



Article

The Role of Social Media Marketing in Green Product Repurchase Intention

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Abstract: This study explores the impact of social media marketing activities and ESG green brand involvement on the repurchase intention of green products among members of Taiwan's green product social media groups. Using the Theory of Reasoned Action, the study employs a quantitative approach, collecting data through an online survey from 438 valid responses. Structural equation modeling (SEM) was applied to analyze the relationships between social media marketing activities (independent variable), green values, environmental concerns, brand image, and brand involvement (mediating variables), and repurchase intention (dependent variable). The findings reveal that social media marketing activities significantly enhance green values, environmental concerns, and brand image, which positively influence brand involvement. Brand involvement significantly mediates the relationship between green values, environmental concerns, brand image, and repurchase intention. This confirms that effective social media marketing can strengthen consumer loyalty and repurchase intentions for green products. The study suggests that companies should integrate green values, environmental concerns, and brand image into their social media marketing strategies to enhance consumer engagement and repurchase intentions. Leveraging social media influencers and interactive content can effectively promote green products and foster a culture of sustainability, creating a winwin situation for companies, consumers, and the environment. This research contributes to the literature by highlighting the mediating roles of green values, environmental concerns, and brand involvement in social media marketing for green products. It provides practical insights for companies aiming to enhance green product repurchase intentions through targeted social media strategies and ESG initiatives, illustrating the strategic use of social media marketing to boost consumer loyalty and sustainable consumption.

Keywords: social media marketing activities; green values; environmental concerns; brand image; brand involvement; repurchase intention



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1. Introduction

The effects of global warming include the melting of polar ice, sea level rise inundating low-lying coastal areas, and global climate changes that result in heavy rains, droughts, and even desertification [1,2]. Global warming poses a threat to ecosystems, food chains, water resources, human activities, and public safety [3,4]. The primary cause of global warming is the emission of greenhouse gases, particularly carbon dioxide, which is directly or indirectly emitted by human activities [5]. As the world's population reaches 8 billion, the climate and environmental quality are suffering a heavy price. Green products have a minimal impact on the environment throughout their life cycle, from production to disposal. They are typically made using sustainable materials and processes, designed to be energy-efficient, and often include features that reduce pollution. Green products aim to conserve resources, reduce the carbon footprint, and promote environmental sustainability [6,7]. To promote the production and sale of green products, reduce corporate carbon emissions, minimize the environmental impact of production lines, and enhance energy efficiency, the

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United Nations Environment Programme (UNEP) released the report "Who Cares Wins". The report stresses the importance of business operators and investors balancing profit with their responsibilities. It clearly states that companies should prioritize ESG principles: environmental protection, social responsibility, and corporate governance [8]. Within these principles, environmental protection includes the standards to be considered in the design and manufacture of green products.

The United Nations Environment Programme (UNEP) and various environmental NGOs worldwide have advocated for and promoted the production and marketing of green products [9,10]. Emphasis on ESG (environmental, social, and governance) principles in sustainable corporate development, rising consumer awareness, and governmental environmental regulations are driving companies to shift towards producing green goods. However, the design and manufacturing of green goods often incur higher costs, leading to higher prices and reduced product competitiveness. To prevent companies from hesitating to switch to green products production due to higher costs, a direct solution is needed to enhance consumer purchase behavior regarding green products. This, in turn, boosts companies' willingness to produce green products, creating a win-win situation for businesses, consumers, and environmental protection.

The global environmental crisis, driven by global warming and its catastrophic effects, necessitates the transition to green products. Despite various initiatives, consumer repurchase rates for green products remain low [11,12]. This study aims to examine the impact of social media marketing and ESG green branding on the repurchase intention of green products in Taiwan. The gap in current research lies in understanding how social media marketing activities can influence consumers' green values, environmental concerns, and brand engagement, ultimately enhancing their repurchase intentions [11,13]. This study addresses this gap by targeting members of social media green product groups in Taiwan and analyzing the mediating effects of green values, environmental concerns, brand image, and brand involvement [14,15].

The Theory of Reasoned Action (TRA), proposed by American psychologists Fishbein and Ajzen, suggests that an individual's specific behavior is influenced by their behavioral intention [16]. This study aims to enhance the intention to repurchase green goods according to TRA. For instance, Malik and Hussain empirically confirmed that social media marketing activity (SMMA) positively and significantly affects consumers' purchase intentions [6]. Similarly, Sherwani et al. [7] demonstrated that millennials' green values influence their intention to purchase green products. They also found that increasing environmental concerns among students at universities leads to a more favorable attitude towards green products, thereby increasing their purchase demand for such products. Furthermore, Aisyah and Shihab [17] noted that brand image has a moderating effect on the repurchase intention of green brand positioning goods and green brand attitude. Additionally, McClure and Seock [18] suggested that the level of brand involvement of customers affects their brand engagement, which in turn influences their purchase intention.

The mentioned studies show that social media marketing activities, green values, environmental concerns, brand image, and brand involvement are significantly associated with repurchase intention or purchase intention. Therefore, this study targets members of social media green product groups in Taiwan, with social media marketing activities as the independent variable and green values, environmental concerns, brand image, and brand involvement as mediating variables, to investigate their effects on the repurchase intention of green goods. Research data will be collected through questionnaires, and the results will be analyzed using statistical methods to test the validity of the research hypotheses. Based on the study's findings, we will provide practical suggestions to enterprises, relevant organizations, and the government for promoting green products in Taiwan as well as references for subsequent related studies. Despite their high initial cost, Tesla has successfully used social media marketing to create a strong brand image and engage consumers [19,20]. Their strategic use of platforms like Twitter, where CEO Elon Musk frequently interacts with followers, has significantly boosted consumer interest and

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repurchase intention [21,22]. This case demonstrates how effective social media marketing can enhance brand engagement and consumer loyalty, leading to increased repurchase rates of green products [23]. By understanding these dynamics in the context of green products, this study aims to provide valuable insights for companies looking to promote sustainable consumption through social media marketing [24].

Main Contributions:

- 1. Investigates the impact of social media marketing and ESG green branding on the repurchase intention of green products in Taiwan.
- 2. Analyzes the mediating effects of green values, environmental concerns, brand image, and brand involvement on repurchase intention.
- 3. Applies the Theory of Planned Behavior (TPB) to enhance understanding of repurchase intentions.
- 4. Uses real-world examples, such as Tesla's strategic use of social media marketing, to illustrate the potential impact on green product repurchase rates.

2. Literature Review

2.1. Theory of Reasoned Action (TRA)

The Theory of Reasoned Action (TRA), developed by Fishbein and Ajzen in 1975, is a psychological framework designed to predict and understand human behavior by focusing on behavioral intentions. According to TRA, an individual's behavioral intention is determined by two key factors: attitude towards the behavior and subjective norm. Attitude refers to the individual's positive or negative evaluation of performing the behavior, while subjective norm encompasses the perceived social pressure from significant others to engage or not engage in the behavior [25,26]. TRA is particularly valuable in various fields such as health promotion, environmental behavior, and consumer behavior due to its predictive power. By analyzing how attitudes and social norms shape intentions, TRA helps researchers and practitioners design effective interventions to influence behaviors, thus enhancing its practical significance across different domains [27,28].

