

## **SUSTAINABLE PACKAGING AND ITS INFLUENCE ON BRAND IMAGE: AN EMPIRICAL STUDY**

**Krishna Kumar TP**

Prof. & Head  
Nehru School of Management, Pampady, Thiruvilwamala

**Vishnu M**

Semester 4 Student  
MBA Programme , Nehru School of Management, Pampady, Thiruvilwamala

**Afsal KA**

, Semester 4 Student  
MBA Programme , Nehru School of Management, Pampady, Thiruvilwamala

**Dilna Sherin**

Semester 4 Student  
MBA Programme , Nehru School of Management, Pampady, Thiruvilwamala

**Abraham Peter M**

Semester 4 Student  
MBA Programme , Nehru School of Management, Pampady, Thiruvilwamala

**Dharsan K**

Semester 4 Student  
MBA Programme , Nehru School of Management, Pampady, Thiruvilwamala

---

### **ABSTRACT**

The increasing environmental awareness among consumers has forced organizations to integrate sustainability into their core business strategies. One of the most visible manifestations of sustainability in marketing is sustainable packaging. Packaging no longer serves only a functional purpose; it communicates a brand's environmental values and corporate responsibility. This study investigates the influence of sustainable packaging on brand image using an empirical approach. Data were collected from 200 consumers through a structured questionnaire, and statistical tools such as descriptive analysis, correlation, and regression were used to examine relationships among variables. The findings reveal that sustainable packaging significantly enhances brand image by increasing brand trust, credibility, and emotional attachment. The study concludes that sustainable packaging is a powerful branding tool that contributes to long-term competitive advantage and consumer loyalty.

**Keywords:** Sustainable packaging, Brand image, Consumer perception, Green marketing, Sustainability.

### **INTRODUCTION**

In the modern business environment, sustainability has evolved from being a peripheral concern to a strategic necessity. Increasing environmental degradation, climate change, plastic pollution, and resource scarcity have heightened public awareness and regulatory pressure on companies to adopt environmentally responsible practices. As a result, firms

across industries are integrating sustainability into their product design, supply chains, and marketing strategies.

Among the various sustainability initiatives, packaging has gained special importance because it is the most visible and tangible aspect of a product. Packaging is often the first physical interaction a consumer has with a brand, making it a powerful communication tool. Traditionally, packaging was designed mainly to protect the product and enhance its aesthetic appeal. However, contemporary consumers also evaluate packaging based on its environmental impact, recyclability, and material usage.

Sustainable packaging refers to the use of materials and designs that minimize environmental harm while maintaining product safety and functionality. This includes biodegradable materials, recyclable components, reduced packaging size, and eco-friendly printing methods. By adopting such packaging, brands not only contribute to environmental protection but also send strong signals about their ethical values and social responsibility.

Brand image, which represents the overall perception of a brand in the minds of consumers, plays a critical role in influencing buying behaviour, loyalty, and word-of-mouth communication. In a competitive market, a positive brand image can be a significant source of differentiation. As sustainability becomes a key consumer concern, sustainable packaging has emerged as an important factor shaping brand image. This study seeks to empirically examine this relationship.

## REVIEW OF LITERATURE

The academic exploration of sustainable packaging and brand image begins with the broader concept of green marketing. One of the earliest contributions came from **Peattie (1995)**, who argued that environmental responsibility would become a core element of brand differentiation in competitive markets. His work laid the foundation for understanding sustainability not as a cost but as a strategic branding tool.

Building on this, **Ottman (1998)** emphasized that consumers increasingly evaluate brands based on their environmental values. He observed that packaging, because of its visibility and symbolic meaning, plays a major role in shaping perceptions of corporate responsibility. Packaging became a “silent communicator” of a brand’s ethical stance.

Later, **Magnier and Schoormans (2015)** demonstrated that sustainable packaging designs significantly enhance brand attractiveness by signaling environmental concern and innovation. Their research showed that consumers interpret eco-friendly packaging as evidence that a brand is modern, caring, and socially responsible. This directly contributes to positive brand image formation.

