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The impact of green marketing mix elements on green customer based brand equity in an emerging market

Bang Nguyen-Viet
University of Economics Ho Chi Minh City, Ho Chi Minh City, Vietnam

Abstract

Purpose – "Green" issues have become increasingly important to corporate decision-makers as firms face mounting public sensitivity, stricter regulation and growing stakeholder pressures focused on preserving the natural environment. This study aims to evaluate the impact of green marketing mix elements on green customer-based brand equity in an emerging market like Vietnam and to analyze the causal order among green customer-based brand equity dimensions, which is important for understanding corporate branding efforts.

Design/methodology/approach – This study follows a quantitative approach through interviews with 870 consumers who had purchased plant-based milk products at milk stores, supermarkets/hypermarkets and convenience stores in Vietnam. Data were analyzed through structural equation modeling.

Findings – The results suggest that green marketing mix tools positively impact green customer-based brand equity creation. Furthermore, the results determine the causal order among green brand equity dimensions in the Vietnam context.

Practical implications – Marketers invest more in green marketing programs to increase green customer-based brand equity. To benefit from significant competitive and economic benefits, firms should develop a green brand image, satisfaction, trust and green loyalty.

Originality/value – The study's findings elucidate the impacts of green marketing on the various components of customer-based brand equity to establish and manage brand equity. They also explain how best to target various green marketing values toward discrete consumer segments based on the degree to which a given segment's membership is predisposed to be concerned about the environment or evaluate the environmental consequences of their behaviors.

Keywords Green marketing, Green promotion, Green place, Green brand equity, Emerging market

Paper type Research paper

Introduction

Due to increased sustainable consumption, consumer environmentalism and ecological issues in society, companies have focused their efforts on offering eco-friendly products and services to meet environmental needs (Ishaq and Di Maria, 2019). Vietnam is no exception (De Koning *et al.*, 2015). As a result, consumer knowledge of green marketing has grown, and they are reacting to brands that promote environmental responsibility, especially given that firms' environmental initiatives are commonly seen as part of their corporate social responsibility (Olsen *et al.*, 2014).

Companies recognize that if they provide products and services that address their consumers' environmental concerns, those consumers are more likely to choose their products or services (Kang and Hur, 2011). The task for companies in this new environmental era is to identify opportunities to augment their products' environmental credentials to strengthen their brand equity (Chen, 2010). In other words, corporates must actively move toward sustainable marketing strategies, such as green marketing (Gordon *et al.*, 2011; Martin and Schouten, 2012). Therefore, the significance of "integrating green marketing" into contemporary business practices is evident by the growing interest of marketing researchers

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and practitioners in environmental issues and their impact on marketing activities (Ng *et al.*, 2013). Although green marketing initiatives have increasingly been popularized by companies (Dangelico and Vocalelli, 2017), almost all green marketing research has been carried out in the United States and European countries (Kumar *et al.*, 2013). The demand for and attitudes toward green products are likely to be uneven across market segments and cultures (Ottman, 2017), and differences in national regulations; therefore, country-specific field studies are necessary (Chamorro and Banegil, 2006), especially in emerging markets (Kumar *et al.*, 2013). Furthermore, future research on green marketing functions should be extended to brand equity or value (Kumar, 2016) to identify and classify different targeting approaches for a green marketing strategy, highlighting the best options based on industry and firm characteristics (Dangelico and Vocalelli, 2017).

According to Keller (1993), brand equity should be managed over time by fine-tuning the supporting marketing programs because they represent the cumulative effect of marketing efforts in the brand. As a result, previous research has demonstrated the importance of marketing mix tools as fundamental variables in creating customer-based brand equity (e.g. Yoo *et al.*, 2000; Nikabadi *et al.*, 2015; Bang and Tuan, 2021) and green marketing programs in green customer-based brand equity (CBBE) creation (Davari and Strutton, 2014; Sohail, 2017). However, no studies have explored the influence of green specific marketing on green customer-based brand equity dimensions. Furthermore, consumer attitudes toward the marketing mix differed across countries due to cultural values (Cui *et al.*, 2008).

Brand equity is a key indicator of brand success. Thus, the improving understanding of consumer-based brand equity is through the interaction between customer-based brand equity dimensions (Buil *et al.*, 2013). As a result, researchers have focused on investigating the associative linkages between consumer-based brand equity dimensions (e.g. Yoo *et al.*, 2000; Buil *et al.*, 2013; Bang and Tuan, 2021), and even more recently, green CBBE dimensions (e.g. Chen, 2010; Ng *et al.*, 2013; Chang and Chen, 2014; Delafrooz and Goli, 2015; Martínez, 2015). However, green CBBE in emerging countries like Vietnam should not simply be examined in the Western context (Chen, 2010; Ng *et al.*, 2013; Chang and Chen, 2014; Delafrooz and Goli, 2015; Martínez, 2015) without first replicating the model of green CBBE.

Therefore, this study aims to fill this research gap. Within this context, this article has two purposes: (1) to examine the role of green marketing mix functions in creating green CBBE; and (2) to analyze the causal order among green CBBE dimensions, which is important for understanding corporate branding efforts (Lehmann *et al.*, 2008; Buil *et al.*, 2013) in the Vietnam context.

The study's findings provide valuable insights into the effects of green marketing on the different elements of CBBE to generate and manage brand equity. They also show how best to target differing green marketing values toward discrete consumer segments based on the degree to which a given segment's membership is predisposed to be concerned about the environment or evaluate the environmental consequences of their behaviors.

The rest of the paper is organized as follows. First, a review of the literature and the conceptual framework is presented. Second, the research methodology and design are explained, and the results of the analysis displayed. Finally, the study's findings, managerial implications and contribution to the literature are discussed, and its limitations.

Literature review

Green CBBE

Since its emergence in the late 1990s, brand equity has become one of the most important marketing concepts in research and practice (Srinivasan *et al.*, 2005). With a focus on environmental business and consumer research, Chen (2010) introduced green brand equity.

