

# Sustainable Branding Strategies: The Role of Ecopreneurship in Green Marketing and Consumer Loyalty

Arthur Simanjuntak<sup>1\*</sup>, Zabenaso Queen<sup>2</sup>, Rizki Galang Rahmadani<sup>3</sup>, Henry Henry<sup>4</sup>

<sup>1</sup>Department of Accounting, Methodist University of Indonesia, Indonesia

<sup>2</sup>Computer Science, Mfintee Incorporation, South Africa

<sup>3</sup>Doctor Information System Postgraduate School, Diponegoro University, Indonesia

<sup>4</sup>Department of Accounting, STIE PMCI, Indonesia

<sup>1</sup>smjt@rocketmail.com, <sup>2</sup>zabenasoqueen@mfintee.co.za, <sup>3</sup>rizkigalangrahmadani@students.undip.ac.id, <sup>4</sup>henryciang451@gmail.com

\*Corresponding Author

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## ABSTRACT

In an era of increasing environmental awareness, consumers are not only concerned with product quality but also with the sustainability values embedded in a brand. Ecopreneurship, as an environmentally driven entrepreneurial approach, plays a crucial role in shaping sustainable branding strategies through the implementation of green marketing. **This study aims** to analyze the influence of ecopreneurship on sustainable branding and its impact on consumer loyalty. **The main research problem** addressed is how ecopreneurial practices and green marketing contribute to building consumer loyalty within environmentally conscious brands. A **quantitative research method** was employed, using a structured questionnaire distributed to 150 respondents who are consumers of eco-friendly products. Data were analyzed using SmartPLS 4 through the Partial Least Squares Structural Equation Modeling (PLS-SEM) approach. **The findings** indicate that ecopreneurship significantly influences the implementation of green marketing strategies, which in turn positively affects brand image and consumer loyalty. Branding strategies that integrate sustainability values were found to foster emotional engagement, enhance consumer trust, and encourage repeat purchase behavior. **The study concludes** that ecopreneurship plays a vital role in developing a sustainable competitive advantage through environmentally focused branding. **The practical implications** suggest that businesses should holistically adopt sustainability principles in their branding communications to strengthen market positioning and foster long-term consumer loyalty.

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## 1. INTRODUCTION

In recent years, the increasing concern over climate change, environmental degradation, and overconsumption has prompted a shift in consumer behavior toward more sustainable choices. This growing awareness has compelled businesses to adapt by embedding sustainability into their core strategies, particularly in branding and marketing [1]. As a response, ecopreneurship entrepreneurial activity with a strong commitment to

environmental values has emerged as a transformative business model. Ecopreneurs aim not only for profit, but also for positive environmental impact, creating value through eco-innovative products and services [2].

One of the critical tools ecopreneurs utilize is green marketing, which involves promoting products or services based on their environmental benefits [3]. When strategically implemented, green marketing can influence consumer perceptions and strengthen brand loyalty [4]. Furthermore, sustainable branding strategies, which combine environmental responsibility with consistent brand messaging, have become essential in differentiating eco-conscious businesses in competitive markets [5], [6].

However, several challenges hinder the effectiveness of these strategies. Firstly, consumers often face greenwashing misleading claims about environmental practices which reduces trust and makes it harder for genuinely sustainable brands to build loyalty [7], [8]. Secondly, many small to medium sized ecopreneurs lack the resources or marketing expertise to implement effective branding strategies that resonate with target audiences [9], [10]. Lastly, there is a limited understanding of how sustainability driven branding directly influences consumer loyalty, particularly in emerging markets where price sensitivity often outweighs environmental values [11].

Although previous studies have explored green marketing and consumer behavior, most focus either on large corporations or general marketing outcomes, without specifically analyzing the interplay between ecopreneurship, sustainable branding, and consumer loyalty [12]. Moreover, few empirical studies have used quantitative modeling tools like SmartPLS to examine the structural relationships among these variables [13].

