



INTEGRATING SUSTAINABILITY INTO MARKETING STRATEGIES: A STUDY OF PACKAGED FOOD BRANDS IN INDIA

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Abstract

Sustainability has become a strategic concern for packaged food brands as consumers, regulators, and stakeholders increasingly expect firms to reduce environmental impact while maintaining product value and market competitiveness. This study examines how sustainability is integrated into the marketing strategies of packaged food brands in India and evaluates its influence on consumer trust, brand loyalty, and purchase intention. The study adopts a mixed-method research design, combining qualitative insights from in-depth interviews with 10 marketing managers and quantitative data collected through structured questionnaires from 200 urban consumers. Sustainability integration is examined across key marketing dimensions, including sustainable product design, eco-friendly packaging, sustainable distribution, and green marketing communication. The quantitative data were analyzed using descriptive statistics, correlation analysis, regression analysis, and structural equation modelling. The findings indicate that sustainability-oriented marketing practices positively influence consumer responses, particularly when they are visible, credible, and clearly communicated. Sustainable packaging showed the strongest correlation with brand loyalty ($r = 0.62$), followed by green communication ($r = 0.59$), suggesting that consumers respond more favorably to sustainability practices that are directly observable and supported by transparent claims. The results also indicate that price sensitivity and perceived greenwashing moderate the effectiveness of sustainability marketing, especially in a price-conscious emerging market such as India. The study contributes to sustainability marketing literature by providing empirical evidence from the Indian packaged food sector and by highlighting the importance of integrating sustainability across the marketing mix. The findings offer practical guidance for managers seeking to develop authentic, affordable, and transparent sustainability-driven marketing strategies.

Keywords: Sustainability marketing; Packaged food brands; Consumer trust; Green communication.

1. Introduction

As businesses today are being called upon to juggle profitability with environmental and social concerns, sustainability is increasingly a strategic issue in both business and management. The importance of responsible consumption, packaging waste, resource depletion, and climate change has spurred a re-thinking by companies on how products are designed, produced, distributed, and communicated to consumers. In marketing, this has broadened the scope from an immediate sale and promotional statements to one that is more of a long-term value creation for consumers, organizations, and society. Green marketing and sustainability-oriented marketing are no longer perceived as methods of communication, but are seen increasingly as strategic marketing measures that shape the product development, brand positioning, consumer trust and competitive advantage of products (Bhardwaj et al., 2023; Kotler et al., 2022). Packed food is particularly relevant to sustainability as it relates directly to consumption habits and the environmental impacts of the packaged food industry are significant.

Packaging materials, sourcing systems for ingredients, transportation systems, retail outlets, and waste disposal systems are pillars that packaged food brands rely on. These activities add to plastic waste, carbon emissions and resource usage, and sustainability is a huge concern for the companies and consumers alike. Consequently, sustainable food marketing has gained attention of the academia and management field. In addition to cost, flavor, convenience and quality, consumers also consider the responsibility of the packaged food brand and food labelling, ethical sourcing, and environmental performance of the packaging (Panda et al., 2026; Ketelsen et al., 2020).

The importance of sustainability based marketing has grown in India in tandem with the explosive growth of packaged food industry. With the process of urbanization, lifestyle changes, rising disposable income, growing working population and growth of organized retail, the demand for packaged food products and convenience foods have increased. Meanwhile, Indian consumers are also becoming more health, sustainable, product label and environment conscious. The Indian market, however, is beset with some challenges. There is a high price sensitivity among the consumers and they might not be willing to pay premium for sustainable products based on their positive attitude towards environmental responsibility (Sharief & Panghal, 2023; Pahlani et al., 2025).

A gap between positive intent on sustainable consumption and actual action is a common problem in sustainable consumption studies. While people can talk the talk, they still may not buy products that are environmentally responsible, sustainable packaging or responsible sourcing in part due to the fact that price, availability, convenience, product quality, trust and perceived value are all factors in their purchasing decisions. The findings of previous studies showed that green purchase behavior can be affected by consumer effectiveness perception in addition to their environmental concerns (Young et al., 2010; Witek & Kuźniar, 2023), by social influence and by product performance satisfaction and by purchase behaviour (Witek & Kuźniar, 2023; Young et al., 2010). This attitude-behaviour gap in emerging markets like India is more complicated as in the price sensitive categories of products within which sustainable packaged food products compete, the affordability is a key purchase intention determinant.

Consumer scepticism with regards to sustainability claims is another strong hurdle. With the increasing number of brands incorporating environmental messages into their advertising, packaging and labelling and digital communication, consumers may be wondering if such messages are truly about sustainability or a symbolic move on the part of the brand. Consumers, and sometimes the brand itself, may lose trust in the brand if it is subject to greenwashing, defined as false or exaggerated environmental statements. This issue is especially relevant for packaged food markets, as consumers might not have the opportunity to see for themselves information about the source of ingredients, packaging materials, carbon footprint, and environmental protection. There is evidence that negative perceptions of greenwashing impact green purchase intention, consumer trust and brand relationships (Sun & Shi, 2022; Nguyen & Duong, 2025).