The Theory of Reasoned Action (TRA) has been widely applied across various research fields, demonstrating its versatility and effectiveness in predicting and influencing human behavior. TRA has been used to understand and promote health-related behaviors, such as disease prevention and health promotion. For instance, a study applied the TRA to investigate children's behavioral intentions regarding climate change adaptation in Vietnam, highlighting the theory's effectiveness in predicting health-related intentions based on attitudes and subjective norms [27]. Environmental behavior research has also benefited from TRA, as seen in a study in Saudi Arabia that explored consumers' intentions to adopt hybrid electric vehicles, finding that attitudes and subjective norms significantly influenced their adoption decisions [28]. Additionally, TRA has been extensively used in consumer behavior research to examine online shopping habits, brand loyalty, and product adoption, showing that consumer attitudes and perceived zsocial influences play a crucial role in shaping purchasing intentions [26].

a. Social Media Marketing Activities

Social media marketing activities encompass various strategies and tactics deployed by brands to engage with consumers on platforms like Facebook, Instagram, Twitter, and others. These activities include content creation, influencer partnerships, interactive campaigns, user-generated content, and targeted advertisements. From the perspective of TRA, the purpose of SMMAs is to shape consumer attitudes and influence their intentions, ultimately guiding their behavior. TRA posits that an individual's intention to perform a behavior is influenced by their attitude towards the behavior and subjective norms [29]. In this context, SMMAs aim to positively impact consumer attitudes towards green products by highlighting their environmental benefits and associating them with positive social norms.

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Social media marketing activities (SMMAs) play a crucial role in shaping consumer attitudes towards green products by providing positive and engaging content that enhances perceptions of the product's value and benefits, leading to favorable attitudes. By leveraging appealing narratives and visual content, SMMAs can make green products more attractive to consumers who might otherwise be indifferent or skeptical. Social media platforms also offer a space where consumers can observe the behavior and opinions of their peers and influencers. When consumers see environmentally conscious behaviors and green product purchases endorsed by influential figures or their social circle, they are more likely to adopt these behaviors themselves, aligning with the TRA concept of subjective norms, where perceived social pressure influences behavioral intentions. The ultimate goal of SMMAs is to convert positive attitudes and favorable subjective norms into behavioral intentions and actual purchasing behavior. By consistently engaging with consumers and reinforcing positive messages about green products, SMMAs can strengthen the intention to repurchase green products, emphasizing the direct link between intention and behavior, which is a key aspect of TRA in predicting actual purchase decisions [30].

A study on customer intentions in China's e-commerce sector analyzed the impact of social media marketing activities (SMMAs) on social identification, satisfaction, and purchase intentions, demonstrating that SMMAs significantly enhance social identification and perceived value, leading to higher customer satisfaction and stronger purchase intentions [12]. Similarly, research focused on airline industry customers concluded that SMMAs positively affect brand equity by enhancing brand awareness, perceived quality, and brand loyalty [31]. Additionally, in the hospitality industry, a study reviewed social media marketing strategies for hotels and travel agencies, finding that effective SMMAs lead to higher customer engagement, resulting in increased brand loyalty and revisit intentions [32]. These studies collectively support the Theory of Reasoned Action (TRA) by illustrating how social media activities shape consumer attitudes and subjective norms, influencing behavioral intentions such as purchase and revisit decisions.

b. Green Values

Green values are key mediating variables in this research. They refer to the attitudes, beliefs, and principles that emphasize the importance of preserving the environment and promoting sustainability, shaping how individuals perceive and interact with products and brands that advocate for environmental consciousness [33]. Examining green values as mediating variables clarifies how deeply held environmental principles influence consumer behavior. According to the Theory of Reasoned Action (TRA), an individual's behavior is directly influenced by their intention to perform the behavior, which in turn is shaped by their attitudes and subjective norms [16]. Green values therefore play a critical role in shaping the attitude component of the TRA model. By mediating the relationship between social media marketing activities and repurchase intention, green values help in understanding how marketing efforts translate into actual consumer actions based on environmental principles [34].

The Theory of Reasoned Action posits that behavior results from the intention formed by attitudes and subjective norms. Green values significantly impact this process by serving as a foundation for the attitudes that consumers form towards green products. When consumers hold strong green values, they are more likely to have positive attitudes towards products and brands that align with their environmental beliefs, thus increasing their intention to repurchase such products [35]. In this study, green values act as a crucial mediator by linking social media marketing activities and ESG green brand involvement to repurchase intention. This alignment ultimately leads to a stronger intention to repurchase, as consumers seek to support brands that reflect their own environmental values [36].

Hu et al. [37] explored ways to enhance consumer repurchase intentions for green products through social media marketing, focusing on green values, environmental concerns, brand image, and involvement. The findings revealed that social media marketing boosts green values and other factors, encouraging green repurchases. Utilizing the Theory of Reasoned Action (TRA), the study examined how attitudes influenced by social media

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marketing translate into repurchase intentions [37]. Similarly, Liu et al. [38] compared the cognitive affect behavior (CAB) model and TRA in predicting everyday green consumption among non-Hispanic White and Hispanic consumers. The results showed that the TRA model, particularly when extended with product knowledge, was superior in explaining green consumption, highlighting TRA's effectiveness in predicting green behavior [38]. The results indicated significant positive effects of brand equity on purchase intention and underscored the moderating role of government subsidies. TRA was employed to explore how green awareness and attitudes influence purchase intentions [39].

Environmental Concerns

Environmental concerns in this study refer to the awareness and apprehension individuals have about the environmental impacts of their behaviors and the broader ecological consequences. This includes worries about pollution, climate change, resource depletion, and loss of biodiversity. Such concerns influence how consumers perceive and interact with products and brands that are positioned as environmentally friendly [40]. The primary purpose of incorporating environmental concerns as mediating variables is to understand how these concerns influence consumer behavior and decision-making processes. According to the Theory of Reasoned Action (TRA), an individual's behavior is directly influenced by their intention to perform the behavior, which is shaped by their attitudes and subjective norms [16]. Environmental concerns play a critical role in forming these attitudes, as they reflect a consumer's ethical and ecological values. By mediating the relationship between social media marketing activities and repurchase intention, environmental concerns help in understanding how marketing efforts can effectively address and leverage these concerns to drive consumer actions [34].