This study seeks to address these gaps by examining the role of ecopreneurship in shaping sustainable branding strategies and their impact on consumer loyalty, using a structural equation modeling approach [14]. The findings are expected to provide theoretical contributions to the field of green entrepreneurship and practical insights for ecopreneurs striving to position their brands effectively in a sustainability driven marketplace.

## 2. LITERATURE REVIEW

### 2.1. Ecopreneurship and Sustainable Branding

Ecopreneurship is a form of entrepreneurship that emphasizes the creation of economic value through environmentally and socially responsible approaches. This concept focuses not only on financial profit but also on generating positive impacts for sustainability [15], [16]. An ecopreneur acts as an agent of change by promoting sustainable business practices through innovation and environmental ethics [17], [18]. In the context of branding, this approach builds a brand identity recognized not only for product quality but also for its sustainability values [19], [20].

Research indicates that ecopreneurs who integrate sustainability principles into their branding strategies can enhance reputation and achieve differentiation in markets increasingly aware of environmental issues [21]. Sustainable branding has proven to be an effective strategy for building authentic and value driven brand images [22]. Nevertheless, challenges such as greenwashing portraying products as eco-friendly without substantial evidence and resource limitations in terms of funding and technology remain significant obstacles to consistent implementation [23].

### 2.2. Green Marketing and Consumer Loyalty

Green marketing refers to marketing activities that emphasize eco-friendly aspects, from production and distribution to consumer communication [24]. When implemented consistently and transparently, it fosters positive perceptions and strengthens consumer loyalty to the brand [25]. This aligns with consumer value theory, which suggests that perceived environmental value can influence purchasing decisions [26].

However, consumer loyalty toward green products does not always align with their initial intentions [27]. Many consumers express high interest, yet actual purchasing behavior remains low due to barriers such as higher prices, limited accessibility, and lack of trustworthy information about sustainability claims [28], [29], [30]. This illustrates the gap between attitude and behavior in green consumption, known as the attitude-behavior gap.

### 2.3. Perceived Value and Trust in Green Marketing

The success of green marketing strategies depends not only on eco-friendly product attributes but also on the extent to which consumers perceive value and trust the company's claims [31]. Key dimensions such as green products, green promotion, green distribution, and green pricing significantly influence brand loyalty [32].

Consumer trust plays a crucial role in mediating the relationship between perceived value and loyalty. Consumers tend to remain loyal to brands they perceive as honest, transparent, and consistent in applying sustainable practices [33]. Yet, this trust is dynamic and can be shaped by public opinion, social media reviews, and consumers direct experiences with the products [34].

#### 2.4. Digital Marketing and Green Consumer Engagement

The rise of digital platforms has transformed how businesses, particularly ecopreneurs, connect and communicate with their consumers in the modern marketplace [35]. The integration of digital marketing strategies allows ecopreneurs to engage consumers more interactively, personally, and efficiently through multiple online touchpoints, including social media platforms, e-commerce websites, email marketing, and mobile applications. These channels not only expand market reach but also serve as powerful tools for promoting sustainability-oriented values and green innovation.

Digital marketing provides an avenue for ecopreneurs to embed sustainability messages into their brand narratives through storytelling, gamification, influencer marketing, and user-generated content campaigns [36]. Storytelling enables brands to humanize their sustainability efforts by highlighting real-world environmental impacts, ethical production processes, and social responsibility initiatives [37]. Meanwhile, gamification such as challenges that reward eco-friendly behaviors or carbonsaving activities encourages consumers to participate actively in sustainable practices, thus fostering behavioral change. Influencer collaborations further amplify these messages, leveraging trusted digital personalities who align with green values to authentically engage their followers.

High levels of engagement with eco-friendly digital content play a critical role in shaping consumer attitudes and brand loyalty. When consumers consistently interact with sustainability-driven narratives, they develop emotional attachment and cognitive resonance with the brand's environmental mission [38]. This emotional engagement not only increases purchase intentions but also strengthens advocacy behaviors, where consumers voluntarily promote the brand within their communities both online and offline. Over time, this dynamic cultivates a loyal consumer base that values the brand not only for its products but also for its ethical stance and environmental contributions.