Customer-based brand equity can be defined as the differential effect of brand knowledge on consumer response to the brand's marketing (Keller, 1993), derived from the words and actions of consumers (Keller and Lehmann, 2006). In a green context, green CBBE is defined as an entire range of impressions, conceptions, and apprehensions toward a brand in the customers' memory correlated to sustainability and eco-friendly concerns (Chen, 2010). Following Keller (1993) and Aaker (1996), Ishaq (2020) defines green CBBE as a set of brand assets and liabilities about environmental, social, and economic concerns and eco-friendly commitments that are connected to a brand and boost or decline the value offered by the brand's product or service. For firms, the main purpose of building green brand equity is to increase environmental awareness (Delafrooz and Goli, 2015), which companies can exploit for competitive advantage by deploying their products in different markets (Ailawadi and Keller, 2004).

Dimensions of green CBBE

As noted, brand awareness, brand associations, perceived quality and brand loyalty have been identified as CBBE dimensions (Aaker, 1991). In a green context, green CBBE has been measured using dimensions such as green brand image (Chen, 2010; Bekk *et al.*, 2015; Ng *et al.*, 2013; Martínez, 2015), green trust (Chen, 2010; Martínez, 2015; Kang and Hur, 2011; Bekk *et al.*, 2015), green satisfaction (Chen, 2010; Kang and Hur, 2011; Martínez, 2015; Bekk *et al.*, 2015) and green loyalty (Kang and Hur, 2011; Martínez, 2015). In addition, green quality perceived, green awareness, and green perceived risk have been examined as CBBE dimensions (Chang and Chen, 2014). Ishaq (2020) proposes six green brand equity components: social influence, leadership, perceived quality, sustainability, brand awareness and brand association.

Four dimensions of green CBBE are selected for investigation in this study, following Martnez (2015): (1) green image, (2) green trust, (3) green satisfaction and (4) green loyalty. This model integrates the initial model of green brand equity (green image, green trust and green satisfaction) by Chen (2010) and brand loyalty, an important component in the brand equity model (Aaker, 1996; Yoo *et al.*, 2000; Kang and Hur, 2011; Bang and Tuan, 2021). Moreover, these specific dimensions are selected because each is acutely relevant in green decision-making contexts.

Green brand image is defined as a set of perceptions of a brand in a consumer's mind linked to environmental commitments and environmental concerns (Chen, 2010; Martínez, 2015). Green brand image fulfils the consumer's environmental wants and reduces the arising problems (Khandelwal *et al.*, 2019). Green brand image is crucial for companies, especially concerning consumer environmental awareness and the strict conditions of international environmental protection (Delafrooz and Goli, 2015).

Green satisfaction is defined as a pleasurable level of consumption-related fulfilment to satisfy a customer's environmental desires, sustainable expectations and green needs (Chen, 2010); Exceeding or matching prior expectations is critical for green satisfaction (Gelderman *et al.*, 2021).

Green trust is defined as a willingness to depend on a product, service or brand based on the belief or expectation resulting from its credibility, benevolence and ability about its environmental performance (Chen, 2010; Mourad and Ahmed, 2012); the willingness to rely on an exchange partner in whom one has confidence depends on their environmental performance (Martínez, 2015). Emotional aspects of trust are significant because customers trust in affective signals from companies as a reference point to evaluate quality (Martínez, 2015).

Green loyalty is defined as a consumer's commitment to repurchase or otherwise continue using a green brand (Martínez, 2015). It is typically demonstrated by the repeated purchase of a green product or service or other affirmative activities such as word-of-mouth

testimony (Kang and Hur, 2011). A benefit of loyalty is the customer's willingness to pay a higher price for a brand than for another brand offering similar benefits (Chaudhuri and Holbrook, 2001).

Green marketing and green marketing mix elements

Green marketing is deep-rooted in earlier attempts of Lazer (1969) to address the societal dimension of marketing regarding finite environmental supplies, the societal and environmental repercussions of conventional marketing, and the greening of various parts of traditional marketing. It has been highlighted as one of the new kinds of marketing that can play a significant role in the supply of opportunities for societal well-being (Kumar and Ghodeswar, 2015).

Green marketing is described as a holistic, integrated approach that continually reevaluates how firms can achieve corporate objectives and meet consumer needs while minimizing long-term ecological harm (Polonsky and Rosenberger, 2001). It is designed to accomplish the firm's strategic and financial goals in ways that minimize their negative (or enhance their positive) impact on the natural environment (Leonidou *et al.*, 2013). In short, green advertising uses environment-friendly claims in the advertising message to influence the consumer to purchase the product (Agarwal and Kumar, 2021). Thus, green marketing aims to minimize the environmental impact of each life cycle stage, comprised raw material acquisition, manufacturing, distribution, consumption and disposal (Dangelico and Vocalelli, 2017).

Green marketing mix consists of marketing tools and elements that allow a firm to serve the target market and achieve organizational goals without harming the natural environment (Mukonza and Swarts, 2020). Leonidou *et al.* (2013) describe green marketing mix as programs designed to accomplish the firm's strategic and financial goals in ways that minimize their negative impact on the natural environment. Green product, price, place and promotion are the components of green marketing mix (Gustavo *et al.*, 2021; Sohail, 2017; Davari and Strutton, 2014). This means that each of the key four marketing mix programs (product, price, place and promotion) can be designed and executed in less harmful ways to the natural environment (Kotler, 2011). Green marketing programs describe environmentally friendly marketing activities (Alsmadi, 2007).

Research hypotheses development

This study focuses on four green marketing programs that influence green CBBE dimensions – green brand image, green trust, green satisfaction and green loyalty. Based on the literature, this research also hypothesizes relationships among green CBBE dimensions.

Relationship between green product programs and green CBBE dimensions

Green products can be defined as safe products to use and are environmentally friendly (Tsai *et al.*, 2020). Green products are typically created through environmentally more amicable processes (Davari and Strutton, 2014). Ottman (2017) highlight that in business, the terms green product is used commonly to describe those products with environmentally friendly characteristics of its materials, manufacturing processes, distribution processes, disposal/recycling processes or product functionality (e.g. low energy consumption). However, unlike other product benefits, such as quality attributes, the environmental sustainability of a product constitutes a benefit to nature and society rather than to an individual consumer (Ottman, 2017). Green products have created new opportunities in their market offerings and promoted businesses to become environmentally responsible (Mukonza and Swarts, 2020).