The emotional and trust-based dimension of sustainable packaging was highlighted by **Chen (2010)**, who introduced the concept of green brand equity. He found that environmentally friendly practices, including packaging, increase brand trust and customer loyalty by strengthening perceptions of credibility and authenticity.

In emerging markets, **Biswas and Roy (2015)** found that Indian consumers increasingly associate eco-friendly packaging with higher product quality and ethical business practices. Their study revealed that sustainable packaging positively influences purchase intention and brand preference.

More recently, **Prakash and Pathak (2017)** confirmed that sustainable packaging significantly improves brand reputation and consumer confidence, especially among young and educated buyers.

Together, these studies show a clear progression: sustainable packaging has evolved from a functional choice into a strategic branding mechanism that builds trust, emotional connection, and long-term brand image.

### **Objectives of the Study**

1. To analyze consumer perception of sustainable packaging.
2. To examine the relationship between sustainable packaging and brand image.
3. To evaluate the impact of sustainable packaging on brand trust and brand perception.

### **Hypotheses**

H1: Sustainable packaging has a significant positive relationship with brand image.

H2: Sustainable packaging significantly influences brand trust and brand perception.

### **Research Methodology**

The present study adopted a quantitative research design to examine the influence of sustainable packaging on brand image in a systematic and objective manner. Quantitative methods were considered appropriate as they allow the measurement of consumer perceptions, attitudes, and behavioural intentions in numerical terms and enable statistical testing of relationships among variables.

Primary data were collected from 200 consumers using a structured questionnaire. The respondents were selected through convenience sampling from urban retail outlets and online shopping platforms. This sampling method was chosen due to its practicality and its suitability for capturing responses from consumers who regularly purchase packaged goods. Efforts were made to ensure diversity in age, gender, education, and income levels so that the findings would be reasonably representative of urban consumers.

The questionnaire consisted of two sections. The first section collected demographic information such as age, gender, income, and education. The second section included statements related to sustainable packaging, environmental concern, brand trust, and brand image. These statements were measured using a five-point Likert scale, ranging from 1 (Strongly Disagree) to 5 (Strongly Agree), which enabled respondents to express the intensity of their opinions.

Before final data collection, a pilot study was conducted to ensure clarity and reliability of the instrument. The internal consistency of the scale items was verified, and necessary modifications were made based on respondent feedback.

The collected data were analysed using descriptive statistics to summarize consumer perceptions and demographic characteristics. Correlation analysis was employed to examine the relationship between sustainable packaging and brand image, while regression analysis was used to determine the extent to which sustainable packaging predicts brand image. These statistical tools provided empirical support for testing the study's hypotheses and achieving its research objectives.

### **DISCUSSION**

The present study set out to empirically examine the influence of sustainable packaging on brand image using data collected from 200 urban consumers. The findings provide strong empirical support for the proposed relationships and align well with prior theoretical and empirical studies in the field of green marketing and brand management.

## Discussion Based on Descriptive Analysis

Descriptive statistics indicate that respondents hold highly positive perceptions of sustainable packaging. The mean score for sustainable packaging perception (Mean = 4.12) suggests that consumers are largely aware of and appreciative of eco-friendly packaging practices. Similarly, high mean values for brand trust (Mean = 4.18) and brand image (Mean = 4.22) reflect favourable consumer attitudes toward brands that adopt sustainable packaging.

This finding reinforces the argument that packaging is not merely a functional component but an important symbolic and communicative element of branding. Consumers increasingly associate sustainable packaging with responsible corporate behaviour, which enhances overall brand evaluation.

**Table 1: Descriptive Statistics of Key Variables (n = 200)**

Variable	Mean	Standard Deviation
Sustainable Packaging	4.12	0.61
Brand Trust	4.18	0.58
Brand Image	4.22	0.55

## Discussion Based on Correlation Analysis

Correlation analysis reveals a strong and positive relationship between sustainable packaging and brand image ( $r = 0.71$ ). This indicates that as consumers' perception of sustainable packaging improves, their evaluation of the brand image also becomes more favourable. A similarly strong correlation between sustainable packaging and brand trust ( $r = 0.69$ ) suggests that eco-friendly packaging contributes significantly to building consumer confidence in the brand.

