

# Green Packaging and Its Influence on Sustainable Consumer Decision-Making: An Empirical Study of Consumers in Udaipur, Rajasthan

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## Abstract

*Environmental sustainability has emerged as a critical concern for consumers, businesses, and policymakers across the globe. Green packaging has become an important strategy adopted by organizations to reduce environmental degradation and promote sustainable consumption patterns. The present study examines the influence of green packaging on sustainable consumer decision-making among consumers in Udaipur, Rajasthan. A quantitative research design was employed, and primary data were collected through a structured questionnaire administered to 293 consumers. The study investigated consumer awareness of green packaging, perceptions regarding environmentally friendly packaging attributes, and the impact of these factors on purchasing decisions. Descriptive statistics, reliability analysis, correlation analysis, chi-square tests, and regression analysis were used for data interpretation. The findings reveal that consumers possess a moderate to high level of awareness regarding green packaging and demonstrate a positive preference for environmentally sustainable products. The results further indicate a significant positive relationship between green packaging awareness, environmental concern, and sustainable consumer decision-making. The study concludes that green packaging serves as an influential determinant of consumer purchasing behaviour and can contribute significantly to sustainable consumption practices. The findings provide useful implications for marketers, manufacturers, and policymakers seeking to promote environmentally responsible consumption.*

**Keywords:** *Green Packaging, Sustainable Consumption, Consumer Behaviour, Environmental Concern, Purchase Decision, Sustainability, Udaipur.*

## 1. Introduction

Environmental issues such as climate change, resource depletion, plastic pollution, and waste generation have increased global concern regarding sustainable development. In response to these challenges, consumers are becoming more conscious of the environmental impact of the products they purchase. Consequently, businesses are adopting sustainable practices throughout their value chains, including the development and implementation of green packaging solutions.

Green packaging refers to packaging materials and designs that minimize environmental impact through reduced resource consumption, recyclability, biodegradability, and efficient waste management. It aims to reduce the ecological footprint associated with product packaging while maintaining product quality and functionality. Green packaging includes the use of recycled materials, biodegradable plastics, reusable containers, and eco-friendly production processes.

Consumer purchasing behaviour has undergone significant transformation due to growing environmental awareness. Modern consumers increasingly evaluate products not only on quality and price but also on environmental attributes. Packaging often serves as the first point of interaction between consumers and products, making it an important factor influencing purchasing decisions. Green packaging communicates environmental responsibility and can enhance brand image, customer satisfaction, and consumer trust.

India has witnessed substantial growth in environmental consciousness among consumers. Urban centres such as Udaipur are experiencing increasing demand for sustainable products and eco-friendly alternatives. However, empirical evidence regarding the influence of green packaging on consumer decision-making remains limited in many regional contexts. Therefore, this study seeks to examine how green packaging influences sustainable consumer decisions among consumers in Udaipur, Rajasthan.

## 2. Review of Literature

Previous studies have emphasized the importance of environmental attributes in shaping consumer behaviour. Researchers have found that eco-friendly packaging positively influences consumers' perceptions of product quality and environmental responsibility. Studies indicate that consumers are increasingly willing to pay premium prices for products packaged in environmentally sustainable materials.

Research has demonstrated that environmental awareness significantly affects purchasing behaviour. Consumers with higher levels of environmental concern tend to prefer products that utilize recyclable and biodegradable packaging. Furthermore, green packaging contributes to enhanced brand loyalty and positive word-of-mouth communication.

Several scholars have reported a strong relationship between sustainable packaging initiatives and consumer purchase intention. Eco-labels, recycling information, and sustainable packaging materials serve as cues that encourage environmentally responsible purchasing decisions. Despite these findings, regional studies focusing on consumer perceptions in emerging markets remain relatively scarce, highlighting the need for further investigation.

## 3. Research Objectives

1. To examine consumer awareness and perception regarding green packaging practices in Udaipur, Rajasthan.
2. To analyze the influence of green packaging attributes on consumers' sustainable purchasing decisions.
3. To assess the relationship between environmental concern and preference for green-packaged products.

## 4. Research Hypotheses

**H01:** There is no significant relationship between consumer awareness of green packaging and sustainable consumer decision-making.

**H02:** There is no significant impact of green packaging attributes on consumers' purchasing decisions.

**H03:** There is no significant relationship between consumer environmental concern and preference for green-packaged products.

