeled things to be more alluring.</td>
<td></td>
<td>.655</td>
</tr>
<tr>
<td>Comparatively, I like to purchase goods that have green labeling.</td>
<td></td>
<td>.689</td>
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<tr>
<td>Green labels sway my decision to buy the goods</td>
<td></td>
<td>.779</td>
</tr>
<tr>
<td>I'm willing to spend extra money on products with green labelling.</td>
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<td>.717</td>
</tr>
<tr>
<td><strong>Structure 5: Eigenvalue = 2.785; Variance = 3.604%, Alpha = 0.88</strong></td>
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<td></td>
</tr>
<tr>
<td><strong>Green Advertisements</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Green product advertisements are successful in raising public awareness of environmental issues.</td>
<td></td>
<td>.638</td>
</tr>
<tr>
<td>Green advertising makes me think about how my purchases could affect the environment.</td>
<td></td>
<td>.533</td>
</tr>
<tr>
<td>Advertising for eco-friendly goods encourage me to buy eco-friendly products in order to protect the environment</td>
<td></td>
<td>.554</td>
</tr>
<tr>
<td>When advertising directly impacts me, I become more environmentally conscious</td>
<td></td>
<td>.567</td>
</tr>
<tr>
<td>Green advertising is successful in influencing customer behavior.</td>
<td></td>
<td>.484</td>
</tr>
<tr>
<td><strong>Structure 6: Eigenvalue = 2.315; Variance = 3.281%, Alpha = 0.79</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Consumer Attitude</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I would like to use green products.</td>
<td></td>
<td>.761</td>
</tr>
<tr>
<td>I enjoy the concept of using green products.</td>
<td></td>
<td>.749</td>
</tr>
<tr>
<td>It is in my interest to purchase green versions of products.</td>
<td></td>
<td>.679</td>
</tr>
<tr>
<td>I feel obligated to purchase eco-friendly goods wherever I can</td>
<td></td>
<td>.488</td>
</tr>
<tr>
<td>I am prepared to spend extra on eco-friendly products.</td>
<td></td>
<td>.533</td>
</tr>
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</table>
4.2 Hypotheses testing and analysis of results

Table 5 presents the results of One-way ANOVA tests for various factors and their correlation with consumer attitude. Notably, all p-values in the table are 0.00, signifying a robust statistical relationship between the independent variables and consumer attitude. This strong correlation substantiates our hypotheses. H1: Environmental awareness is significantly related to consumer attitude. This outcome reinforces existing research on environmental awareness, emphasizing its substantial and positive connection with consumer attitudes. H2: Green products are significantly related to consumer attitude. The statistical significance at a p-value of 0.00 highlights a robust relationship between green products and consumer attitudes, supporting the hypothesis. H3: Green packages are significantly related to consumer attitude. A p-value of 0.00 underscores the considerable link between green packages and consumer attitudes, thereby confirming the hypothesis. H4: Green labels are significantly related to consumer attitude. With a p-value of 0.00, this result accentuates the strong association between green labels and consumer attitudes, affirming the hypothesis. H5: Green advertisements are significantly related to consumer attitude. Again, a p-value of 0.00 indicates a powerful connection between green advertisements and consumer attitudes, lending support to the hypothesis. In conclusion, the findings in Table 5 underscore a consistent and robust relationship between environmental awareness, green products, green packages, green labels, green advertisements, and consumer attitudes. These results significantly contribute to the literature on environmental awareness, further emphasizing the positive correlations and interactions between consumer attitudes and these crucial environmental factors.

Table 5: Empirical results of hypothesis testing

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<thead>
<tr>
<th></th>
<th>Sum of Squares</th>
<th>df</th>
<th>Mean Square</th>
<th>F</th>
<th>Sig.</th>
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<td>Between Groups</td>
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<td></td>
<td>Within Groups</td>
<td>35.589</td>
<td>310</td>
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<td></td>
<td>Total</td>
<td>64.232</td>
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<tr>
<td><strong>GPro</strong></td>
<td>Between Groups</td>
<td>43.652</td>
<td>12</td>
<td>3.638</td>
<td>23.397</td>
</tr>
<tr>
<td></td>
<td>Within Groups</td>
<td>48.198</td>
<td>310</td>
<td>.155</td>
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</tr>
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<td></td>
<td>Total</td>
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<td><strong>GLab</strong></td>
<td>Between Groups</td>
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<td>12</td>
<td>7.164</td>
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<td></td>
<td>Within Groups</td>
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<td></td>
<td>Total</td>
<td>166.249</td>
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<tr>
<td><strong>GAd</strong></td>
<td>Between Groups</td>
<td>78.276</td>
<td>12</td>
<td>6.523</td>
<td>31.468</td>
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<tr>
<td></td>
<td>Within Groups</td>
<td>64.261</td>
<td>310</td>
<td>.207</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Total</td>
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<tr>
<td><strong>GPack</strong></td>
<td>Between Groups</td>
<td>44.167</td>
<td>12</td>
<td>3.681</td>
<td>17.247</td>
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<tr>
<td></td>
<td>Within Groups</td>
<td>66.155</td>
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<tr>
<td></td>
<td>Total</td>
<td>110.322</td>
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</table>
5. Discussion, Implications, Suggestions and Limitations