Agustini *et al.* (2021) emphasize that green product should cover the entire lifecycle from design, material procurement, manufacture, storage, distribution, usage to post-usage activities. Firms can then use lifecycle analysis to evaluate a product's ecological impact for each production stage (Polonsky and Rosenberger, 2001). Environmental sustainability, and not solely profit, must be considered while developing and commercializing these products. For instance, a company should reduce excessive packaging by using recyclable materials as this process is a major source of environmental waste (Agustini *et al.*, 2021). Therefore, green products are often safer, healthier and gentler than other products (Luchs *et al.*, 2010). Further, Alsmadi (2007) explains green product as not harming the environment or environmentally friendly products (i.e. products that use environmentally friendly materials, consume minimum energy and resources, subject to recycling, etc.). Green consumers are everywhere because green products are known to be better for the planet (Ottman, 2017).

Green product programs as product-related decisions and actions whose purpose is to protect or benefit the natural environment by conserving energy and/or resources and reducing pollution and waste (Dangelico and Pujari, 2010; Leonidou *et al.*, 2013).

Where consumers are uncertain of a claim's credibility, this may confuse and hinder the effectiveness of environmental claims (Testa *et al.*, 2015). Therefore, green product programs are attractive instruments for informing consumers about the environmental impact of their purchasing decisions and helping them to identify products that are more environmentally preferable than other similar products (Rahbar and Wahid, 2011). Thus, green products can create higher green trust.

Moreover, paying attention to and participating in public affairs and fulfilling corporate social responsibilities have a significantly positive effect on improving enterprises' image among consumers and differentiating them from competitors (Tsai *et al.*, 2020). Thus, green products can create higher green brand image.

Green product programs efforts which satisfy a customer's environmental desires, sustainable expectations (Davari and Strutton, 2014; Sohail, 2017). Thus, green products can create higher green satisfaction.

Moreover, the results from re-studies found a significant relationship between green product and brand loyalty (Davari and Strutton, 2014; Sohail, 2017). When businesses pursue green product initiatives, they create attitudinal brand loyalty by designing and manufacturing green products that meet the goals and needs of green customers (Davari and Strutton, 2014). As a result, it creates a repurchase intention, which leads to brand loyalty (Sohail, 2017).

Based on the above evidence from the literature, the following hypotheses H1 are proposed:

H1a. Green product programs are positively related to green brand image.

H1b. Green product programs are positively related to green trust.

H1c. Green product programs are positively related to green satisfaction.

H1d. Green product programs are positively related to green loyalty.

Relationship between green price programs and CBBE dimensions

Green prices refer to premiums that consumers often must pay to acquire green products (Davari and Strutton, 2014). The prices of green products are typically higher than the conventional equivalents, reflecting environmental and social expenses added to the costs (Agustini *et al.*, 2021).

Higher green prices arise because firms must persuade customers to willingly pay more to benefit themselves, future generations or the environment (Chan *et al.*, 2012). Green goods

have higher initial out-of-pocket expenses but lower long-term costs (Polonsky and Rosenberger, 2001).

Green price programs concern pricing practices that account for both the economic and environmental costs of production and marketing while providing value for customers and a fair profit for business (Martin and Schouten, 2012; Leonidou *et al.*, 2013). Tactically, firms can use pricing actions, such as rebates for returning recyclable packaging or charging higher prices for environmentally unfriendly products (Leonidou *et al.*, 2013).

Given the customer intentions to obtain reliable information, including feather of product features, about environmental concerns (Ganapathy *et al.*, 2014), customers are willing to spend more money on environmentally friendly products and services (Tsai *et al.*, 2020; Gelderman *et al.*, 2021). Therefore, it increases consumer brand trust. Based on these arguments, green price has a positive impact on green brand trust.

In addition, customers are prepared to pay a higher price for environmentally friendly products and services as they understand that their environmental knowledge influences their ecological behavior (Gelderman *et al.*, 2021). According to prior research, green price perceptions directly influence consumer satisfaction (Herrmann *et al.*, 2007; Gelderman *et al.*, 2021). Therefore, green price can create higher green satisfaction.

In the future, price is expected to be the indicator of socially and environmentally responsible businesses and educate consumers to realize that paying a little more for a green product is worthwhile (Agustini *et al.*, 2021), thereby improving the brand image.

Furthermore, the results from re-studies find a significant relationship between green price and green loyalty (Davari and Strutton, 2014; Sohail, 2017). As firms pursue green price programs, it creates brand loyalty by justifying the advantages of green products with price premiums (Sohail, 2017). Thus, green loyalty might be created through the management of green price (Davari and Strutton, 2014).

Based on the above evidence from literature, hypotheses H2 are proposed:

H2a. Green price programs are positively related to green brand image.

H2b. Green price programs are positively related to green trust.

H2c. Green price programs are positively related to green satisfaction.

H2d. Green price programs are positively related to green loyalty.

Relationship between green place programs and CBBE dimensions

Green place refers to a complex set of decisions involving a network of activities that goes from material procurement to distribution channel management to the point of consumption (Sohail, 2017). According to Davari and Strutton (2014), green place refers to management tactics related to distribution – the chain of production to consumption – and reverse logistics, reducing packaging (decreasing transportation costs, optimizing carriers and reducing material consumption), and using integrated transportation systems. In other words, green place involves the selection of channels that ensures that there is minimal environmental damage (Mukonza and Swarts, 2020).

Green place programs involve monitoring and improving environmental performance in the firm's demand chain (Martin and Schouten, 2012). Tactical efforts include working with channel partners to develop product reuse or disposal arrangements and ensuring customers can return recyclable materials (Leonidou *et al.*, 2013). Strategically, firms may create policies requiring suppliers and distributors to adopt more environmentally responsible standards in fulfilling their respective marketing roles (Zhu and Sarkis, 2004). In short, firms in green distribution work with the intermediaries and channel partners to use green products, reuse

and recycle arrangements and, in the process, ensure that customers also recycle (Mukonza and Swarts, 2020).

The convenience of finding the brand when and where one wants it saves consumers time, thus enhancing customer satisfaction and increasing CBBE (Yoo *et al.*, 2000). Thus, it helps to increase customer satisfaction.