The Theory of Reasoned Action posits that behavior results from the intention formed by attitudes and subjective norms. Environmental concerns significantly impact this process by shaping the attitudes consumers form towards green products. When consumers have high environmental concerns, they are more likely to develop positive attitudes towards products and brands that demonstrate a commitment to environmental sustainability, thereby increasing their intention to repurchase such products [41]. In this study, environmental concerns act as a crucial mediator by linking social media marketing activities and ESG green brand involvement to repurchase intention. Effective social media marketing that highlights a brand's environmental initiatives can resonate with consumers' environmental concerns, enhancing their positive attitudes towards the brand and its products. This alignment ultimately leads to a stronger intention to repurchase, as consumers seek to support brands that reflect their own environmental values [42]. By examining the role of environmental concerns through the lens of TRA, the study sheds light on the psychological mechanisms driving green consumer behavior. This understanding is essential for marketers aiming to design effective campaigns that not only promote products but also align with the deeper environmental values of their target audience.

Mi et al. [43] investigated corporate social responsibility (CSR) behavioral intentions among businesses, emphasizing the role of environmental concerns and expected CSR benefits and efforts. The findings revealed several determinants that affect behavioral intentions towards CSR practices, including environmental concerns, which were critical in shaping corporate actions. The study applied the Theory of Reasoned Action (TRA) to discuss behavioral models for CSR practices. Similarly, Wang et al. [44] explored consumers' intentions to engage in sustainable tourism practices, focusing on the impact of environmental concerns and perceived behavioral control. The study found that environmental concerns significantly influenced sustainable tourism intentions, with perceived behavioral control acting as a moderator. This research extended TRA by incorporating perceived behavioral control to better understand environmental behavior. Kim and Lee [45] examined the influence of environmental concerns on consumers' intentions to engage in green purchasing behaviors in South Korea. The results indicated that higher environmental concerns led to stronger intentions to purchase green products, highlighting the importance of aligning marketing strategies with environmental values. TRA was employed to analyze

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how attitudes and subjective norms influenced green purchasing behaviors. These studies collectively underscore the critical role of environmental concerns in shaping sustainable behaviors and the applicability of TRA in understanding these dynamics [43–45].

d. Brand Image

Brand image refers to the perceptions and associations that consumers hold about a brand, formed through direct and indirect experiences with the brand [46]. It encompasses various attributes such as quality, reliability, and sustainability. In the context of green products, a positive brand image is associated with the brand's commitment to environmental responsibility and sustainable practices [47]. This study examines brand image as a mediating variable to understand how consumers' perceptions of a brand, shaped by social media marketing and ESG initiatives, influence their intention to repurchase green products. Social media marketing activities play a significant role in shaping and enhancing brand image by promoting the brand's green values and sustainable practices. Similarly, a brand's involvement in ESG (environmental, social, and governance) practices reinforces its commitment to sustainability, thereby enhancing its brand image [48]. A strong brand image built on credible social media marketing and authentic ESG practices fosters consumer trust, which is essential for repurchase intention [49]. According to the Theory of Reasoned Action (TRA), attitudes significantly influence behavioral intentions, and a positive brand image enhances consumers' attitudes towards the brand, thereby increasing their likelihood of repurchasing the brand's products [16]. Additionally, brand image enhances the perceived value of the product, making consumers more likely to repurchase green products from brands that they perceive as socially and environmentally responsible [50].

Research on customers' brand-switching behavior within the mobile phone industry revealed that brand image plays a significant role in affecting consumers' brand-switching behavior, with a positive brand image reducing the likelihood of switching and a negative brand image increasing it. The Theory of Reasoned Action (TRA) was applied to understand how attitudes and subjective norms influence this behavior [51]. A study on the influence of peers on Instagram on US consumers' purchase intentions indicated that a positive brand image, reinforced by peer influence and social proof, significantly increased purchase intentions. This study utilized the TRA framework to analyze how attitudes and subjective norms shaped by peer interactions affect purchasing decisions [52]. Factors influencing consumers' purchase intentions towards life insurance in Bangladesh emphasized the importance of brand image. The results demonstrated that a strong and positive brand image significantly enhances purchase intentions. The TRA was again used to show how attitudes and subjective norms towards the brand influence these intentions [53].

e. Brand Involvement

Brand involvement refers to the level of personal relevance and interest that consumers have in a brand, reflecting the degree to which a consumer is willing to engage with and think about a brand's products and marketing efforts [54]. High brand involvement indicates that consumers are more likely to process information about the brand deeply and integrate it into their attitudes and decision-making processes. This study examines brand involvement as a mediating variable aims to understand how consumers' engagement with a brand, influenced by social media marketing and ESG initiatives, affects their intention to repurchase green products. Social media marketing activities can enhance brand involvement by creating engaging and interactive content that resonates with consumers' values and interests. Similarly, a brand's ESG (Environmental, Social, and Governance) practices can increase brand involvement by aligning with consumers' environmental concerns and ethical values [55].

Some studies indicate that brand involvement plays a significant role in mediating the relationship between social media marketing, ESG involvement, and repurchase intention. According to the Theory of Reasoned Action (TRA), attitudes significantly influence behavioral intentions, and high brand involvement strengthens the positive attitudes formed

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through social media marketing and ESG practices, increasing the likelihood of repurchasing green products [30]. Moreover, brand involvement enhances the perceived value of the brand's products, making consumers more likely to perceive the brand as unique and superior, particularly in terms of its commitment to sustainability, thereby increasing their repurchase intention [56].

Thomas et al. [57] aimed to understand consumers' attitudes toward a brand and their purchase intentions within the context of a cause-related marketing campaign for a pharmacy product. The results indicated that high brand involvement enhances consumers' positive attitudes and purchase intentions, showing that consumers with higher involvement in a brand are more likely to respond positively to cause-related marketing campaigns. The Theory of Reasoned Action (TRA) was used to explain how attitudes and subjective norms influence these behaviors. Similarly, a study by Walsh et al. [58] explored the factors driving consumers' intention to buy manufacturer brands, focusing on perceived quality, brand involvement, and attitudes toward private-label brands. Their findings revealed that high brand involvement enhances purchase intentions for manufacturer brands, with the TRA framework demonstrating how perceived product quality, brand involvement, and subjective norms interact to influence buying intentions. Brodowsky et al. [59] examined how brand and country influences affect purchase intentions, using the TRA to understand these dynamics. This research showed that high brand involvement positively affects purchase intentions, as consumers who are more involved with a brand are influenced by their attitudes and subjective norms toward the brand's country of origin. The TRA framework provided a basis for understanding these influences [57–59].