5.1 Discussion

The results derived from the One-way ANOVA tests presented in Table 5 furnish compelling evidence of a consistent and robust relationship between various pivotal environmental factors and consumer attitudes. Notably, the p-values for all variables in the analysis register as 0.00, unequivocally underscoring the statistical significance of these relationships and providing unwavering support for the study's hypothesized relationships. The initial hypothesis, postulating a significant association between environmental awareness and consumer attitude, is resoundingly affirmed by our findings. This outcome dovetails seamlessly with prior research and accentuates the substantive and affirmative connection between individuals' environmental consciousness and their consumer behaviors.

Similarly, Hypotheses 2 through 5 elicit substantial confirmation. Each of these hypotheses - pertaining to green products, green packaging, green labels, and green advertising - exhibits noteworthy and statistically significant relationships with consumer attitudes. The consistently low p-values across these variables underscore the utmost importance of considering eco-friendly product offerings, environmentally conscious packaging, credible eco-labeling, and sustainability-focused advertising in shaping and molding consumer attitudes.

Our findings transcend the mere validation of specific hypotheses; they engender significant contributions to the broader research landscape focused on environmental awareness and its profound implications for consumer behavior. They emphasize the constructive correlations and synergies inherent to the complex interplay between consumer attitudes and these pivotal environmental considerations. The majority of survey respondents express a firm belief in the dual benefits of green products, recognizing their positive impact on both the environment and human health. Furthermore, these respondents’ express consensus in the belief that green products are optimized for minimal resource and energy usage. This preference for eco-friendly packaging is driven by the respondents' astute understanding that judicious packaging choices signify a product's eco-friendliness.

Survey results prominently underscore the respondents' inclination to favor products bearing green labels, often demonstrating a willingness to pay a premium for such labeled products. Additionally, the survey data reveals a prevailing sentiment among respondents: green advertising possesses an influential capacity to modify consumer behavior and encourage the purchase of green products, thereby contributing to environmental protection endeavors. The typified respondents exhibit genuine concern for environmental preservation and firmly believe that their purchase choices play a pivotal role in mitigating ecological challenges.
5.2 Implications

The findings of this study underscore the significant impact of sustainability-related factors on consumer attitudes. In light of these results, it is evident that businesses and policymakers should strategically integrate sustainability principles into their operations to align with the preferences and values of environmentally conscious consumers. From a sustainability perspective, we propose the following strategic imperatives:

Champion Eco-Friendly Product Development: Given the robust correlation between environmentally responsible products and favorable consumer attitudes, enterprises should accord high priority to the development and promotion of sustainable and eco-friendly products. This includes comprehensive considerations of the product life cycle, environmental footprint, and the use of eco-sensitive materials.

Invest in Sustainable Packaging Solutions: The study underscores the pivotal role of sustainable packaging in shaping consumer attitudes. Organizations should commit to investments in sustainable packaging solutions, encompassing biodegradable and recyclable materials. Sustainable packaging not only appeals to eco-conscious consumers but also aids in mitigating environmental waste.

Embrace Transparent Eco-Labeling Practices: Clear and credible green labels have been empirically demonstrated to exert a significant influence on consumer choices. As a result, companies should adopt transparent eco-labeling practices that empower consumers with accurate information regarding the environmental attributes of products. Trustworthy labeling facilitates informed and sustainable consumer decisions.

Infuse Sustainability in Advertising Strategies: The study accentuates the potency of eco-focused advertising in driving changes in consumer behavior. Companies should integrate sustainability messaging and imagery into their advertising campaigns, underscoring their commitment to environmental values. Such endeavors resonate deeply with eco-conscious consumers and stimulate the purchase of environmentally responsible products.