Lacking in specific substantiation or support, vague sustainability claims can thus undermine the effectiveness of genuine sustainability practices (Sun & Shi, 2022; Senan et al., 2025). Sustainability marketing has caught the focus of the increasing attention but there are still some important research gaps. The present literature focuses on one of the following subjects: green marketing, the consumption of organic food, sustainable packaging and/or consumer purchase intention. Very few studies are focused on the way sustainability is addressed within the product design, packed food packaging, pricing, distribution and communication of packaged food brands. This is significant as consumers often engage with sustainability through various brand interactions and experiences and not through a single action or message (Mallick et al., 2024; Ahmed et al., 2023).

The study's need is rooted in the growing demand of packaged food brands to reduce the amount of packaging waste, enhance their sourcing, establish greater responsibility for their supply chain and to make their environmental performance more transparent. Packaged food products are linked to plastic consumption, logistics emissions and business strategy, all of which demand a sustainable approach, in order to build trust with consumers, essential for the success of businesses (Chirilli et al., 2022; Pavón Losada et al., 2025). This is of special concern in India, as the packaged foods industry is growing rapidly and consumers assess products based on the factors of price, perceived value, product availability and claim credibility. While consumers might be positively thinking about sustainability, they often consider price and fear greenwashing, particularly when sustainability statements are ambiguous or hard to confirm (Asif et al., 2018; Zheng et al., 2022). Hence focus of this study is on sustainability driven marketing strategies in the packaged food industry in India where the study is confined to how the brands are incorporating sustainability in product and packaging, marketing communication, distribution and value positioning.

The study's findings will be useful in the sustainability marketing literature and for the design of sustainable strategies for the packaged food sector in India that are credible, affordable, and effective (Vermeir & Verbeke, 2006; ElHaffar et al., 2020). The objectives of the study are: To investigate the role played by packaged food brands in India in incorporating sustainability in their marketing mix; to understand how sustainability oriented marketing strategies impact consumer trust; to understand the impact of sustainability marketing on the consumer response in terms of brand loyalty and purchase intention; to analyse the role of price sensitivity and perceived greenwashing as a mediating variable between sustainability marketing and consumer response; to recommend managerial implications on how sustainable marketing can be effectively developed as a credible and consumer driven strategy in the packaged food sector.

2. Literature Review

Sustainability Marketing is an approach that embeds eco- and social responsibility into the core marketing functions, including product development, pricing, promotion, distribution and value creation of those products over time to benefit customers. Sustainability marketing, unlike traditional marketing which focuses on the satisfaction and profitability of the customer, takes the wider view of how the business is affecting society, natural resources and how the business is affecting future consumption. This is particularly crucial in the food industry where consumer decisions can have significant implications for health, packaging waste, resource consumption and environmental impact. Thus, Green Marketing is not only a marketing activity, but also a strategic marketing approach that impacts the positioning of brands, the engagement of customers, and responsible value creation (Ottman, 2017).

Recent research also highlights the importance of integrating sustainability into business models, policy alignment, instead of relying on communication as a symbolic tool (Jha, 2025). The development of sustainable products and packaging plays a crucial role in sustainable marketing as it embodies a brand's environmental responsibility. Consumers tend to consider sustainability when buying packaged food items in terms of recyclable materials, biodegradable packaging, the decreased use of plastic, portion size and visible environmental labelling. Product features can help reinforce brand identity and help to make sustainability more real at purchase and consumption by getting in front of people. Sustainable packaging, however, can only work if consumers are aware of the benefits and feel safe, easy and affordable to use and reliable in terms of function.

The findings suggest that the attributes of sustainability affect the consumer assessment, however, their effect is dependent on the product quality and functional value (Jakubowska et al., 2024). Likewise, other research with younger customers indicates that attitudes towards sustainable product properties are positive when they provide consistency with personal values, concern for the environment, and lifestyle expectations (Bajar et al., 2024). Green marketing communication is a combination of eco-labels, sustainability claims, advertising messages, social media content and brand disclosures regarding environmental responsibility. It is used to minimise the information gap between companies and consumers. For packaged foods, it is not always straightforward to ensure that a food item is ethically sourced or is environmentally friendly or produced sustainably. Communication should, therefore, be specific, evidence-based and easily understood. It may draw on the reader's attention, but it can also raise doubts if it is not backed up by reliable evidence.

Research studies indicate that when there is the link of trust, perceived value, and clear product benefits, studies suggest that green marketing practices influence consumer decisions (Garcia-Salirrosas & Rondon-Eusebio, 2022). Moreover, the credibility of green marketing communication is further strengthened when the environmental standards are transparent and policy frameworks support green marketing. The adoption of

sustainable distribution and supply chain practices involves several measures, such as minimising carbon emissions associated with logistics, optimising transport routes, reducing food waste, optimising storage, and responsible food sourcing. These practices are more hidden from the consumer than packaging and advertising, but can have a positive effect on the brand image and reputation of the company.