#### 2.5. Research Gaps and Future Directions

Although numerous studies have explored ecopreneurship, green marketing, and consumer loyalty individually, there is still limited research that integrates these elements into a comprehensive conceptual framework. Most existing works focus on large corporations, leaving the role of ecopreneurs particularly SMEs as social and ecological change agents underexplored [39].

In addition, quantitative approaches such as Structural Equation Modeling have not been widely applied to examine direct and indirect relationships among these variables [40]. This opens opportunities to develop an integrative model connecting sustainable branding, ecopreneurship, green marketing, perceived value, trust, and consumer loyalty [41]. Future research should also expand across different cultural and geographical contexts to better understand local dynamics in implementing effective and relevant sustainable branding strategies [42], [43].

### 3. METHOD

#### 3.1. Research Type and Approach

This study adopts a quantitative research approach aimed at empirically measuring and analyzing the relationships between variables as illustrated in Figure 1. The quantitative method was selected to examine the influence of ecopreneurship on green marketing strategies and its subsequent impact on brand image and consumer loyalty [44]. The data analysis was conducted using Partial Least Squares Structural Equation Modeling (PLS-SEM) with the assistance of SmartPLS 4 software, which is appropriate for analyzing complex relationships between latent constructs.

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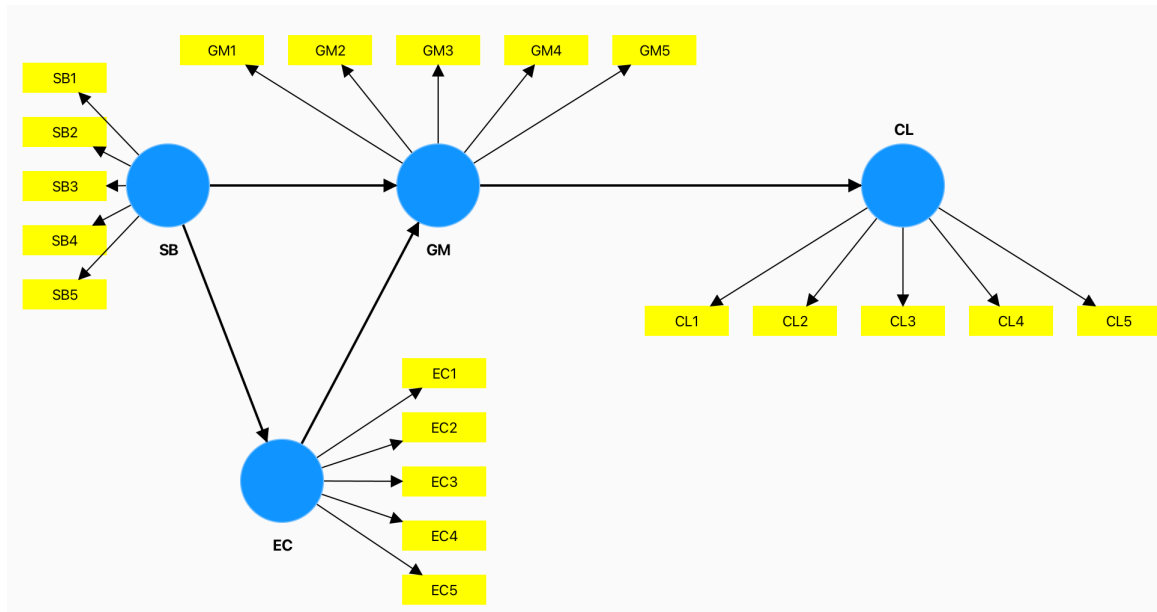


Figure 1. Research Model

**3.2. Population and Sample**

The population of this study consists of consumers who have purchased or used environmentally friendly (eco-friendly) products in Indonesia. A purposive sampling technique was employed, with the following inclusion criteria:

- Consumers who have purchased or used eco-labeled products,
- Aged 17 years or older,
- Have basic awareness of sustainability or environmental issues.

A total of 150 respondents were successfully collected through the distribution of an online questionnaire using Google Forms and social media platforms.