2.2. Repurchase Intention

Repurchase intention refers to a customer's likelihood or willingness to buy a product again after having purchased it previously. In the context of green products, repurchase intention is particularly significant as it not only reflects customer satisfaction and loyalty but also indicates the effectiveness of marketing strategies and brand positioning in promoting sustainable consumption behaviors [60]. Repurchase intention encompasses various dimensions, including perceived value and brand trust. Perceived value refers to the customer's evaluation of the product's benefits relative to its cost. Studies have shown that perceived value significantly influences repurchase intentions [61]. Additionally, brand trust plays a crucial role in forming a positive repurchase intention, encompassing the brand's credibility, reliability, and ability to meet customer expectations consistently [62]. Repurchase intention is crucial for businesses as it directly impacts long-term profitability and market share. For green products, understanding and enhancing repurchase intention is vital. Encouraging the repurchase of green products supports the larger goal of environmental sustainability by fostering eco-friendly consumption patterns [63]. Additionally, repeat purchases generate a steady revenue stream, which is essential for business sustainability [64]. Moreover, a strong repurchase rate can solidify a brand's position in the market, making it a preferred choice among consumers [60].

This study aims to explore how marketing activities and brand involvement impact this critical dependent variable. The research is set against the backdrop of Taiwan green product social media groups, highlighting the role of digital engagement in shaping consumer behavior. This exploration considers various factors that contribute to repurchase intention. Social media marketing activities, including content sharing, influencer endorsements, and interactive campaigns, are designed to enhance brand awareness, engage consumers, and ultimately drive repurchase intention. Research shows that effective social media marketing can significantly influence consumer purchase behaviors and foster brand loyalty [42,65]. Additionally, green values and environmental concern, which represent consumers' attitudes and beliefs about environmental sustainability, can amplify the impact of social media marketing and ESG brand involvement on repurchase intention [66]. A positive brand image and high brand involvement can further strengthen the emotional connection between consumers and the brand, leading to higher repurchase intention.

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Studies have shown that a strong brand image and active consumer involvement with the brand can enhance customer loyalty and repurchase behaviors [67,68].

3. Methodology

3.1. Conceptual Framework

In this study, repurchase intention is the dependent variable, while social media marketing activities are the independent variable, and green values, environmental concern, brand image, and brand involvement are used as the mediating variables to examine their effects on the repurchase intention of green products. Based on the literature review, the conceptual framework of this study is illustrated in Figure 1.

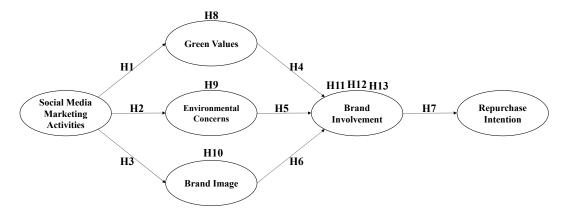


Figure 1. Conceptual Framework.

Studies have shown that marketing environmental or green products on social media affects the green values of social media users. For example, McQueen and Turner [69] examined the factors that influence sustainability and green values among senior managers in UK energy companies. The findings suggest that social media marketing not only influences customers' green values but also increases managers' willingness to produce sustainable energy. Similarly, Kane et al. [70] studied how social media impacts users' purchasing behavior toward green products and services. Their results showed that the use of social media affects the users' green attitudes and green values. Furthermore, Barboza and Filho [71] analyzed the relationship between the use of social media mobile applications and green consumption. They found that the green values of social media users are related to the use of social media. In addition, Dabija and Bejan [72] investigated the relationship between millennial consumers' green values, green tendencies, and green reuse motivations. They noted that marketing green products through social media can help promote personal care for nature, adoption of sustainable products, and motivate the purchase of green products. Sanchez and Lacap [73] studied the effect of green product beliefs on green values, attitudes, and green purchase intentions. They suggest that companies and marketers should use integrated and effective marketing communication strategies to establish green brand positioning in the minds of consumers and that the use of social media marketing is an effective way to communicate corporate green values. These studies reveal that the marketing activities of social media related to green products influence or contribute to the green values of social media users. Therefore, the following hypotheses are proposed:

H1. *Social media marketing activities positively influence the green values of their members.*

Studies have shown that marketing eco-friendly or green products on social media impacts the environmental concerns of social media users. For example, Farhat et al. [74] investigated how social media influences green purchasing behavior through environmental concerns. The results indicated that social media affects green purchasing behavior by heightening users' environmental concerns. The study also emphasized that social media

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marketing should highlight the benefits of green products to consumers to shape green purchasing behavior. Additionally, it should promote an environmentally conscious attitude to foster positive green purchasing behavior among customers. Similarly, Ali et al. [75] noted that social media plays a crucial role in promoting green products. Specifically, social media influences the environmental concerns of young users, increasing their intention to support a sustainable environment, which leads to lower carbon emissions. In turn, this affects their green purchase intention and green consumption behavior. Furthermore, Sultan et al. [76] examined the impact of social media marketing of sustainable green tourism products on the environmental behavior of ecotourism. The study found that social media marketing content influenced travelers' environmental concerns and attitudes, significantly contributed to responsible environmental behavior. These studies suggest that social media marketing activities related to green products positively impact the environmental concerns of social media members. Therefore, the following hypothesis is proposed:

H2. Social media marketing activities positively influence the environmental concerns of their members.

Studies show that marketing products on social media affects the brand image of social media users. For example, Sanny et al. [77] analyzed the effect of social media marketing on brand image, brand trust, and product purchase intention. The results demonstrated that social media marketing significantly impacts brand image and brand trust. Furthermore, both brand image and brand trust significantly influence product purchase intention. Jasin [78] studied the effect of social media marketing and Internet word-of-mouth on purchase intention through brand image. The findings revealed that social media marketing positively and significantly affects brand image, and brand image, in turn, positively and significantly affects purchase intention. Social media marketing also positively and significantly influences purchase intention through brand image referral. Additionally, Putra and Aprilson [79] analyzed the effect of social media marketing on brand image and purchase intention in the hotel industry. Their study showed that social media marketing positively and significantly impacts brand image, and brand image positively and significantly affects purchase intention. Social media marketing also positively and significantly affects purchase intention through the mediating effect of brand image. These studies reveal that social media marketing activities related to green products positively impact the brand image of green products. Therefore, the following hypothesis is proposed:

H3. Social media marketing activities positively influence the brand image of their members.

Studies suggest that consumers' green values affect their involvement with green product brands. For example, Khare et al. [80] investigated the impact of pro-environmental clothing brand involvement, organic clothing knowledge, and materialism on Indian consumers' willingness to purchase organic apparel. The study found that consumers' commitment to green values was linked to pro-environmental apparel brand involvement. Similarly, Rizomyliotis et al. [81] examined the effect of green consumption values on green brand loyalty and brand-related factors. The study noted that green consumption values enhance consumers' involvement with green brands. Furthermore, to understand the relationship between the implementation of green policies by the Macau government and the actual level of participation in green activities, Wong et al. [82] analyzed the relationship between the Macau government's implementation of green policies and actual participation levels in green activities. The study revealed that people's green consumption values were related to their involvement with green products. These studies indicate that green values, or green consumer values, are related to brand involvement or product involvement with green products. Therefore, the following hypothesis is proposed:

H4. The green values of social media members positively influence their brand involvement with green products.