Furthermore, green place entails exposing the items to the correct consumers, particularly those who are environmentally conscious, and offering assurances of the product's ecological character (Agustini *et al.*, 2021). Consequently, green place programs can boost green brand image.

Green place programs that fulfill customer wants to increase consumer trust (Davari and Strutton, 2014). Using green distribution channels boost brand trust (Sohail, 2017). Furthermore, re-studies discover a substantial association between green place and brand trust (Davari and Strutton, 2014; Sohail, 2017). As a result, green place programs can increase green trust.

The results from re-studies find a significant relationship between green distribution and brand loyalty (Davari and Strutton, 2014; Sohail, 2017). As businesses pursue green place programs, they create brand loyalty distributed via channels where environmental obligations are valued (Sohail, 2017). Thus, brand loyalty is enhanced through utilizing green place (Sohail, 2017).

Based on the above evidence from literature, the following hypotheses H3 are proposed:

H3a. Green place programs are positively related to green brand image.

H3b. Green place programs are positively related to green trust.

H3c. Green place programs are positively related to green satisfaction.

H3d. Green place programs are positively related to green loyalty.

Relationships between green promotion programs and CBBE dimensions

Green promotion is an effective awareness tool of communicating, informing and reminding stakeholders about their commitment and achievements toward environmental preservation efforts (Mukonza and Swarts, 2020). Therefore, sustainable production and consumption promotion and design are of great significance (Ülkü and Hsuan, 2017). Firms use green promotional tools to convey messages to persuade customers of the environmental benefits (Sohail, 2017). In general, green promotion refers to activities that educate and change consumers' views on green products and is expected to communicate substantive environmental information that contains meaningful relations to the company's activities (Agustini *et al.*, 2021).

Green promotion relates to green advertisements and the use of communication tools (Kumar, 2016). Green advertising refers to advertising that emphasizes the environment-friendly attributes of the product. Green appeals can differ in their focus, such as degradability, recyclability and lower pollution (Kong and Zhang, 2013), claims that a product is made of environmentally sound materials or is contained in an environmentally sound package and increases consumer awareness of environmental issues (Polonsky and Rosenberger, 2001). The great focus of green advertisements on product-oriented claims denotes firms' tendency to make green claims more easily observable, clearly understandable and practically useful for protecting the natural environment (Leonidou and Leonidou, 2011). Communication tools include websites, sustainability reports, eco-labelling and environmental certifications (Kumar, 2016). The main objectives of using these tools are spreading environmental knowledge, creating awareness of green products and developing the credibility of environmental claims (Cegarra-Navarro and Martinez, 2010).

Green promotion programs reflect communications designed to inform stakeholders about the firm's efforts, commitment and achievements toward environmental preservation (Dahlstrom, 2011). This may also involve actions to reduce any negative environmental impact of the firm's marketing communication efforts (Kotler, 2011). More strategic green promotion approaches are designed to communicate the environmental benefits of the firm's goods and services (Leonidou *et al.*, 2013).

Yoo *et al.* (2000) and Buil *et al.* (2013) find that advertising is a useful tool for increasing customer loyalty, creating brand awareness, and reinforcing other brand-related associations and attitudes, which subsequently lead to the successful and favorable brand image in consumers' memories. Similarly, Raji *et al.* (2019) reiterate that marketing communications influence the creation of and enhance CBBE. They are primarily deployed to generate positive and favorable associations with the functional and hedonic brand images in consumers' minds. Connect to green context, green promotion can create stronger green brand image.

Green advertising generally addresses an environmental issue of interest to consumers and an environmental need (Kim *et al.*, 2019). Green advertising influences individual mindsets toward advertising and consumers' intention to be friendly to the environment (Kim *et al.*, 2019). Thus, green advertising satisfies customers' environmental desires, sustainable expectations and green needs.

Some studies have explained the positive impact of promotion programs on brand trust, such as Bang and Tuan (2021) and Kirmani and Wright (1989). These studies state the importance of spreading accurate and honest messages through advertising. It helps build trust and credibility toward the brand. When customers see advertisements, they gain a sense of confidence and develop expectations from the brand. Therefore, it increases consumer brand. Based on these arguments, green advertising has a positive impact on green trust.

Firms use green promotions programs to develop attitudinal loyalty by communicating green product benefits and characteristics through promotional activities (Sohail, 2017). As a result, they generate repurchase intent, which leads to brand loyalty (Davari and Strutton, 2014; Sohail, 2017). Furthermore, the results from re-studies show a significant relationship between green promotion and brand loyalty (Davari and Strutton, 2014; Sohail, 2017).

Based on the above evidence from the literature, the following hypotheses H4 are proposed:

H4a. Green promotion programs are positively related to green brand image.

H4b. Green promotion programs are positively related to green trust.

H4c. Green promotion programs are positively related to green satisfaction.

H4d. Green promotion programs are positively related to green loyalty.

Relationships among green CBBE dimensions

Green CBBE has a set of dimensions (Bick, 2009; Yoo *et al.*, 2000), which interrelate, and causal order among these dimensions is important in the context of studying CBBE (Buil *et al.*, 2013).

The influence of green brand image, green trust and satisfaction on green loyalty

Satisfaction reflects preference or desire regarding any brand or product and a deciding element in the brand's standing, which increases consumer loyalty (Saeed and Shafique, 2021). Research has confirmed that satisfied consumers could intend to repurchase and recommend the product to other consumers more frequently than dissatisfied consumers (Chen, 2010). Concerning the relationship between green customer satisfaction and green customer loyalty, extant literature has demonstrated that satisfied consumers are likely to

repeat a purchase, be more tolerant of high price premiums, and recommend the product to others (Kang and Hur, 2011; Martínez, 2015). Thus, satisfaction with a green brand can result in a general green brand loyalty (Kang and Hur, 2011; Martínez, 2015; Saeed and Shafique, 2021). When a consumer appreciates an ecofriendly product or green brand and is positive about that relationship, the outcome is a high-level loyalty and a certain degree of green commitment (Kang and Hur, 2011).