**3.3. Discriminant Validity**

Discriminant validity is a fundamental concept in research, ensuring that each of your study’s variables or dimensions is truly unique and distinct from the others. Think of it this way: if you’re measuring both “intelligence” and “creativity”, discriminant validity ensures your “intelligence” scale isn’t accidentally measuring “creativity” as well. If your measures are too similar, you can’t confidently draw conclusions about their individual effects, which can lead to serious statistical issues like multicollinearity.

The Table 1 you provided is a classic test for this, called the Fornell-Larcker Criterion. The rule is straightforward: the square root of a construct’s Average Variance Extracted (AVE) must be greater than its correlation with any other construct.

Table 1. Fornell-Larcker Criterion

	CL	EC	GM	SB
CL	<b>0.811</b>			
EC	0.848	<b>0.863</b>		
GM	0.861	0.892	<b>0.865</b>	
SB	0.780	0.829	0.864	<b>0.855</b>

The primary instrument used in this study was a structured questionnaire comprising items measured on a five-point Likert scale, ranging from 1 (strongly disagree) to 5 (strongly agree). The questionnaire was developed based on validated constructs from prior studies and included the following dimensions:

- Ecopreneurship: environmental orientation, sustainable innovation, and social responsibility.
- Green Marketing: green promotion, green product, green distribution, and green pricing.
- Sustainable Branding: brand value, brand image, and sustainability commitment.
- Consumer Loyalty: repeat purchase intention, brand recommendation, and emotional attachment.

Before full-scale distribution, a pilot test was conducted with 30 respondents to assess the clarity and internal consistency of the items. Validity and reliability tests were performed to ensure the instrument's robustness.

### 3.4. Data Analysis Technique

The data were analyzed using SmartPLS 4 and the PLS-SEM (Partial Least Squares Structural Equation Modeling) approach. This method is particularly suitable for exploratory research involving complex models and non-normally distributed data. The analysis was conducted in two main stages:

- Measurement Model Evaluation (Outer Model): The measurement model, also known as the outer model, focuses on assessing the reliability and validity of the constructs used in the study. In the context of PLS-SEM (Partial Least Squares Structural Equation Modeling), this step is essential to ensure that the indicators accurately measure the latent variables (constructs) they are intended to represent.
- Structural Model Evaluation (Inner Model): The structural model, also known as the inner model, evaluates the hypothesized relationships among latent constructs in the research framework. In PLS-SEM (Partial Least Squares Structural Equation Modeling), this step follows the validation of the measurement model and focuses on assessing the predictive power and directional relationships among variables.
- Path coefficients to test the strength and direction of relationships,
- R-square values to assess the explanatory power of the model,
- Significance testing using bootstrapping with 5,000 samples.

The structural model, also known as the inner model, evaluates the hypothesized relationships among latent constructs in the research framework. In PLS-SEM (Partial Least Squares Structural Equation Modeling), this step follows the validation of the measurement model and focuses on assessing the predictive power and directional relationships among variables.

- Convergent validity (via Average Variance Extracted or AVE),
- Construct reliability (Composite Reliability and Cronbach's Alpha),
- Discriminant validity.

### 3.5. Research Ethics

This study adheres to ethical research principles. All respondents participated voluntarily and provided informed consent. Confidentiality and anonymity were ensured, and the data collected were used solely for academic and research purposes.

### 3.6. Research Design

This study adopts a quantitative approach with a causal-explanatory research design as outlined in Table 2. The objective is to examine the causal relationship between Ecopreneurship (X1), Green Marketing Strategies (X2), and their impact on Consumer Loyalty (Y) through the mediating role of Perceived Value (M1) and Trust (M2).

### 3.7. Research Ethics

This study adheres to ethical research principles. All respondents participated voluntarily and provided informed consent. Confidentiality and anonymity were ensured, and the data collected were used solely for academic and research purposes.

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Table 2. Population and Sample

Aspect	Description
Population	Consumers who have interacted with ecopreneur-led brands in Indonesia.
Sampling Method	Non-probability purposive sampling.
Inclusion Criteria	- Purchased eco-friendly products in the last 6 months. - Familiar with sustainability-oriented brands. - Minimum age 18 years old.
Sample Size Calculation	Based on SmartPLS “10-times rule”: Maximum arrows pointing to one construct = 4. Minimum sample size = $10 \times 4 = 40$ .
Target Sample Size	150–200 respondents to improve reliability and generalizability.