Studies have shown that consumers' environmental concerns affect their brand involvement with green products. For example, Huang et al. [83] studied the relationship between green brand positioning, green brand attitudes, and green purchase intentions. The study found that the more environmentally concerned consumers were, the higher their brand involvement with green products; consumers' ability to evaluate the products offered by green brands also increased. In other words, the more environmentally concerned consumers are, the more they are involved in environmental issues. Similarly, Tucker et al. [84] examined the effect of personal environmental attitudes on green product advertising. The study found that consumers' personal characteristics, such as their concern for environmental issues, were related to their involvement with green product brand advertisements and influenced their green brand attitudes. Furthermore, Baiquni and Ishak [85] analyzed the effect of green branding factors on the purchase intention of green products. The study mentioned that as consumers become more environmentally conscious, their involvement with green products increases, and their attitudes become more positive, which in turn affects their purchase intention of green products. These studies revealed that environmental concerns are related to brand involvement with green products and their advertising. Therefore, the following hypothesis is proposed:

H5. The environmental concerns of social media members positively influence their brand involvement with green products.

Related studies have indicated that the brand image of green products influences consumers' brand involvement with these products. For example, Bouhlel et al. [86] studied the influence of brand personality on consumer decisions. The results showed that brand image is related to brand involvement. Similarly, Srivastava and Kamdar [87] examined the relationship between brand image formation and consumers' involvement with the brand. Their findings indicated that the higher the consumer's involvement with the brand, the more consistent their brand image profile is, indicating a correlation between the two. Furthermore, Gorgulu [88] explored how digital influencers can help companies market their brand image, increase brand involvement, and boost consumer loyalty through Instagram. The results of the study showed that as brand image increases, brand involvement also increases. These studies demonstrate that brand image is related to brand involvement. Therefore, the following hypothesis is proposed:

H6. The brand image of green products positively influences social media members' brand involvement with green products.

Studies have shown that consumers' brand involvement with products affects their repurchase intentions. For example, Smith et al. [89] investigated the influence of online and offline purchases and the impact of fashion brand involvement and online brand involvement on the purchase intention of social media products. The results showed that online brand involvement directly influenced the purchase intention of social media products. Additionally, pre-purchase influence was found to affect product purchase intention through the mediating effect of fashion brand involvement. Similarly, the study by Bouhlel, Mzoughi, Hadiji, and Slimane [86] mentioned the moderating effect of brand involvement on purchase intention. Martín-Consuegra et al. [90] reported similar findings. Furthermore, Hanzaee and Taghipourian [91] investigated the effect of brand credibility and prestige on consumers' purchase intention at different levels of product involvement. Their findings suggest that product involvement affects repurchase intention through brand credibility and prestige. These studies indicate that brand involvement affects purchase intention. Therefore, the following hypothesis is proposed:

H7. The brand involvement of social media members positively influences their repurchase intention.

In summary, this study concluded that social media marketing activities influence brand involvement through the mediating effects of green values, environmental concerns, and brand image. Additionally, green values, environmental concerns, and brand image affect repurchase intention through the mediating effect of brand involvement. Therefore, the following mediating hypotheses are proposed:

- **H8.** Green values mediate the relationship between social media marketing activities and brand involvement.
- **H9.** Environmental concerns mediate the relationship between social media marketing activities and brand involvement.
- **H10.** Brand image mediates the relationship between social media marketing activities and brand involvement.
- **H11.** Brand involvement mediates the relationship between green values and repurchase intention.
- **H12.** Brand involvement mediates the relationship between environmental concerns and repurchase intention.
- **H13.** Brand involvement mediates the relationship between brand image and repurchase intention.

3.2. Research Subjects and Data Collection

The subjects of this study are members of Taiwanese social media groups interested in green products. To ensure a representative and diverse sample, we posted recruitment advertisements on social media, enlisted group administrators to help promote the study, and directly posted within the groups to recruit participants. The survey was conducted online using an electronic questionnaire, and research data were collected during the period from 1 November 2022 to 30 November 2022. A total of 466 questionnaires were collected. After removing invalid responses, 438 valid questionnaires remained. According to Creative Research Systems [92], with a statistical confidence level of 95% and a confidence interval of 5%, a sample size of 384 is required for the total population of Taiwan. The sample for this study met this requirement.

3.3. Measurement

The survey collected basic personal information from the study participants, including gender, marital status, education level, and monthly income. A five-point Likert scale was used to measure their opinions on all study variables, ranging from strongly disagree (1) to strongly agree (5). After designing the scale questions, experts and scholars were invited to review and provide feedback on the questions.

3.3.1. Social Media Marketing Activities Scale

The social media marketing campaign scale was referenced from the studies by Wibowo et al. [93] and Ebrahim [94]. Both studies categorize social media marketing activities into five subcomponents—entertainment, interaction, trending, customization, and word-of-mouth—based on Kim and Ko [55]. Wibowo, Chen, Wiangin, Ma, and Ruangkanjanases [93] investigated the effect of social media marketing activities and customer experience on purchase intention. Ebrahim [94] examined the impact of social media marketing campaigns on brand loyalty through brand trust and brand equity. The social media marketing activity scale was adapted to the context of this study to include questions such as "I buy green products on social media because the content is interesting", "I buy green products on social media because it allows me to share information with others", and "I am willing to pass on information about green brands and green products/services on social media to my friends". In total, 11 items were developed.

3.3.2. Green Values Scale

The green values scale was adapted from Dumont et al. [95] and Chou [96], focusing on individual green values and personal environmental norms. In this study, the scale was tailored to include questions such as "I feel obligated to conserve energy as much as possible", "I feel morally obligated to conserve energy regardless of what others do", and "I should do my best to reduce energy use". In total, five items were developed.

3.3.3. Environmental Concern Scale

The environmental concern scale was based on Pattanapomgthorn et al. [97] and Yadav and Pathak [98]. In this study, the scale was adapted to include questions like "When humans interfere with nature, there are often disastrous consequences", "Humans must live in harmony with nature to survive", and "Humans are seriously abusing the environment". In total, five items were developed.

3.3.4. Brand Image Scale

The brand image scale was derived from Gómez-Rico et al. [99] and Gomez et al. [92]. In this study, the scale was modified to include questions such as "I think green brand products are of high quality", "I think green brand products are highly competitive", and "I think green brand products are attractive". In total, five items were developed.

3.3.5. Brand Involvement Scale

The brand involvement scale was based on Duong et al. [100] and Leckie et al. [101]. In this study, the scale was adapted to include questions like "I feel compelled to buy green brand products because of my personal attitude", "I feel compelled to buy green brand products because of my personal values", and "When buying a product, I consider it very important that it is a green brand". In total, five items were developed.