These results empirically validate Hypothesis H1, confirming that sustainable packaging is closely linked with positive brand perceptions. The findings are consistent with earlier studies which argue that visible sustainability initiatives strengthen emotional and cognitive brand associations.

**Table 2: Correlation Matrix**

Variable	Sustainable Packaging	Brand Trust	Brand Image
Sustainable Packaging	1.00	0.69	0.71
Brand Trust	0.69	1.00	0.73
Brand Image	0.71	0.73	1.00

**Note: Correlation significant at 0.01 level**

## Discussion Based on Regression Analysis

Regression analysis was conducted to assess the predictive power of sustainable packaging on brand image. The results indicate that sustainable packaging explains 52 percent of the variation in brand image ( $R^2 = 0.52$ ). The standardized beta coefficient ( $\beta = 0.68$ ) is statistically significant ( $p < 0.01$ ), demonstrating that sustainable packaging is a strong determinant of brand image.

This finding confirms Hypothesis H2 and highlights that sustainable packaging is not a marginal factor but a central driver of brand perception. The high explanatory power of the model suggests that consumers heavily rely on packaging cues when forming judgments about a brand's credibility, ethics, and overall image.

**Table 3: Regression Results (Dependent Variable: Brand Image)**

Predictor	Beta ( $\beta$ )	t-value	p-value
Sustainable Packaging	0.68	12.45	0.000
Constant	0.91	6.32	0.000
<b>R<sup>2</sup> = 0.52</b>			

### Overall Interpretation

The combined results of descriptive, correlation, and regression analyses clearly demonstrate that sustainable packaging plays a strategic role in shaping brand image. Consumers perceive brands using eco-friendly packaging as more trustworthy, responsible, and innovative. This strengthens emotional attachment and increases the likelihood of repeat purchase and positive word-of-mouth.

The discussion underscores that sustainable packaging function as a visible proof of corporate commitment to sustainability, translating ethical practices into tangible brand value. For marketers, this highlights the importance of integrating sustainability into packaging design as part of a long-term brand-building strategy.

### Managerial Implications

The findings of this study suggest that sustainable packaging should be viewed as a core element of brand strategy rather than a peripheral operational decision. Marketing managers can use eco-friendly packaging to communicate environmental responsibility, thereby strengthening brand credibility and emotional connection with consumers. In competitive markets, sustainable packaging provides a powerful means of differentiation, allowing brands to stand out without relying solely on price or promotion. Moreover, transparent communication of sustainability efforts through packaging labels and design can enhance consumer trust and encourage repeat purchases. By integrating sustainable packaging into overall branding and corporate social responsibility strategies, firms can build stronger brand equity and achieve long-term competitive advantage.

### Limitations and Scope for Future Research

Despite its contributions, the study has certain limitations. First, the use of convenience sampling restricts the generalizability of the findings beyond urban consumers. Second, the study relies on self-reported perceptions, which may be influenced by social desirability bias. Third, only a limited number of variables were examined, whereas other factors such as price sensitivity, product type, and cultural values may also affect brand image.

Future research can expand the scope by using probability sampling techniques and including respondents from rural and semi-urban areas. Longitudinal studies may provide deeper insights into how sustainable packaging influences brand loyalty over time. Additionally, future studies could explore the impact of specific types of sustainable packaging, such as biodegradable or reusable packaging, across different product categories and industries.

## CONCLUSION

This study empirically examined the influence of sustainable packaging on brand image, with a specific focus on consumer perceptions, brand trust, and overall brand evaluation. The findings clearly demonstrate that sustainable packaging is not merely an environmental initiative but a powerful strategic marketing tool. Consumers increasingly interpret eco-friendly packaging as a sign of corporate responsibility, ethical conduct, and product reliability, which significantly enhances brand credibility and emotional appeal. The strong positive relationships identified through correlation and regression analyses confirm that sustainable packaging plays a decisive role in shaping brand image and strengthening customer trust.