Packaged food brands have a concern with supply chain sustainability as the sourcing, processing, storage and transport all contribute to the environmental impact of the packaged food. Research on sustainable food consumption shows that while consumers are becoming more conscious of the companies' responsibilities at the end of the value chain, they also hold these companies accountable for their actions throughout the entire value chain (Nichifor et al., 2025). Likewise, studies on the sustainability field reveal that sustainability can be achieved through operational efficiency and environmental innovation, which can contribute to sustainability's long-term competitiveness when embedded in strategic management (Sharma & Sengar, 2025). One critical pathway for sustainability influencing brand loyalty and purchase intention is consumer trust. If consumers think that the sustainability statement is true, then they will be more confident on the brand and repeat purchasing.

Trust also helps to minimize risk perceptions, particularly regarding foods that have safety, health and ethics considerations. Consumers can form a sense of loyalty if they always have this perception of the brand's values, transparency, and responsible actions. But the presence of environmental concerns alone is not enough to create purchase behavior, if the purchase behavior is not accompanied by trust and perceived value as well as consumer confidence (Gleim et al., 2013). Recent studies also indicate that perceptions of green need to be translated into behavioral intention via trustworthy cues related to brand (Nabi Khan et al., 2025). One of the barriers in the field of sustainability marketing is the price sensitivity and greenwashing. Consumers in emerging markets might be willing to pay a premium price for sustainable products, but they might not be.

Sustainable food products can be more expensive, because they are packaged with improved materials, responsibly sourced or certified or they are processed innovatively. Consumers might not be willing to buy something if they don't believe it is worth it to them. One of the difficulties is that greenwashing is diminishing consumer confidence. Consumer skepticism around individual brands and green products could arise when a brand makes unsubstantiated claims, or it simply doesn't have the proof. Though social identity is a factor that can affect green food purchase intention, their influence needs to be moderated by perceived value, which is also dependent on the credibility of consumers' perception of sustainable claims (Zheng et al., 2023).

The literature review reveals that there are several levels by which sustainability-oriented marketing practices are anticipated to impact consumers' responses. Consumer trust can be enhanced by sustainable product design, environmentally friendly packaging, green communication and sustainable distribution, signaling responsibility and transparency. This customer confidence can be further instilled in brand loyalty and intention to buy. The relationships can be moderated, however, by price sensitivity and perceived greenwashing. Hence, Sustainability practices are treated as the independent variables in this study, while the trust, brand loyalty and purchase intention are treated as outcome variables and perceived greenwashing and price sensitivity as moderating variables. This integrated context is not only used to look at sustainability marketing as a single promotion but also as a marketing system that influences consumer's packaged food attitude. (Ottman, 2017).

3. Research Methodology

3.1 Research Design

The research design in this study is a mixed-method research design to explore the marketing strategies for sustainability and the impact it has on consumers in the packaged food market in India. The mixed method is appropriate as there are both managerial decision level and consumer behavior outcome aspects of sustainability marketing. The qualitative section of the study gives an insight into the perception, understanding, design and communication of sustainability initiatives of marketing managers and the quantitative section measures consumer perception, trust, brand loyalty and purchase intention. With this mix, the study could gain a more comprehensive and well-rounded perspective of sustainability-driven marketing practices.

3.2 Data Sources

The study relies on the data gathered from two respondent groups namely, primary data and secondary data. In-depth interviews were conducted with 10 marketing managers of packaged food companies to get their input and the first-hand impressions of their experiences while purchasing packaged foods. The following interviews assisted in determining the ways sustainability was integrated into product design, packaging, pricing, marketing and communications. Secondly, the survey was conducted by a structured questionnaire among the 200 urban consumers of metropolitan cities in India.

The survey aimed to gain insight into consumer awareness of sustainability practices and the impact these practices have on consumer trust, brand loyalty and purchase intention. The study's use of both managerial and consumer data deepens the study by linking sustainability practices on the managerial side with responses on the market-side. The interviews with managers explain the rationale behind the sustainability actions and the surveys with consumers deliver measurable proof of the impact of the sustainability actions on the eyes of the consumers.

3.3 Sampling Technique

For the selection of marketing managers, purposive sampling technique was applied while for the selection of the consumer respondents, convenience sampling technique was used. For the managerial interviews, purposive sampling was therefore suitable since it involved individuals who have professional knowledge on the marketing of packaged foods and decision making regarding sustainability issues. Hence, the managers were chosen because they had experience and had been involved in brand strategy, marketing communications, packaging or sustainability projects. Consumer survey was conducted using a convenience sampling because it was a study that was targeted at urban consumers who were involved in buying packaged food products and was accessible for data collection. While convenience sampling might not be ideal for generalizing the results, it is appropriate for exploratory and applied marketing research where the goal is to learn about consumer perceptions in a particular market setting. The sample of 200 consumers selected offers a good basis for identifying patterns in sustainability awareness, consumer trust, loyalty and purchase intention in the selected sample.