3.3.6. Repurchase Intention Scale

The repurchase intention scale was adapted from Ali and Bhasin [61] and Tandon et al. [102]. In this study, the scale included questions such as "I intend to continue buying green brand products", "I intend to prioritize green brand products in my future purchases", and "I intend to recommend green brand products to others". In total, five items were developed.

3.4. Data Analysis

In this study, the questionnaires were analyzed using SPSS 23.0 for the valid samples collected. Both descriptive and inferential statistics were examined. The data analysis methods included frequency distribution analysis, which assessed the distribution and percentage of samples based on gender, marital status, education level, and monthly income. The mean and standard deviation of each component were calculated to understand the concentration of each variable. Next, the reliability of the questions and constructs was assessed through confirmatory factor analysis. Convergent and discriminant validity were tested. Finally, structural equation modeling was conducted to examine the model fit, direct effects, and mediating effects.

4. Results

4.1. Descriptive Analysis

The majority of the respondents were male, with 292 people making up 66.7% of the total. Most of the respondents were married, with 347 people representing 79.2%. In terms of education, 317 respondents, or 72.4%, had a graduate degree or higher. Additionally, 304 respondents, or 69.4%, had a monthly income of TWD 70,001 or higher. These details are summarized in Table 1.

Category	Label	Frequency	Percentage
Gender	Female	146	33.3
	Male	292	66.7
Marriage	Married	347	79.2
· ·	Unmarried	91	20.8
Education level	University	104	23.7
	Master's degree and above	317	72.4
	Junior college	17	3.9
Monthly income	TWD 30,000 and below	10	2.3
•	TWD 30,001-50,000	52	11.9
	TWD 50,001-70,000	72	16.4
	TWD 70,001 and above	304	69.4

4.2. Structural Equation Modeling

4.2.1. Measurement Model Test

1. Convergent Validity

According to Anderson and Gerbing [103], a complete structural equation model (SEM) analysis should be divided into at least two stages. The first stage involves the measurement model, followed by the evaluation of the structural model in the second stage. Confirmatory factor analysis (CFA) is equivalent to measurement model evaluation and is part of SEM analysis. In this study, the evaluation and refinement of CFA measurement models were based on the two-stage approach proposed by Kline [104]. If the measurement model fit is acceptable, the complete SEM model can then be reported. The measurement model was estimated using the maximum likelihood estimation (MLE) method. The estimated parameters included factor loadings, reliability, convergent validity, and discriminant validity. Table 2 provides the standardized factor loadings, composite reliability, and average variance extracted (AVE). According to Fornell and Larcker [105] criteria for convergent validity, the following conditions must be met: first, the standardized factor loading for each variable should be higher than 0.50; second, composite reliability should exceed 0.60; and third, the average variance extracted should be higher than 0.50.

As shown in Table 2, the standardized factor loadings ranged from 0.549 to 0.942, all within a reasonable range, indicating that each question had reliability. The composite reliability of the constructs ranged from 0.858 to 0.939, all exceeding 0.7, meeting the criteria suggested by Nunnally [106] and indicating that the six constructs were internally consistent. Finally, the AVE ranged from 0.552 to 0.756, all above 0.5, which aligns with the criteria of Hair and Anderson [107] and Fornell and Larcker [105], indicating that the constructs have good convergent validity.

Table 2. Convergent validity.

Constructs	Standardized Factor Loading	Composite Reliability	Average Variance Extracted
Social Media Marketing Activities	0.701-0.835	0.934	0.564
Green Values	0.603 - 0.827	0.858	0.552
Environmental Concern	0.549-0.886	0.893	0.632
Brand Image	0.747 - 0.817	0.896	0.633
Brand Involvement	0.764-0.929	0.928	0.722
Repurchase Intention	0.824-0.942	0.939	0.756

2. Discriminant validity

In this study, discriminant validity was examined using the rigorous AVE method. Fornell and Larcker [105] suggested that discriminant validity should consider the relationship between convergent validity and construct correlation. They proposed that the

square root of the AVE for each construct should be greater than the correlation coefficient between the constructs, indicating that the model has discriminant validity. As shown in Table 3, the square root of the AVE for each diagonal component in this study is greater than the off-diagonal correlation coefficients, demonstrating that this study has discriminant validity.

	AVE	SMMA	GV	EC	BI	BV	RI
SMMA	0.564	0.751					
GV	0.552	0.476	0.743				
EC	0.632	0.295	0.664	0.795			
BI	0.633	0.674	0.469	0.305	0.796		
BV	0.722	0.540	0.595	0.534	0.667	0.850	
RI	0.756	0.555	0.469	0.336	0.624	0.719	0.869

Note: SMMA = social media marketing activities; GV = green values; EC = environmental concern; BI = brand image; BV = brand involvement; RI = repurchase intention. Note: The items on the diagonal on bold represent the square roots of the AVE; off-diagonal elements are the correlation estimates.

4.2.2. Structural Model Test

1. Goodness-of-Fit

The goodness-of-fit indices in this study are based on the analysis of 194 SSCI papers examined by Jackson et al. [108]. The nine most widely used indices were used to evaluate goodness-of-fit. Since the SEM sample size is larger than 200, the chi-square value is excessively large, resulting in a poor fit. Therefore, the fit value was corrected using the bootstrap method [109]. The results of the Bollen–Stine-Bootstrap-modified goodness-of-fit are presented in Table 4. After the modification, all the fit indicators for this study met the criteria, indicating that the results are acceptable.

Table 4. Goodness-of-fit.

Fit Indices	Allowable Range	Fitness	Model Adaptation
Chi-square		763.082	
Degree of freedom		587	
CFI	>0.9	0.987	Passed
RMSEA	< 0.08	0.026	Passed
TLI	>0.9	0.986	Passed
GFI	>0.9	0.945	Passed
NFI	>0.9	0.945	Passed
χ^2/df	<3	1.300	Passed
AGFI	>0.8	0.937	Passed

2. Path Analysis

The results of the path coefficients are shown in Table 5 and Figure 2. Social media marketing activities ($\beta=0.390,\ p<0.05$) significantly influenced green values. Social media marketing activities ($\beta=0.359,\ p<0.05$) also significantly influenced environmental concerns. Furthermore, social media marketing activities ($\beta=0.743,\ p<0.05$) significantly influenced brand image. Green values ($\beta=0.302,\ p<0.05$) significantly influenced brand involvement. Environmental concerns ($\beta=0.268,\ p<0.05$) significantly influenced brand involvement as well. Brand image ($\beta=0.545,\ p<0.05$) had a significant impact on brand involvement. Finally, brand involvement ($\beta=0.645,\ p<0.05$) significantly influenced repurchase intention. The results of the study support the research questions of the model. Social media marketing activities explained 24.7% of the variance in green values, 10.3% of the variance in environmental concerns, and 47.0% of the variance in brand image. Green values, environmental concerns, and brand image together explained 56.8% of brand involvement. Brand involvement explained 51.1% of repurchase intention.