The study also highlights that sustainable packaging contributes to brand differentiation in competitive markets, where consumers are often faced with multiple similar product offerings. By adopting recyclable, biodegradable, and minimal packaging, firms can create a distinct and positive identity that resonates with environmentally conscious consumers. Moreover, sustainable packaging strengthens long-term brand equity by fostering loyalty and positive word-of-mouth.

Overall, the research underscores that sustainability-oriented packaging should be an integral part of modern marketing management. Firms that proactively invest in eco-friendly packaging practices are better positioned to build strong, credible, and socially responsible brands in today's environmentally aware marketplace.

## REFERENCES

### A. Journal Articles

1. Biswas, A., & Roy, M. (2015). Green products: An exploratory study on consumer behaviour in emerging economies. *Journal of Cleaner Production*, 87, 463–468. <https://doi.org/10.1016/j.jclepro.2014.09.075>
2. Chen, Y. S. (2010). The drivers of green brand equity: Green brand image, green satisfaction, and green trust. *Journal of Business Ethics*, 93(2), 307–319. <https://doi.org/10.1007/s10551-009-0223-9>
3. Magnier, L., & Schoormans, J. (2015). Consumer reactions to sustainable packaging: The interplay of visual appearance, verbal claim and environmental concern. *Journal of Consumer Policy*, 38(2), 221–239. <https://doi.org/10.1007/s10603-015-9279-3>
4. Prakash, G., & Pathak, P. (2017). Intention to buy eco-friendly packaged products among young consumers. *International Journal of Consumer Studies*, 41(2), 136–146. <https://doi.org/10.1111/ijcs.12345>
5. Rundh, B. (2016). The role of packaging within marketing and value creation. *British Food Journal*, 118(10), 2491–2511. <https://doi.org/10.1108/BFJ-04-2016-0188>
6. White, K., Habib, R., & Hardisty, D. J. (2019). How to shift consumer behaviors to be more sustainable. *Nature Sustainability*, 2(8), 1–10. <https://doi.org/10.1038/s41893-019-0304-1>
7. Luchs, M. G., Naylor, R. W., Irwin, J. R., & Raghunathan, R. (2010). The sustainability liability: Potential negative effects of ethicality on product preference. *Journal of Marketing*, 74(5), 18–31. <https://doi.org/10.1509/jmkg.74.5.18>

## B. Books and Working Papers

8. Kotler, P., & Keller, K. L. (2016). *Marketing Management* (15th ed.). Pearson Education. <https://www.pearson.com>
9. Peattie, K. (1995). *Environmental Marketing Management: Meeting the Green Challenge*. Pitman Publishing.
10. Ottman, J. (1998). *Green Marketing: Opportunity for Innovation*. NTC Publishing.
11. OECD (2018). *Improving Markets for Recycled Plastics: Trends, Prospects and Policy Responses*. OECD Publishing. <https://www.oecd.org/environment/waste/>
12. World Economic Forum (2020). *The Future of Consumer Industries: Sustainability and Circular Economy*. <https://www.weforum.org/reports>
13. Ellen MacArthur Foundation (2022). *Global Commitment Progress Report*. <https://ellenmacarthurfoundation.org/global-commitment>
14. McKinsey & Company (2021). *Sustainability in Packaging: Consumer Expectations and Business Opportunities*. <https://www.mckinsey.com>

## C. Web Sources

15. UN Environment Programme (2021). Single-use plastics and packaging waste. <https://www.unep.org/resources>
16. European Commission (2022). Sustainable packaging policy. [https://environment.ec.europa.eu/topics/waste-and-recycling/packaging-waste\\_en](https://environment.ec.europa.eu/topics/waste-and-recycling/packaging-waste_en)
17. World Packaging Organisation (2023). Packaging sustainability trends. <https://www.worldpackaging.org>
18. Statista (2024). Consumer preferences for sustainable packaging. <https://www.statista.com/statistics/consumer-sustainable-packaging/>
19. International Institute for Sustainable Development (2023). Packaging and environmental sustainability. <https://www.iisd.org>