#### 4. MANAGERIAL IMPLICATIONS

The findings of this study offer several important insights for startup founders, managers, and decision-makers in the digital industry. First, the results highlight the crucial role of implementing innovation strategies such as product, process, and business model innovation as a means to achieve sustainable business growth. Managers must prioritize continuous innovation to maintain competitiveness in the rapidly evolving digital market. By doing so, they can increase revenue, expand market share, and improve customer retention.

The study underscores the need for startups to actively identify and capitalize on emerging opportunities. Managers are advised to build organizational capabilities that support flexibility and adaptability, ensuring that startups can quickly respond to technological advances, market changes, and shifts in consumer preferences. A notable example is Satya Nadella, CEO of Microsoft, who successfully transformed the company’s culture. The limitations of this study suggest that managers should not rely solely on quantitative performance indicators but should also integrate qualitative insights into their decision-making processes. This implies the need for managers to engage more closely with stakeholders, including customers, partners, and industry experts, to uncover nuanced challenges and opportunities that may not be visible through numerical data alone. Ultimately, the implications extend to industry-specific contexts. These tailored strategies will enable startups to better leverage innovation, build resilience, and ensure long-term competitiveness.

#### 5. CONCLUSION

The research adopted a rigorous quantitative research approach, utilizing the Partial Least Squares Structural Equation Modeling (PLS-SEM) technique with the assistance of SmartPLS 4 software. The study’s population consisted of consumers who have purchased or used environmentally friendly (eco-friendly) products in Indonesia. Data were successfully collected from a total of 150 respondents through purposive sampling.

The primary structural finding is that ecopreneurship significantly influences the implementation of green marketing strategies, which subsequently positively affects brand image and, critically, consumer loyalty. The analysis confirmed that branding strategies integrating sustainability values successfully foster emotional engagement, enhance consumer trust, and encourage repeat purchase behavior among consumers. Thus, the study concludes that ecopreneurship plays a vital role in developing a sustainable competitive advantage through environmentally focused branding.

Methodological quality was established through the evaluation of the measurement model, including the assessment of Discriminant Validity tested using the Fornell-Larcker Criterion. Key quantitative values derived from this test confirmed high internal consistency and distinctiveness: the square root of the Average Variance Extracted (AVE) was reported as 0.865 for Green Marketing (GM), 0.863 for Ecopreneurship (EC), 0.855 for Sustainable Branding (SB), and 0.811 for Consumer Loyalty (CL).


In essence, the study concludes that ecopreneurship plays a vital role in developing a sustainable competitive advantage, advising businesses to holistically adopt sustainability principles in their branding communications to secure long-term consumer loyalty.


## 6. DECLARATIONS

### 6.1. About Authors

Arthur Simanjuntak (AS)  <https://orcid.org/0000-0003-2821-6324>

Zabenaso Queen (ZQ)  <https://orcid.org/0009-0003-0763-9931>

Rizki Galang Rahmadani (RG)  <https://orcid.org/0009-0009-6794-9476>

Henry Henry (HH)  <https://orcid.org/0000-0002-0036-1389>

### 6.2. Author Contributions

Conceptualization: AS; Methodology: ZQ; Software: RG; Validation: AS and HH; Formal Analysis: RG; Investigation: ZQ; Resources: AS; Data Curation: RG; Writing Original Draft Preparation: HH and AS; Writing Review and Editing: RG and ZQ; Visualization: AS; All authors, AS, ZQ, RG, and HH, have read and agreed to the published version of the manuscript.

### 6.3. Data Availability Statement

The data presented in this study are available on request from the corresponding author.

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The authors received no financial support for the research, authorship, and/or publication of this article.

### 6.5. Declaration of Conflicting Interest

The authors declare that they have no conflicts of interest, known competing financial interests, or personal relationships that could have influenced the work reported in this paper.

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