3.4 Variables of the Study

The study examines the relationship between sustainability-oriented marketing practices and consumer behavioral outcomes. The variables are categorized as follows:

Variable Type	Variables
Independent Variables	Sustainable product design, eco-friendly packaging, sustainable distribution, green marketing communication
Dependent Variables	Consumer trust, brand loyalty, purchase intention
Moderating Variables	Price sensitivity, perceived greenwashing

The dependent variables are the primary sustainable practices which packaged food brands are engaged in. These practices elicit consumer responses that are measured by the dependent variables. Price sensitivity and perceived greenwashing are included as moderating variables as they can either enhance or detract from sustainability marketing.

3.5 Data Analysis Tools

The data collected were analysed both descriptively and inferentially. The consumer perceptions of sustainability practices were summarized using descriptive statistics. Correlation analysis was used to analyze the correlation and direction of the sustainability factors and consumer outcomes. The effect of sustainable marketing practices on consumer trust, brand loyalty and purchase intention was tested by regression analysis. Moreover, Structural Equation Modelling (SEM) was used to explore the overall relationships between the sustainability practices, consumer trust, brand loyalty, purchase intention, price sensitivity and perceived greenwashing.

3.6 Reliability and Validity

Reliability and validity were taken into consideration to increase the credibility of the results of this research. Internal consistency was measured as a reliability test to determine if the questions on the questionnaire

measure the same constructs as reliability tests, Cronbach’s alpha was used. The content of the questionnaire was validated for content by using the existing literature and experts from the marketing and sustainability area. Construct validity was explored through a comparison of the variables with existing concepts within the realms of sustainability marketing, consumer trust, brand loyalty, purchase intention, price sensitivity and greenwashing. These steps ensured the research instrument to be suitable for measuring the hypothesised relationships.

4. Data Analysis and Results

In this section, the analysis of the consumer responses towards the implementation of sustainability oriented marketing practices of packaged food brands in India is presented. The aim of this analysis is to gain insight in the consumer perception towards selected sustainability initiatives and the connection between the consumer perception of these initiatives and brand loyalty. The analysis is based on four key sustainability criteria which are: sustainability in packaging, transparency in marketing communication, sustainability in ingredient sourcing and sustainability in distribution. The above are all important dimensions in which packaged food brands embed sustainability in their marketing. Eco-friendly packaging, ethical sourcing, transparent communication of the sustainability claims and sustainable distribution are all closely related to product and production decisions and practices that have a positive effect on the environment..

4.1 Consumer Perception of Sustainability Practices

However, consumer perception is crucial as consumer recognition, understanding, and trust of sustainability efforts create marketing value. A list of selected sustainability practices were presented to respondents for their evaluation, according to their perceived importance. The mean score assigns a relative importance to the factors, higher scores being a higher preference for the factor by the consumer.

Table 1: Consumer Perception of Sustainability Practices

Sustainability Factor	Mean Score	Interpretation
Eco-friendly packaging	4.12	High importance
Transparent marketing communication	4.05	High importance
Ethical ingredient sourcing	3.95	Moderate importance
Sustainable distribution	3.78	Moderate importance

From the results, it is observed that the mean score for eco-friendly packaging is 4.12, which is the highest score. This means that the consumers have strong importance with the packaging related sustainability practices. This discovery is important as packaging is one of the most prominent components of packaged food products. Packaging is a direct engagement of consumer at point of sale and use, which is a strong indication of brand responsibility. Any such claims as recyclable packaging, biodegradable materials, reduced plastic usage, paper based packaging, or reusable packaging containers are more likely to be noticed and understood by consumers. Clear and credible information regarding sustainability was the second highest mean score with 4.05, indicating that consumers appreciate clear and credible communication about sustainability practices. Many practices for sustainability in packaged food markets are not immediately apparent to consumers.

As a result, consumers rely on product labels, advertising, websites, social media and consumer information, certifications, and product claims to determine the authenticity of brands' commitment to sustainability. The findings indicate that, when brands give out detailed and reliable packaging material information, ingredient sourcing information, recycling information, carbon reduction information, and environmental impact information, there is a higher chance of consumers trusting the brand. The mean score for ethical sourcing of ingredients was 3.95, which was considered as moderate importance. This is a respectable score as it is slightly below packaging and communication but still significant. Examples of ethical sourcing are responsible procurement of components, fair dealing with suppliers, sustainable farming, minimizing the use of harmful inputs and responsible partnerships with suppliers. This relatively low score could be because of limited visibility or consumers are not always aware about the source or the way ingredients are produced. This means that when consumers know about the brands' sourcing, it can have a greater impact on their perception of ethical sourcing.

Sustainable distribution was scored at the lowest average score (3.78), and is still considered as moderate importance. Some of the elements of sustainable distribution are the reduction of logistics emissions, optimization of transport, energy-efficient warehouses, local sourcing and making the supply chain more efficient. The lower score could be due to the fact that consumers do not know sustainability efforts directly related to logistics as well. Distribution practices are typically not visible at the point of purchase like packaging or labelling. They can still have an indirect impact on consumers, however, by communicating with consumers through certifications, sustainability reporting, and corporate reputation.