Moreover, the link between brand trust and brand loyalty has been established in previous studies, where brand trust acts as an antecedent of brand loyalty (Chaudhuri and Holbrook, 2001; Bang and Tuan, 2021). In green CBBE context, Kang and Hur (2011) and Martínez (2015) find a significant relationship between green brand trust and brand loyalty. Evidence shows that consumers who trust environmental labels are likely to purchase environmentally friendly products and remain loyal to such goods (Issock *et al.*, 2019).

Finally, brand image directly relates to the need and requirements of purchasers to encourage brand loyalty (Jamshidi and Rousta, 2021). Prior research indicates that brand image is positively related to brand loyalty (Chang, 2021; Jamshidi and Rousta, 2021). Furthermore, related to the concept of green marketing, green brand image positively affects green loyalty (Martínez, 2015; Bashir *et al.*, 2020).

Based on the above evidence from the literature, hypotheses H5, H6 and H7 are proposed:

H5. Green satisfaction is positively related to green loyalty.

H6. Green trust is positively related to green loyalty.

H7. Green brand image is positively related to green loyalty.

The influence of green brand image on green satisfaction and green trust

Firms investing many efforts in improving their brand images can avoid the trouble of environmental protests or punishment and enhance their customer satisfaction about environmental desires, sustainable expectations, and green needs (Chen, 2010). Furthermore, the link between green brand image and green satisfaction has been established in previous studies, where green image acts as an antecedent of green satisfaction (Chen, 2010; Martínez, 2015; Bekk *et al.*, 2015).

Moreover, brand image positively influences consumer trust because it can diminish the risk perceived by consumers and simultaneously increase the probability of purchase at the moment of transaction (Chen, 2010). Previous studies found a positive relationship between green brand image and green brand trust (Chen, 2010; Martínez, 2015; Bekk *et al.*, 2015; Bashir *et al.*, 2020). Based on the above evidence from the literature, hypotheses H8 and H9 are proposed:

H8. Green brand image is positively related to green satisfaction.

H9. Green brand image is positively related to green brand trust.

The influence of green satisfaction on green trust

Satisfaction with brand consumption creates a positive attitude toward that brand, which results in brand trust (Jamshidi and Rousta, 2021). When customers are satisfied with a transaction and feel secure in their relationship with the vendor, they develop trust and are willing to believe the promises of the business (Ravald and Grönroos, 1996). Accordingly, it can be postulated that overall satisfaction, as a general assessment of the consumption experience with a brand, engenders brand trust (Kang and Hur, 2011). Thus, a high level of positive green satisfaction can cause green brand trust of customers to increase.

H10. Green satisfaction is positively related to green brand trust.

Methodology

Measurement

The questionnaire designed for this study was originally drafted in English, translated into Vietnamese, then back to English by two native Vietnamese speakers to ensure it corresponded with the English version. Nine constructs are used in this study. Green product programs are measured by three items; green rice programs, three items; green promotion programs, five items; and green place programs, four items. All these items are adapted from Davaria and Strutton (2014). Green brand image is measured by five items; green brand satisfaction, four items; and green brand trust, five items. All these items are adopted from Chen (2010). Green loyalty is measured by five items, adapted from Kang and Hur (2011). All items are measured using a five-point Likert scale, ranging from 1 – strongly disagree to 5 – strongly agree. The questionnaire consisted of two sections: the first section concerns with personal information and demographic characteristics, and the second part of the questionnaire involves the research concepts.

Sampling and data collection

The hypotheses are tested using consumers who had purchased plant-based milk products at milk stores, supermarkets/hypermarkets, convenience stores, grocery stores located in Ha Noi capital, and Ho Chi Minh City, Vietnam's biggest city. Milk is a global or sustainable food that benefits human health, communities, and the environment. Plant-based milk such as oat milk, coconut milk, and soy milk were chosen for the study because they are better for the environment (McClements *et al.*, 2019). Furthermore, customers choose milk/products that are healthy and ecologically beneficial to meet their environmental demands (Chen, 2010). Convenience sampling is also performed. With instructions on how to complete them, the questionnaires were distributed to the respondents by an interviewer. The instructions emphasized that the study focused only on their personal opinions to minimize possible response bias. There were no right or wrong answers. Respondents were advised that their participation entitled them to a small gift. Cover letters were provided with all surveys to explain the aim and purpose of the research, and respondents were guaranteed the confidentiality and anonymity of their responses. Trained interviewers were instructed not to interview more than 05 consumers from the same stores to avoid potential bias stemming from a "sameness" in the consumers. Respondents were asked to complete the self-administered questionnaire onsite within 15 min approximately. A total of 1,000 questionnaires were distributed from August to December 2020. After eliminating incomplete questionnaires, we collected 870 completed questionnaires for further analysis. Most respondents were females (65.4%), who earned less than 500 USD/month (66.7%), below 40 years old (68.9%) and undergraduates (55.1%). Table 1 provides details on the demographic characteristics of the respondents.

Demographic profile		Frequency (%)
Gender	Male	34.6
	Female	65.4
Age (in years)	Below 30	31.7
	From 30 –below 40	37.2
	40–50	22.1
	Above 50	9.1
Income (USD/month)	Below 500	66.7
	500–900	21.8
	Above 900	11.5
Education level	Undergraduate	55.1
	Graduate	33.1
	Postgraduate	11.8

Table 1. Demographic characteristics

Data analysis

Cronbach's α reliability analysis and confirmatory factor analysis are used to assess the scales. Structural equation modeling is used to test the model and research hypotheses.

Results

Results testing scale

The measurement model is assessed via the reliability and validity of the studied constructs; details are presented in Tables 2 and 3. The recommended thresholds for key reliability and validity indexes, such as Cronbach's alpha, composite reliability (CR), average variance explained (AVE) values, and factor loadings, are adopted following Hair *et al.* (2010).

Construct reliability is measured using composite reliability. The value range from 0.823 to 0.880, higher than the recommended criteria of 0.6 (Hair *et al.*, 2010). We measure the internal consistency of the items of each construct using Cronbach's α; the value is higher than 0.6, which is considered suitable for reliability/internal consistency between the items (Hair *et al.*, 2010).

Convergent validity is measured using factor loading, and the average variance was extracted. The standardized factor loadings of all items range from 0.668 to 0.855, higher than the recommended criteria of 0.5 (Hair *et al.*, 2010).