Localize Sustainability Initiatives: Acknowledging the pronounced regional variations in income levels and the perception of sustainability, global companies should customize their sustainability initiatives to align with the unique dynamics of each local context. What constitutes high or medium income can diverge significantly, necessitating a region-specific approach.

Support Indigenous Sustainability Research: In light of the paucity of research findings within the Mongolian context, there exists a valuable opportunity for both corporate entities and researchers to facilitate and engage in indigenous sustainability-related studies. These local studies can assist in the tailoring of strategies to specific regions and contribute to an enriched understanding of sustainability preferences and behaviors in diverse cultural and economic contexts. In summation, these implications underscore the critical need to imbue business strategies with sustainability principles, with a particular emphasis on product
development, packaging, labeling, and advertising practices that resonate with consumer values and preferences. By doing so, companies can not only attract eco-conscious consumers but also make substantial contributions to environmental preservation efforts while remaining cognizant of regional variations in income levels and perceptions of sustainability.

5.3 Suggestions

In view of the compelling sustainability insights yielded by this study, we fervently recommend that businesses and policymakers acknowledge the momentous influence of environmental factors on fostering sustainable consumer attitudes. Our research unequivocally validates the substantial nexus between sustainability consciousness, eco-friendly products, sustainable packaging, credible eco-labeling, and sustainability-focused advertising, and their impact on cultivating consumer attitudes conducive to sustainable living.

Guided by these enlightening findings, we advocate for the following sustainability-driven actions:

- Elevate the Significance of Sustainability Awareness: Spearhead initiatives that nurture and disseminate sustainability consciousness among consumers. Harness educational campaigns and information dissemination to underscore the paramount relevance of sustainability in the context of environmental stewardship.

- Champion Sustainable Products: Invest in the creation and promotion of products designed with environmental sustainability at their core. Emphasize their positive ecological impact to resonate with the growing segment of conscientious consumers deeply committed to sustainable living.

- Embrace Sustainable Packaging Solutions: Pledge to adopt sustainable packaging materials, such as biodegradable or recyclable options. Recognize that consumers manifest a strong inclination for products presented in eco-conscious packaging, aligning with their sustainability aspirations.

- Transparent Sustainability Labeling: Employ transparent and credible sustainability labels on your products. These labels not only affirm the eco-friendliness of your offerings but also instill trust, as they symbolize your commitment to sustainable practices.

- Infuse Eco-Conscious Messaging in Advertising: Infuse your advertising campaigns with eco-conscious messaging and imagery. Highlight your unwavering dedication to sustainable values to connect with consumers who ardently embrace sustainable lifestyles.

In closing, these recommendations emanate from a rich tapestry of evidence, reaffirming the profound synergy between sustainability consciousness, sustainable practices, and the cultivation of attitudes congruent with sustainable living. By aligning your organizational strategies with these sustainability principles, you are well-positioned to attract and retain a clientele passionately devoted to sustainable ideals. Moreover, your concerted efforts will significantly contribute to the global sustainability movement.
5.4 Limitations of the Study

The limitations of this study are as follows: The research investigates consumer attitudes in Mongolian cases, yet the study itself was conducted in a different country. Consequently, the survey was limited to an online format, potentially impacting the representativeness of the sample. Achieving a balanced gender distribution among respondents would have been ideal, but due to the online survey method, there was limited control over the demographic composition of the sample. Some respondents live in countries other than Mongolia, which may have posed challenges when choosing their income levels as the options were expressed in Mongolian currencies, possibly leading to inaccurate or imprecise income categorizations. The interpretation of income levels can vary widely between countries, and while 651 USD may be considered a high income in Mongolia due to its lower cost of living, it may be viewed as typical or medium income in other countries. This raises the issue of accurately assessing the income of respondents living abroad.

The study does not incorporate findings from Mongolian cases, as there is no readily accessible research conducted in Mongolia on this topic. This absence of local data limits the study's ability to contextualize its findings within the Mongolian context. The researcher’s social network predominantly consists of individuals who follow a vegan diet, a group often associated with heightened environmental awareness. This potential bias in the researcher's social circle could have influenced the survey results, introducing an element of self-selection bias. Access to famous papers and dissertations, which could have enriched the literature review and contextualized the study, was restricted. This limitation may have impacted the comprehensiveness of the study's literature review and background research. Acknowledging these limitations is essential for a comprehensive understanding of the study's scope and findings. Researchers should consider these constraints when interpreting and generalizing the results and explore potential solutions to address them in future studies.
References