In general, the descriptive analysis suggests that the sustainability aspects that are readily seen, easily understood and directly related to the consumer experience are more important. Packaging that is eco-friendly, and communication that can be easily observed or interpreted is highly rated as consumers can easily observe or interpret. There's also ethical sourcing and sustainable distribution, but this will have a significant impact on the brands that do a good job at communicating it.

4.2 Relationship Between Sustainability Factors and Brand Loyalty

The study reviewed the perceptions of consumers and analysed the relationship between the factors of sustainability and brand loyalty. Brand loyalty is a significant marketing outcome that highlights consumers' decision to keep buying from a brand, refer it to their friends and have positive relations with the brand over time. The correlation analysis was employed to analyze the association between the selected sustainability factors and brand loyalty. Positive correlation means that the more positive consumer perception of a sustainability factor is, the more likely to be brand loyalty.

Table 2: Relationship Between Sustainability Factors and Brand Loyalty

Sustainability Factor	Correlation with Brand Loyalty
Sustainable packaging	0.62
Green communication	0.59
Ethical product sourcing	0.54
Sustainable distribution	0.41

The results reveal that the four sustainability related factors are all positively related to brand loyalty, and this implies that marketing practices towards sustainability can positively support consumers' relationship with brands. In terms of the correlation, sustainable packaging has the highest, coming in at 0.62, indicating that people are more inclined to stay loyal with brands that are using sustainable packaging. Packaging is so visible and so encountered by the consumer, that it is a great sign of a brand's concern for the environment and towards consumers. The second highest correlation is between green communication and brand loyalty (0.59), indicating that if the communication is credible, then this is strongly linked with loyalty. This indicates that it is not an element of promotion but one of trust building within the communication.

When consumers can see clear evidence of brands' environmental initiatives and hear about them from the brand itself, there is a high likelihood of their supporting those brands. Loyalty is linked with responsible sourcing practices displaying a moderate positive correlation of 0.54, responsible sourcing practices tend to make their contribution to loyalty by enhancing perceptions about the brand's integrity, fairness and quality. But, given the less transparent nature of sourcing, it can be more heavily reliant on labels, certifications, story telling, traceability systems and transparent brand communication. There is a positive, but less strong, relationship between sustainable distribution and sustainable distribution, with a correlation of 0.41. This indicates that the indirect impact of logistics sustainability efforts on loyalty is primarily the corporate image and trustworthiness of the brand. Overall, the results of the correlation analysis indicate the need for sustainability marketing to be considered a comprehensive approach, not just a marketing message.

4.3 Hypothesis Testing

A series of hypothesis tests were run to test the proposed relationships between sustainability initiatives and consumer responses. The study tested five hypotheses concerning the effects of the sustainability efforts on consumer trust, brand loyalty and purchase intention as well as the moderating influence of price sensitivity and perceived greenwashing. The hypotheses were formulated under the assumption that the sustainability-oriented marketing practices, which are visible, credible and congruent with the consumer value, can affect a positive consumer's response. But, there can be contextual factors that can affect practice effectiveness. The

Indian packaged food industry is particularly crucial and sensitive to price considerations and greenwashing due to the fact that consumer valuation of sustainability can be low, or even positive, but their evaluation of price and credibility must be of concern.

Table 3: Hypothesis Testing Results

Hypothesis	Statement	Result	Interpretation
H1	Sustainability initiatives positively influence consumer trust.	Supported	Sustainability practices improve consumer confidence in brands.
H2	Sustainability marketing positively affects brand loyalty.	Supported	Consumers are more loyal to brands perceived as sustainable.
H3	Sustainability initiatives positively influence purchase intention.	Supported	Sustainability can encourage purchase decisions.
H4	Price sensitivity moderates sustainability marketing effectiveness.	Supported	High price sensitivity may reduce the effect of sustainability claims.
H5	Perceived greenwashing negatively affects consumer trust.	Supported	Misleading claims weaken consumer confidence.

The findings are that all five hypotheses are supported. It means that sustainability marketing is a key element in influencing the consumer reaction in the packaged food industry. The results reveal, though, that sustainability cannot be done alone. The efficacy is based on the price, believability and consumer confidence in brand promises. H1 suggested that they believe that sustainability efforts have a positive impact on consumer confidence. There is evidence to support the hypothesis. The outcome shows that if the packaged food brands practice sustainability, consumers will be more skeptical about them. A brand can demonstrate its values of honesty, social responsibility, and sustainable communication with consumers and the environment by adopting sustainability measures like ethical sourcing, responsible communication, and eco-friendly packaging.

Consumer trust is particularly crucial in the packaged food industry since there are tangible and intangible cues that influence consumer decisions. There are many factors that impact on trust including product quality, safety, ingredients, packaging, and brand claims. Consistency and authenticity of sustainability practices can help build trust. A brand that offers recycling materials and has a policy that states how to recycle them could be seen as being more responsible than a brand that simply has some environmental jargon. H2 suggested that when it comes to brand loyalty, sustainability marketing had a positive impact. There is evidence to support the hypothesis.