Further, to evaluate discriminant validity, the value of the average variance extracted ranges from 0.500 to 0.678, higher than the criterion of 0.5 (Hair *et al.*, 2010). Moreover, for confirmation of discriminant validity, the square root of a construct's AVE should be higher than its bivariate correlation with the other constructs in the model (Fornell and Larcker, 1981).

Result of common method bias

Common method bias (CMB) might result in bias between the observed and true relationships by either inflating or deflating the estimate. Thus, several procedural remedies are considered during the survey design and data collection to ensure that CMB does not affect the interpretation of the results. For example, we protect respondent anonymity, reduce evaluation apprehension, use verbal midpoints for measures, and reverse coded questions. Furthermore, Harman's single-factor test is applied to check for CMB (Podsakoff *et al.*, 2003). The first unrotated factor captures only 31.605% of the variance in the data. Therefore, these results suggest that CMB is not an issue in this study.

Results of model testing

Owing to the complexity of the model and the need to test the relationships between the constructs simultaneously, we use structural equation modelling by applying the maximum likelihood method. Figure 1 shows the results of the testing model with $\chi^2 = 1{,}316.403$; df = 474; Cmin/df = 2.777; Tucker–Lewis fit index (TLI) = 0.929 (>0.9), comparative fit index (CFI) = 0.936 (>0.9), and root mean square error of approximation (RMSEA) = 0.048 (<0.07) (Hair *et al.*, 2010). Therefore, the data show acceptable fit to our conceptual model.

Results of estimate model

The results of the estimated model presented in Table 4 show that green products have a significant effect on green satisfaction ($\beta = 0.128$, $p = 0.000$), green brand loyalty ($\beta = 0.113$, $p = 0.000$). Therefore, H1c and H1d are supported, and H1a and H1b are not supported.

Constructs	SFL	CA	CR	AVE
Green product (PRT)				
This firm produces environmentally friendly products	0.689	0.820	0.823	0.610
This firm tries to improve the design and quality of its products in order to make them more environmentally friendly	0.855			
This firm has been a pioneer in introducing green products to the market	0.788			
Green price (PRI)				
This brand usually charges more for its environmentally friendly products	0.791	0.863	0.863	0.678
I must pay more to purchase the environmentally friendly products that are made by this firm	0.841			
Green products that are made by this firm are more expensive than non-green alternatives	0.837			
Green promotion (PRO)				
This firm provides a lot of information about its green products in its advertisements	0.747	0.880	0.880	0.595
This brand offers special promotions and deals (price discounts, coupons, etc.) to people who purchase its green products	0.833			
I have read about this firm's green products in newspaper articles	0.720			
In my opinion, the advertising of this firm's green products is great (very attractive)	0.789			
The advertisements (and informations) for this firm's green products are frequently shown	0.761			
Green place (PLA)				
This firm's green products can be found in stores which themselves are known for supporting environmental and green causes	0.748	0.839	0.840	0.568
The stores that sell green products made by this firm are usually environmentally friendly themselves	0.791			
This firm's green products are available in most of the retail outlets that environmentally friendly themselves	0.770			
The stores where I can buy this firm's green products have well-known green brands	0.701			
Green brand image (GIM)				
The brand is regarded as the best benchmark of environmental commitments	0.673	0.835	0.838	0.512
The brand is professional about environmental reputation	0.855			
The brand is successful about environmental performance	0.677			
The brand is well established about environmental concern	0.644			
The brand is trustworthy about environmental promises	0.706			
Green satisfaction (GSAT)				
You are happy about the decision to choose this brand because of its environmental commitments	0.776	0.842	0.842	0.571
You believe that it is a right thing to purchase this brand because of its environmental performance	0.773			
Overall, you are glad to buy this brand because it is environmental friendly	0.728			
Overall, you are satisfied with this brand because of its environmental concern	0.743			

(*continued*)

Table 2.
Constructs with items and reliability and validity

Constructs	SFL	CA	CR	AVE
Green trust (GBT)				
You feel that this brand's environmental commitments are generally reliable	0.668	0.833	0.833	0.500
You feel that this brand's environmental performance is generally dependable	0.721			
You feel that this brand's environmental argument is generally trustworthy	0.712			
This brand's environmental concern meets your expectations	0.693			
This brand keeps promises and commitments for environmental protection	0.738			
Green Loyalty (GLO)				
I will choose this brand as my first option in the future	0.813	0.879	0.879	0.644
I recommend this brand to others because it is environmentally friendly	0.795			
I will always use this brand because of its concern for the environment	0.800			
I would make positive comments about this hotel company to family and friends	0.800			

Table 2.

Note(s): SFL: Standardized Factor Loading, CR: Composite Reliability, AVE: Average Variance Extracted

	Mean	GPRT	GPRI	GPLA	GPRO	GIM	GBT	GSAT	GLO
GPRT	3.707	*0.781*							
GPRI	3.583	0.055	*0.823*						
GPLA	2.654	0.119	0.163	*0.754*					
GPRO	2.774	0.075	0.131	0.278	*0.775*				
GIM	2.781	0.020	0.056	0.087	0.102	*0.716*			
GBT	2.627	0.046	0.083	0.178	0.150	0.054	*0.707*		
GSAT	2.726	0.137	0.212	0.332	0.349	0.128	0.186	*0.756*	
GLO	2.803	0.180	0.281	0.448	0.424	0.162	0.240	0.519	*0.802*

Table 3.
Results of test for discriminant validity

Note(s): The italic diagonal elements are the square root of the variance shared between the constructs and their measures; off diagonal elements are the correlations among constructs

The results also show that H2a, H2c and H2d are supported, and H2b is not supported indicating that green prices have a significant effect on green CBBE dimensions ($\beta = 0.106$, $p = 0.007$) for green brand image, ($\beta = 0.137$, $p = 0.000$) for green satisfaction, ($\beta = 0.120$, $p = 0.000$) for green loyalty.

These findings support the notion that green places have a significant effect on green CBBE dimensions ($\beta = 0.207, p = 0.000$ for green brand image, $\beta = 0.362, p = 0.000$ for green trust, $\beta = 0.299, p = 0.000$ for green satisfaction, $\beta = 0.250, p = 0.000$ for green brand loyalty). Therefore, H3a, H3b, H3c and H3d are supported.