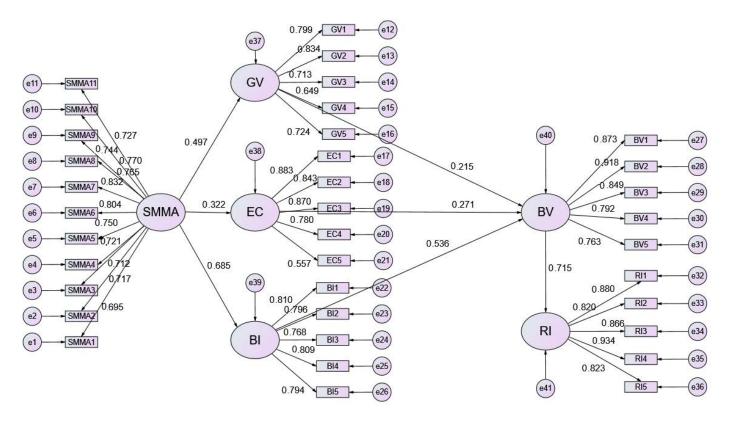


Figure 2. SEM Statistical Model Diagram.

Table 5. Path Analysis.

Dependent Variable	Independent Variable	Unstandardized Regression Coefficient	Standard Error	C.R	p	Standardized Regression Coefficient	R ²
GV	SMMA	0.390	0.044	8.867	0.000	0.497	0.247
EC	SMMA	0.359	0.058	6.158	0.000	0.322	0.103
BI	SMMA	0.743	0.062	11.901	0.000	0.685	0.470
BV	GV	0.302	0.059	5.142	0.000	0.215	0.568
BV	EC	0.268	0.039	6.943	0.000	0.271	
BV	BI	0.545	0.047	11.478	0.000	0.536	
RI	BV	0.654	0.041	15.813	0.000	0.715	0.511

Note: SMMA = social media marketing activities; GV = green values; EC = environmental concern; BI = brand image; BV = brand involvement; RI = repurchase intention.

4.2.3. Mediating Effects

The indirect effect of social media marketing activities—green values—brand involvement was significant (p < 0.05), with a confidence interval that does not include 0 [0.018, 0.224], indicating that the indirect effect holds. Social media marketing activities—environmental concern—brand involvement was also significant (p < 0.05), with a confidence interval that does not include 0 [0.028, 0.175], confirming the indirect effect. Additionally, social media marketing activities—brand image—brand involvement showed a significant indirect effect (p < 0.05), with a confidence interval that does not include 0 [0.319, 0.509]. Green values—brand involvement—repurchase intention demonstrated a significant indirect effect (p < 0.05), with a confidence interval that does not include 0 [0.022, 0.416]. Similarly, environmental concern—brand involvement—repurchase intention was significant (p < 0.05), with a confidence interval that does not include 0 [0.047, 0.273]. Finally, brand image—brand involvement—repurchase intention was significant (p < 0.05), with a confidence interval that does not include 0 [0.252, 0.485]. These results are shown in Table 6. Table 7 shows the hypothesis test results for this study.

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Table	6.	Ana	lvsis	of	ind	lirect	effects.

Parameter	Estimate	Lower	Upper	p
Social Media Marketing Activities→Green Values→Brand Involvement	0.118	0.018	0.224	0.026
Social Media Marketing Activities→Environmental Concern→Brand Involvement	0.096	0.028	0.175	0.010
Social Media Marketing Activities→Brand Image→Brand Involvement	0.405	0.319	0.509	0.002
Green Values→Brand Involvement→Repurchase Intention	0.198	0.022	0.416	0.029
Environmental Concern→Brand Involvement→Repurchase Intention	0.175	0.047	0.273	0.013
Brand Imagen→Brand Involvement→Repurchase Intention	0.356	0.252	0.485	0.002

Table 7. Hypothesis test results.

	Hypothesis	Valid/ Invalid
H1	Social media marketing activities positively influence the green values of their members.	Valid
H2	Social media marketing activities positively influence the environmental concerns of their members.	Valid
Н3	Social media marketing activities positively influence the brand image of their members.	Valid
H4	The green values of social media members positively influence their brand involvement with green products.	Valid
H5	The environmental concerns of social media members positively influence their brand involvement with green products.	Valid
Н6	The brand image of green products positively influences social media members' brand involvement with green products.	Valid
H7	The brand involvement of social media members positively influences their repurchase intention.	Valid
H8	Green values mediate the relationship between social media marketing activities and brand involvement.	Valid
H9	Environmental concerns mediate the relationship between social media marketing activities and brand involvement.	Valid
H10	Brand image mediates the relationship between social media marketing activities and brand involvement.	Valid
H11	Brand involvement mediates the relationship between green values and repurchase intention.	Valid
H12	Brand involvement mediates the relationship between environmental concerns and repurchase intention.	Valid
H13	Brand involvement mediates the relationship between brand image and repurchase intention.	Valid

5. Discussion and Conclusions

This study examines the impact of social media marketing activities on the repurchase intention of green products, using green values, environmental concerns, brand image, and brand involvement as mediating variables. The research model includes both direct and indirect hypotheses. After collecting data from the questionnaire survey, the model and hypotheses were tested and verified using structural equation modeling.

5.1. Theoretical Contributions

The empirical analysis in this study validates that social media marketing activities positively affect the green values of their members. These direct effects are consistent with the findings of McQueen and Turner [69] and Kane, Chiru, and Ciuchete [70]. Additionally, social media marketing activities positively influence the environmental concerns of their members, aligning with the results of Farhat, Aslam, and El Alfy [74] and Ali, Ullah, Ahmad, Cheok, and Alenezi [75]. The mechanisms through which social media marketing might amplify green values, such as increased exposure to green content or peer influence within online communities, help in understanding the psychological or sociological factors at play. This is also suggested by McQueen and Turner [69] and Kane, Chiru, and Ciuchete [70]. Social identity theory [110] further explains the link between marketing activities and green values, suggesting that individuals align their values with those perceived by their online social groups. Furthermore, social media marketing activities positively impact the brand

image of green products, consistent with the findings of Sanny, Arina, Maulidya, and Pertiwi [77] and Jasin [78]. A positive brand image that emphasizes sustainability and environmental responsibility can strengthen consumer attitudes toward repurchasing. A green brand image cultivated through social media enhances consumer perceptions of the brand's benefits, including product quality, effectiveness, and environmental impact. The direct hypotheses on brand involvement in green products were examined as follows: First, social media members' green values positively affect their brand involvement in green products, consistent with the findings of Khare, Sadachar, and Manchiraju [80] and Rizomyliotis, Poulis, Konstantoulaki, and Giovanis [81]. Huang, Huang, Yang, and Wang [83] and Tucker, Rifon, Lee, and Reece [84]. The mediator, environmental concerns, relates to the consumer's perception of significant others' beliefs about environmental issues and green practices. In social media environments, where community and influencer opinions are highly visible, heightened environmental concerns can create a strong subjective norm. Consumers might feel a social obligation or pressure to purchase green products if they perceive that their social circle values environmental activism or sustainable living. Additionally, the brand image of green products positively influences consumers' brand involvement in green products, similar to the results of Bouhlel, Mzoughi, Hadiji, and Slimane [86] and Gorgulu [88]. In terms of mediating effects, green values, environmental concerns, and brand image mediate the relationship between social media marketing activities and brand involvement. Moreover, brand involvement mediates the effect between green values, environmental concern, brand image, and repurchase intention, consistent with the findings of previous studies.