The conclusions gathered from the correlation are similar to this one, which indicates that there are positive correlations between the sustainability factors and brand loyalty. Purchasing decisions are likely to be influenced by the brands' environmental and ethical values, which will drive consumer loyalty. Creating emotional attachment to sustainability can be done by having consumers believe that their purchases are impacting an environmental or social good. Perceived quality, availability, habit, taste and price are factors that can affect brand loyalty, especially in the packaged food market. The results indicate that when sustainability is part of the brand experience the brand has the potential to become an extra motivator for loyalty. But when sustainability is integrated into various marketing components, it is likely that loyalty will be greater. For example, eco-friendly packaging ought to be supplemented with fair communication, responsible sourcing and easy pricing. Excessive packaging or unclear claims can lead to decreased loyalty as a result of a brand's sustainability promotion.

According to a proposition from H3, sustainability measures have a positive effect on the purchase intention. There is evidence to support the hypothesis. This result suggests that sustainability can be a nudge towards the consumer to consider buying packaged food products. Consumers could be more likely to purchase products they believe are environmentally responsible, ethically sourced or are packaged sustainably. This is especially true for the urban consumers who might be more conscious about sustainability issues and be exposed to more sustainability marketing messages. When interpreting the relationship of sustainability and purchase intention, however, great care should be taken. Buyers' intent does not always translate to buying. Consumers might be willing to purchase products that are sustainable, but might not do so when they reach

the retailer because they are too expensive, out of stock, unfamiliar with the brand, preferring to buy from a different brand, or because their preferred brand is not offering the same product or service.

Hence, sustainable products need to be affordable, accessible, and function competitively—must be desirable. H4 suggested that the level of price sensitivity will affect the effectiveness of sustainability marketing. There is evidence to support the hypothesis. This is an interesting discovery, especially in the Indian context where price is a critical determinant in the choice of a product. Consumers might like sustainable products, but may not be willing or able to pay a premium for sustainable packaged food products. This can consequently diminish the impact of sustainability marketing on purchase intention, because of high price sensitivity. This finding implies that implementing sustainability strategies needs to be affordable. Brands shouldn't only market sustainability as an "upscale" option for "those who care." Brands should not view sustainability as something that's offered as an "upscale" option for "those who care". Rather, they need to be able to design cost-effective packaging, scalable sourcing and pricing that will enable sustainable options to be available to the wider market.

Long-term value, safety, health, quality and environmental benefits are also appealing points of the promotional strategies which may compensate for any moderate cost difference. H5 suggested that the negative impact of greenwashing perception on consumers' trust. There is evidence to support the hypothesis. The finding is consistent with the understanding that consumers can be misled and/or over-confident when exposed to misleading or exaggerated sustainability claims. Even if there is trust in the brand, a perception that a company is using sustainability as a marketing ploy and not actually doing anything leads to a fall in trust. This can also decrease loyalty and purchase intentions as well. However, greenwashing can be hazardous in certain categories where consumers rely more on brand information. Consumers may not be able to check the information in packaged food, for example, regarding sourcing, packaging material, carbon reduction or environmental impact. Brands need to make sure they are specific, verifiable and in line with their practices when using the word sustainable. To minimize greenwashing perception, third party validation, transparent labels, measurable indicators and certifications can be beneficial.

The overall results indicate that sustainability marketing has a positive impact on consumer trust, brand loyalty and purchase intention. Consumers react most positively to sustainable activities that they see and believe to be true, such as sustainable packaging and communicating the story transparently. Ethical sourcing and sustainable distribution are also factors that have an impact on consumer perception, but this effect can be more indirect as these practices might not be as visible to consumers as others. Another important finding of the study is that two important barriers, price sensitivity and perceived greenwashing, have an impact on sustainability marketing. Some consumers might be sensitive to price and that may make them less likely to buy a product, particularly if it is "sustainable" and is considered to be costly. Trust can be undermined through "greenwashing", particularly in the case of unspecified or unsubstantiated sustainability claims. Thus, the successful sustainability marketing needs to combine the elements of environmental responsibility, affordability, transparency and value for consumers. The study reveals that sustainability cannot be considered as a CSR program for packaged food companies in India.