In addition, H4a, H4b, H4c and H4d are supported, revealing that green promotions have a significant effect on green CBBE dimensions ($\beta = 0.384$, $p = 0.000$ for green brand image, $\beta = 0.169$, $p = 0.000$ for green brand trust, $\beta = 0.398$, $p = 0.000$ for green satisfaction, $\beta = 0.222$, $p = 0.000$ for green brand loyalty).

The results also show that Hypotheses H5, H6 and H7 are supported, indicating that green satisfaction ($\beta = 0.281, p = 0.000$), green brand trust ($\beta = 0.202, p = 0.000$), green brand image ($\beta = 0.208$, $p = 0.000$) have a significant effect on green brand loyalty.

The findings show that green brand image has a significant effect on green satisfaction ($\beta = 0.280$, $p = 0.000$), and green brand trust ($\beta = 0.112$, $p = 0.013$). Thus, H8 and H9 are supported.

Finally, these findings support the notion that green satisfaction has a directly effects green brand trust ($\beta = 0.277, p = 0.000$).

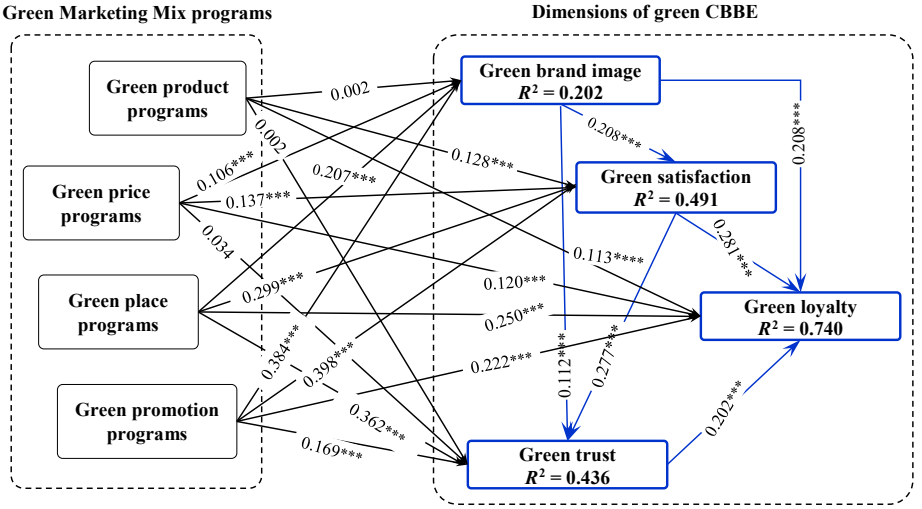

Figure 1.
Results of model testing

Note(s): *Significant at 10% level; **Significant at 5% level; ***Significant at 1% level

Hypothesis	Path	Estimate	*p*	Results
H1a	GPRT → GIM	0.002	0.954	Not supported
H1b	GPRT → GBT	0.002	0.955	Not supported
H1c	GPRT → GSAT	0.128	0.000	Supported
H1d	GPRT → GLO	0.113	0.000	Supported
H2a	GPRI → GIM	0.106	0.007	Supported
H2b	GPRI → GBT	0.034	0.356	Not supported
H2c	GPRI → GSAT	0.137	0.000	Supported
H2d	GPRI → GLO	0.120	0.000	Supported
H3a	GPLA → GIM	0.207	0.000	Supported
H3b	GPLA → GBT	0.362	0.000	Supported
H3c	GPLA → GSAT	0.299	0.000	Supported
H3d	GPLA → GLO	0.250	0.000	Supported
H4a	GPRO → GIM	0.384	0.000	Supported
H4b	GPRO → GBT	0.169	0.000	Supported
H4c	GPRO → GSAT	0.398	0.000	Supported
H4d	GPRO → GLO	0.222	0.000	Supported
H5	GSAT → GLO	0.281	0.000	Supported
H6	GBT → GLO	0.202	0.000	Supported
H7	GIM → GLO	0.208	0.000	Supported
H8	GIM → GSAT	0.280	0.000	Supported
H9	GIM → GBT	0.112	0.013	Supported
H10	GSAT → GBT	0.277	0.000	Supported

Table 4.
Results of estimate model

Discussion and managerial implications

The objectives of this study are to investigate the impact of the milk firms' green marketing mix tools on green CBBE creation, evaluate the inter-relationships among these green CBBE dimensions. The study provides important insights that assist researchers in investigating issues related to green CBBE, identifying green marketing functions and strategies in an

emerging market. The findings of this study offer valuable insights into the effects of each green marketing mix tool on green CBBE creation or each dimension of CBBE; it could inform corporations on how green marketing functions could contribute the most to their CBBE and develop green marketing functions/campaigns.

The current study generates findings that green products positively impact green satisfaction and green brand loyalty. This result supports the previous findings of Davari and Strutton (2014), Sohail (2017), who suggest that green product positively influences CBBE. Davari and Strutton (2014) and Sohail (2017) do not investigate the impact of green marketing tools on green CBBE. Moreover, the findings of this study are related to the non-significant influence of green product program on green image and green brand trust. They differ from the findings of Rahbar and Wahid (2011), who suggest that green products significantly impact green brand trust. Furthermore, they contradict the findings of Tsai *et al.* (2020), who suggest that green products significantly impact brand image. These findings would be of great interest to firms and marketers. The benefits of green products are usually long-term, so it does not accrue to consumers who purchase or use green products. Therefore, marketers must focus on green product strategies to increase green brand image, green satisfaction and green trust. Although the gap between expectations and perceived quality still exists, marketers can reduce this by diversifying their green product lines/types and improving the design and quality of their products (i.e. eco-labeling, recyclable packaging, certified eco-friendly products).