Our research confirms that social media marketing activities positively influence green values and brand involvement, which are directly linked to repurchase intentions for green products. This highlights the economic insight that investments in social media marketing can lead to increased consumer loyalty and repeated sales, which are vital for sustainable business practices. Economically, this suggests that companies effectively engaging in social media marketing and fostering strong green brand values are likely to see a higher return on investment due to enhanced consumer repurchase behaviors, aligning business profitability with environmental sustainability. Additionally, the positive correlation between social media marketing activities and heightened environmental concern among members has significant political and social implications. By influencing green values and environmental concerns, such campaigns can shape public opinion and potentially sway policy directions toward more sustainable practices. Socially, these activities cultivate a community that is aware of and sensitive to environmental issues, fostering a culture of sustainability. Politically, as consumer awareness and demand for green products increase, it may encourage Taiwan's legislature to enact stricter environmental regulations and support eco-friendly businesses. Furthermore, if social media marketing effectively enhances brand image and involvement and these factors mediate the relationship between marketing activities and repurchase intentions, it logically follows that improving the quality and frequency of these marketing efforts can directly boost consumer loyalty and repurchase rates. This supports the strategic use of social media as a tool not just for promotion but as a critical component of building lasting consumer relationships and sustaining green consumer behaviors.

Our study demonstrates that social media marketing activities significantly influence green values, environmental concerns, and brand involvement, which in turn enhance repurchase intentions for green products. This finding aligns with the research of Pancić, Serdarušić, and Ćućić [36], who showed that green marketing efforts, including those on social media, positively impact consumer repurchase intentions through brand loyalty and equity. However, our study uniquely emphasizes the mediating roles of green values and brand involvement, providing a more nuanced understanding of these dynamics. Additionally, while Koh et al. [111] found that perceived ESG initiatives affect brand credibility and image, our study extends this by showing the direct influence of ESG branding on repurchase intentions through social media marketing. This integration of ESG with social media marketing to drive green product repurchase behavior offers a new

dimension to existing research. The mediating effects of environmental concerns are also supported by Yanyan et al. [112], who indicated that social media exposure significantly impacts green consumption intentions through environmental concerns. Our focus on these concerns within the context of social media marketing activities adds depth to the understanding of how these concerns translate into consumer behavior. Furthermore, the application of the Theory of Planned Behavior (TPB) in our study to link social media marketing activities with repurchase intentions is corroborated by Pop et al. [113], who used TPB to explain green cosmetics purchase motivations influenced by social media. Our research confirms and extends these findings by applying TPB to a broader range of green products and highlighting the importance of brand involvement as a mediator. While our findings align with existing research, they also provide new insights, particularly regarding the mediating roles of green values, environmental concerns, and brand involvement in the context of social media marketing and ESG branding. This comprehensive approach helps fill existing research gaps and offers practical implications for businesses aiming to enhance green product repurchase intentions through targeted social media strategies and ESG initiatives.

5.2. Practical Contributions

The results of the study showed that social media marketing activities positively influence group members' green values, environmental concerns, and brand image of green products. Through various marketing and promotional content, including interactive, cooperative, and sharing activities, green product group members increase their green values and environmental concerns. In turn, this enhances their intention to repurchase green products through the mediation of brand involvement. Therefore, this study proposes the following practical directions to strengthen social media marketing activities, green values, environmental concerns, the brand image of green products, and green brand involvement to increase the repurchase intention of green products.

First, this study recommends integrating green values, environmental concerns, the brand image of green products, and green branding into social media marketing activities. Companies should provide data on the environmental friendliness of green products; the use of no or fewer non-recyclable raw materials; consumer confidence in green products; compliance with manufacturing, design, and raw material standards; recycling mechanisms at the end of product life; and flat packaging to save on shipping costs and should inform consumers of the company's commitment to reducing carbon emissions. Additionally, through social media videos, they should promote respect for nature, the benefits of protecting diversity, and the consequences of disrespecting nature And should engage members by asking for their opinions and encouraging dialogue with open-ended environmental questions like, "What green products are you most interested in?" They should offer incentives, such as inviting a friend to a green product event to receive a bonus. Green product enterprises, community group administrators, and stakeholders should lead by example in environmental protection and encourage social media members to engage in environmentally conscious behavior. Strengthening the intention to repurchase green products through social media marketing not only fosters a green and environmentally friendly lifestyle but also promotes the concept of coexistence with nature.

Second, this study recommends using social media for recruiting like-minded channels. After promoting the company's commitment to energy saving and environmental protection and gaining the approval of social media group members, companies should recruit suppliers willing to invest in improving the environment and equipment to join the green supply chain. This approach may result in more orders and sales, creating more business opportunities and encouraging more companies to invest in green initiatives. This strategy fosters a four-win situation for enterprises, suppliers, consumers, and the environment. However, it is important to note that a product's greenness is related to its consumption level, not its inherent quality. Overconsumption of any product makes it non-green.

Third, green enterprises should recruit social media digital influencers and key opinion leaders to help promote green products. Leveraging the charisma and influence of these figures can create momentum for green brands and help to achieve marketing goals. Companies should conduct polls to select green key opinion leaders and invite them to present easy-to-understand green perspectives after appropriate training. Green key opinion leaders should use products with green labels and carbon footprint labels in real life. By promoting through social media influencers and key opinion leaders, green products can quickly and effectively reach a broader audience, attracting public attention to the green brand. This will enhance the company's green reputation and build a trust relationship with consumers in the community.

5.3. Limitations and Future Research

This study focuses on members of green product social media groups in Taiwan and will be expanded to include other social media groups in the future. For example, future research will include members of groups focused on environmental protection, resource recycling, minimalism, earth care, second-hand goods, energy-saving, and carbon reduction. The study will also compare the impact of different types of social media groups on green and environmental protection-related intentions. Additionally, the identity of community group members may influence their willingness to complete the questionnaire. For instance, group administrators and active members may be more likely to participate, potentially affecting the validity of the results. Moreover, this study concentrates on the intention to repurchase green products. Due to time constraints and the focus on positive factors, the study may not address the reasons for a decrease in the intention to repurchase green products. Future research will explore the negative impacts using a suppressed green intention variable and employ a more detailed sampling method.

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