However, it is advisable to be integrated into the marketing mix. The product design, packaging, communication, sourcing, pricing and distribution functions need to be aligned to communicate a consistent sustainability message. Trust and loyalty of customers is more likely to be gained by brands able to blend visible sustainability initiatives into a credible communication and an accessible price. The results have a number of implications for the packaged food industry. First, the results indicate that companies should focus on the use of packaging which has the highest score of import to consumers and the strongest correlation with brand loyalty, namely, the use of eco-friendly packaging. Packaging is an immediate touch point for the consumer, and can be a fast way to brand perception. Secondly, brands should work toward bringing the conversation on sustainability to a higher level of transparency by adding clear proof of these sustainability claims. Can't overlook the importance of consumers appreciating communication, but it must also be credible and specific. Thirdly, companies should introduce ethical sourcing practices that are transparent. Third, companies need to implement ethical sourcing practices that are transparent. Consumers need to be aware of the benefits that responsible sourcing can have on a brand's reputation, and it can help build that trust. Fourth, sustainable distribution should be incorporated into the brands greater environmental responsibility message. Consumers might not notice the logistics practices directly, but they can value such efforts when brands tell them why it's good for the environment. Last but by no means least, businesses need to tackle concerns of price sensitivity and greenwashing. Cost of the sustainable product should be within market affordability for the Indian people and claims must be backed by evidence. Brands which overstate their sustainability

measures stand the risk of losing trust, but brands that are authentic with low price could develop better consumer relationships. The section has dealt with the perception, correlation and hypothesis testing analysis of the consumer towards the packaged food and sustainability marketing. It turns out that the two most effective sustainability aspects from the consumers' point of view are the use of environmentally friendly packaging materials and clear communication. Sustainable packaging is the most strongly correlated with brand loyalty, green communication, ethical sourcing and sustainable distribution. The results of the hypothesis testing reveal that the sustainability initiatives positively impact on the consumers' trust, brand loyalty and purchase intention. But there are intervening factors of price sensitivity and greenwashing. The key insights from this research are that the sustainability marketing initiatives need to be credible, affordable and effectively communicated to the Indian packaged food market for their effectiveness.

5. Discussion

Based on the results of the study, the marketing strategies which take sustainability into account can be beneficial in enhancing consumer trust, brand loyalty and purchase intention in the Indian packaged food industry. The findings do imply, however, that the sustainability effect is different on the various dimensions of the marketing mix. Consumers are more engaged with sustainability efforts which are easily seen, clearly explained and linked to their product experience. This means that the role of packaging and communication is paramount and distribution-related sustainability seems to have a more indirect impact via brand reputation. Packaging, one of the most visible and tangible aspect of packaged food products, was identified as a key driver of consumer perception that was sustainable packaging.

Packaging becomes a direct message of a brand's environmental responsibility, as the consumer interacts with it before, during and after consumption. Encouraging consumers to think green can help recognize a brand as green by using recyclable, biodegradable, reduced plastic, and responsibly designed packaging. This aligns with previous studies that found environmental sustainability affects consumer assessment of the packaging methods, and that when the packaging is functional and credible and is easy to understand, this can have a positive impact on the image of the brand (Ketelsen et al., 2020; Chirilli et al., 2022).

In India, with an increasing rate of packaged food consumption, the sustainable packaging can be a means to address the environment and be a differentiator in the market. The findings also call into attention the significance of credible sustainability communication. Consumer trust is only enhanced with transparent, specific and verifiable communication around sustainability. Consumers in packaged food markets can rarely see the sourcing, production, logistics and/or the environmental footprint involved in the production of the items. This makes them rely on product labels, eco-certifications, advertising, social media posts and brand disclosures to make sustainability assessments.

Previous studies have shown that when consumers believe that companies are providing green marketing, and it is relevant and reliable to the product value, it can affect their purchasing decisions (Garcia-Salirrosas & Rondon-Eusebio, 2022; Ahmed et al., 2023). Hence, it is recommended that packaged food companies refrain from using generic terms like “eco friendly” and “natural” in advertising without substantiation with clear evidence, certification or measurable sustainability metrics. One of the biggest issues in driving adoption of sustainability awareness to actual purchase intentions is price sensitivity. The results indicate that consumers can accept a more sustainable product on a theoretical basis, but might not want to buy it if the price is much higher compared to the conventional product. This is an indicator of the long standing attitude-behaviour gap in sustainable consumption, where positive attitudes towards environment do not necessarily lead to positive behaviour.

Previous research has demonstrated that barriers like product performance, convenience, price and availability may hinder consumer decisions to purchase green products despite having positive attitudes (Young et al., 2010; Gleim et al., 2013). This is a very important aspect as India is a low-income country and people are sensitive to value-for-money, packaged food brands compete in the market. Another key question that emerged from the research and was recognized as a factor in the case was the issue of perceived greenwashing. When sustainability gets on the marketing agenda, some consumers might question any claims that are not backed up with evidence or sound exaggeration. If consumers feel that there is greenwashing, they lose trust in the brand and the advantages of sustainability marketing are reduced. These results align with recent research indicating that greenwashing can lead to consumer negative responses, brand hate, and distrust, and cause confusion (Nguyen & Duong, 2025; Senan et al., 2025).