This study find that green prices positively impact green brand image, trust, satisfaction and green loyalty. This result supports the previous findings by Davari and Strutton (2014) and Sohail (2017), who suggest that green price have a positively influences CBBE. However, Davari and Strutton (2014), Sohail (2017) do not research in a green CBBE context. Furthermore, the observation that green price program was not significantly associated with enhanced trust in green brands. Generally, the prices of greener products are a bit high. The typically higher prices of green products are largely responsible for the extant disconnect between green consumers' stated beliefs and actual behaviors. Thus, marketers can deliver green values to the point where those values justify higher prices in the market's green mind. It is not enough to convince consumers to pay more to create benefits for future generations or the natural environment. Marketers should emphasize the benefits/features of green brands that make a difference or are superior to other brands of product category. These can increase perceived quality, which in turn will significantly affect brand trust. Furthermore, marketers often face the challenge to identify which consumers are willing to pay more for environmentally friendly products, promotions with price incentives such as quantity and frequency discounts, coupons, and rebates to increase interest and trialability.

Our study demonstrates that green place significantly enhances green CBBE dimensions. This result supports the findings of Davari and Strutton (2014) and Sohail (2017), who suggested that green price positively influences CBBE. However, Davari and Strutton (2014), Sohail (2017) do not research in the green CBBE context. Hence, marketers must also emphasize the choice of appropriate green distribution by collaborating with channel partners to improve the environmental impact of their joint activities, such as reconfiguring logistics arrangements to make them environmentally efficient; manage products from production to the point of sales, and then, to consumers; increasing green distribution intensity (supermarkets, convenience stores, directly and on-line marketing channels, etc.) for consumers to access green products easily. Moreover, firms should reduce packaging (to decrease transportation costs, optimize carriers, reduce material consumption). According to Dangelico and Vocalelli (2017), the internet plays an important role in green place. Thus, another option is to use integrated transportation systems and the Internet to lessen the environmental effect of transportation. Conversely, according to our observations, Vietnamese consumers continue to purchase at general trade channels (grocery shops,

convenience stores) considered non-green channels. In this context, dairy companies may want to boost the availability of green goods in various channels to improve the buy and everyday experience while also encouraging green consumption. Furthermore, enterprises should emphasize reverse logistics to lead to cost savings, time savings, higher revenues, lower inventory expenses, better inventory management, a drop in stock-out incidents, and better customer service.

This study also finds that green promotion positively impacts green CBBE dimensions (green brand image, trust, satisfaction and loyalty). This result agrees with previous studies in understanding the relationships between green promotion and CBBE dimensions (Davari and Strutton, 2014; Sohail, 2017). Green promotion plays an essential role in the four traditional green marketing mix elements in green CBBE creation. These findings would be of great interest to firms and marketers. Through the execution of sound green promotion programs, as eco-labels, firms specific attention should design environmentally friendly packaging that uses environmentally friendly materials (recycled, recyclable, biodegradable, compostable) and minimizes the number of materials used (eventually making packaging unneeded, such in the case of draft detergents) and that communicates the environmentally friendliness of the product. Through green advertising, firms highlight product environmental benefits, promote sustainable lifestyles, improve the green image of the brand, and reduce the information asymmetry typical of green products. Firms also need to differentiate themselves from competitors by communicating a green brand image; the diversity of environmental problems requiring more extensive and in-depth communication. Most importantly, it is critical that advertisers deliver on what they promise and mention in their advertising messages because members of society may react negatively (i.e. organic farming, farm-raised, energy-efficient processing, waste control) when advertisers overestimate their benefits. As a result, they might assist milk companies in developing trusting and long-term connections with their customers. Thus, these could help milk firms to build trustful and long-lasting relationships with consumers.

This study discovers the causal order among CBBE dimensions: green brand image, green trust, green satisfaction and green loyalty. Specifically, the current study reveals that green brand image, green trust, and green satisfaction positively influence green loyalty. This result supports the findings of Martínez (2015), who analyze the influence of green brand image, green trust, and green satisfaction on green loyalty. The current study generates findings that green brand image has a significant positive impact on green satisfaction and trust. This result supports the finding of Martínez (2015), who suggest that image positively influences green satisfaction and green trust. An interesting outcome of this research is that green satisfaction has a significant positive impact on green trust. It differs from Martínez (2015), who find the effects of brand trust on green satisfaction. In short, these results agree with those of previous studies in understanding the relationships among green CBBE dimensions (Chen, 2010; Ng *et al.*, 2013; Chang and Chen, 2014; Delafrooz and Goli, 2015; Martínez, 2015); and providing managers with useful insights in branding efforts (Buil *et al.*, 2013). Thus, managers should develop the brand image in the first place because it has a significant role in creating green satisfaction and green trust. Then, they should concentrate on green satisfaction and trust and create more green loyalty.

Contribution to literature

Several important contributions to the literature emerge from this study. First, the study bridges the gap in the literature by investigating the influence of firms' green marketing functions on green CBBE. The study findings confirm that green promotion and green place are the most important functions in green CBBE creation in an emerging market like Vietnam. This study also extends the findings of many scholars that the relationship between the four

Green Ps (product, price, place and promotion) and CBBE (Davari and Strutton, 2014; Sohail, 2017). The results will encourage interested companies to invest more in green marketing strategies and programs to increase CBBE.

Second, the study also fills another gap in the literature by testing the relationship between CBBE dimensions (green brand image, green trust, green satisfaction, and green loyalty) in an emerging market like Vietnam. Understanding the relationships among CBBE dimensions is a necessary task (Lehmann *et al.*, 2008), as it will provide managers with useful insights into branding efforts (Buil *et al.*, 2013). In the new given context of Vietnam, consumer attitudes toward the marketing mix differed across countries due to cultural values (Cui *et al.*, 2008).

Limitations and future research

A few limitations of this study must be noted. First, future studies should consider more green marketing mix elements (e.g. green packaging and eco-labels) to further explore the factors influencing green CBBE. Second, this study selects only four specific dimensions of green CBBE, and a comprehensive study of other dimensions of green CBBE must be explored. Third, respondents are drawn from a selection of Vietnamese consumers, limiting the generalizability of the findings. Fourth, this study reports the initial findings in an emerging market, in a sector of growing importance to scholars and marketers, while increasing global coverage on ecological issues, emphasis on greener and more sustainable changes, and innovations in marketing call for more research on types of sustainable marketing on CBBE. Finally, convenience sampling might pose a problem, as the results cannot represent all sample sizes.

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Corresponding author
Bang Nguyen-Viet can be contacted at: bangnv@ueh.edu.vn