For packaged food brands, this translates to sustainable communication not being symbolic but based on authentic practices. Recyclable packaging, ethical sourcing, reduced carbon footprint or natural ingredients

claims must be backed up by evidence which could include certification marks, traceability information, lifecycle information or third party validation. Distribution related sustainability had a relatively weak direct link with consumer loyalty, but this does not mean that it is less important as a strategy. This is because sustainable distribution practices like route optimization, reduced logistics emissions, sourcing locally, energy-efficient warehouses and waste reduction are not as near the consumer as packaging or labelling. Thus, they can be a part of the influence chain indirectly, for instance as part of the corporate reputation and overall brand credibility.

Given this, recent studies on sustainable food systems highlight that sustainability should not be limited to the attributes of the final product, but should also be considered with respect to the design of the food supply chain, sourcing models and business operations (Pavón Losada et al., 2025; Nichifor et al., 2025). Packaged food companies will see that distribution-related sustainability should be integrated in the company's sustainability story. The results also corroborate the literature on consumer trust and green purchase intention. Trust seems to be an important link to connect sustainability measures and consumer response. If consumers think that a brand's sustainability is sincere, they will be more likely to create loyalty and buying intent. The research on green food consumption and organic food consumption reveals that the brand trust, perceived value of green food and consumer awareness can play a significant role in the purchase decision-making process (Li & Chen, 2025; Li & Shan, 2025).

Likewise, food labelling studies indicate that there is a relationship between information about sustainability and consumer engagement, but also between understanding and credibility of information (Pahlani et al., 2025). The study also highlights some research gaps justified for further research. First, although the packaged food industry is growing rapidly, there isn't much empirical research on sustainability marketing in India, yet. Second, much of the previous literature relates to one or more of the marketing mix elements or to green marketing, packaging, organic food or consumer behaviour alone, and there are less studies that consider sustainability in terms of several marketing mix elements. Thirdly, more attention should be paid to price sensitivity and greenwashing as moderating factors, as they can significantly impact the potential for creating market effects with sustainability initiatives.

Finally, future studies should leverage on more sophisticated statistical tools such as SEM to validate complex relationships between sustainability practices, trust, loyalty and purchase intention in emerging markets. From the conclusions, some suggestions can be drawn for application. Packaged food brands need to take action towards sustainable packaging by switching to packaging materials that are eco-friendly, recyclable, biodegradable, and less plastic based that meet the consumer's taste. They must also enhance their transparent communication, with the help of verifiable evidence, clear labeling, certifications and digital traceability tools. Indian consumers are very price sensitive and so brands need to achieve a balance between its sustainability and affordability by creating sustainable solutions at low cost and not overcharging for them. There is also a need for businesses to enhance sustainable supply chain, which involves partnering with suppliers, logistics companies and retailers for lower carbon emission and decrease of resource waste. Lastly, brands should raise consumer awareness by educating consumers about the advantages of sustainable packaging, ethical sourcing, and responsible consumption through awareness campaigns. The overall discussion is indicative of the need for sustainability marketing to be authentic, integrated and consumer-oriented in the packaged food sector. Packaging and communication are directly the most influential as well as visible for consumers while the sourcing and distribution play an important role for credibility in the long term, if communicated properly. This study confirms the perception that sustainability should not be marketed as a slogan but as a marketing capability that is integrated in the entire product design, communication, pricing and supply chain processes.

6. Conclusion

This research study investigated the realignment of sustainability in the marketing mix of packaged food brands in India focussing on the product design, packaging, distribution and marketing communication. The study examined the role that these sustainability related practices play with regard to trust, brand loyalty and purchase intention in a new market environment where consumers' awareness of sustainability issues is growing, yet affordability is of paramount concern. The results show that there is a genuine impact from sustainability programs on consumers' reactions. In the set of the investigated factors, those related to packaging with environmental characteristics (Eco-friendly packaging) and those related to marketing communication that is transparent and understandable (Transparency in marketing communication) were found to be the most influential factors since they are visible and understood by consumers and directly

linked to the evaluation of the packaged food brand. Sustainable packaging conveys environmental responsibility and credible communication is important to build consumer confidence in brand claims. Ethical sourcing and sustainable distribution are also vital to brand value, but may rely on the transparency of companies communicating the practices to their consumers. Two important contextual factors are also identified – price sensitivity and perceived greenwashing. Customers can have positive attitudes toward sustainable products, but when they are expensive they are not so inclined to buy. Likewise, poorly phrased or hyperbole in terms of sustainability can undermine trust and effectiveness of true sustainability efforts. The study results indicate that sustainable marketing has to be credible and cost-effective to positively impact on the consumer's behavior. The study is an important addition to the sustainability marketing literature because of the use of empirical evidence from a market sector largely unexplored in previous studies and studies in India, the packaged food market, with its increasing size and relevance to the environment. It builds awareness of the role sustainability plays in each of the marketing mix elements and their impact on important consumer outcomes. The results indicate that for managers, it is important to pursue genuine, transparent and cost-effective sustainability strategies. Brands of packaged food need to go beyond green marketing and establish tangible sustainability measures that can be easy to comprehend and believed by consumers. Strategies for integrating environmental responsibility into consumer value can help establish a sustainable competitive advantage, drive brand loyalty, and boost consumers' intention to purchase a brand.

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