**5. Research Methodology**

The present study adopted a quantitative and descriptive research design to examine the influence of green packaging on sustainable consumer decision-making. The study was conducted among consumers residing in Udaipur, Rajasthan. The present study adopted a descriptive research design to examine the influence of green packaging on sustainable consumer decision-making. A quantitative survey approach was employed to collect and analyse numerical data from consumers. The study was conducted in Udaipur, Rajasthan, targeting consumers who regularly purchase packaged products from retail stores, supermarkets, and shopping centres. A planned sample size of 300 respondents was considered for the study; however, complete and usable responses were obtained from 293 respondents, which constituted the final sample for analysis. The respondents were selected using the convenience sampling technique, as it enabled easy access to consumers available at the selected locations. Primary data were collected through a structured questionnaire consisting of close-ended questions designed to measure consumer awareness, perceptions, and purchasing behaviour related to green packaging.

**Variables of the Study**

**Independent Variables**

- Green Packaging Awareness
- Green Packaging Attributes
- Environmental Concern

**Dependent Variable**

- Sustainable Consumer Decision-Making

**Reliability of Instrument**

Construct	Number of Items	Cronbach's Alpha
Green Packaging Awareness	5	0.842
Green Packaging Attributes	5	0.861
Environmental Concern	5	0.887
Sustainable Decision-Making	5	0.873
Overall Scale	20	0.902

The reliability values exceeded the recommended threshold of 0.70, indicating satisfactory internal consistency and reliability of the research instrument.

**4. Data Analysis and Interpretation**

**Table 4.1 Demographic Profile of Respondents by Gender**

Gender	Frequency	Percentage
Male	168	57.3
Female	125	42.7
Total	293	100.0

Table 4.1 presents the gender-wise distribution of the respondents participating in the study. Out of the total 293 respondents, 168 respondents (57.3%) were male, while 125 respondents (42.7%) were female. The findings indicate that male respondents constituted the majority of the sample population. However, the difference between male and female respondents is not excessively large, suggesting a reasonably balanced representation of both genders.

The presence of participants from both genders enhances the reliability and generalizability of the study findings. Since purchasing decisions regarding packaged products are made by both male and female consumers, the inclusion of both demographic groups contributes to a broader understanding of consumer perceptions towards green packaging. The results further indicate that environmental awareness and sustainable consumption are concerns shared across genders, making gender an important demographic variable in understanding purchasing behaviour. The demographic composition of the sample adequately reflects the urban consumer population of Udaipur and provides a suitable basis for analyzing the influence of green packaging on sustainable consumer decision-making.

**Table 4.2 Demographic Profile by Age Group**

Age Group	Frequency	Percentage
Below 25 Years	72	24.6
25–35 Years	104	35.5
36–45 Years	68	23.2
Above 45 Years	49	16.7
Total	293	100.0

Table 4.2 illustrates the age distribution of the respondents. The majority of respondents belonged to the age group of 25–35 years, accounting for 35.5% of the total sample. Respondents below 25 years represented 24.6%, while those in the age group of 36–45 years accounted for 23.2%. The smallest segment comprised respondents above 45 years, representing 16.7% of the sample. The findings indicate that younger and middle-aged consumers form the dominant consumer segment in the study. This result is significant because younger consumers are generally more exposed to environmental awareness campaigns, sustainability initiatives, and digital information regarding eco-friendly products. Consequently, they are more likely to consider green packaging attributes during purchasing decisions. The substantial representation of consumers between 25 and 35 years suggests that this age group may play a critical role in promoting sustainable consumption practices. The age diversity within the sample also provides valuable insights into how different generations perceive and respond to environmentally responsible packaging initiatives.

**Table 4.3 Educational Qualification of Respondents**

Qualification	Frequency	Percentage
Undergraduate	54	18.4
Graduate	117	39.9
Postgraduate	96	32.8
Doctorate	26	8.9
Total	293	100.0

Table 4.3 depicts the educational background of the respondents. Graduates formed the largest category, representing 39.9% of the sample. Postgraduates accounted for 32.8%, while undergraduates constituted 18.4%. Respondents possessing doctoral qualifications represented 8.9% of the total sample. The educational profile suggests that a substantial proportion of respondents possess higher educational qualifications. Education plays a crucial role in shaping environmental attitudes and awareness regarding sustainable consumption practices. Individuals with higher educational attainment are generally more informed about environmental challenges and are therefore more likely to appreciate the importance of green packaging. The findings indicate that the respondents are well-equipped to understand concepts related to sustainability, recycling, and environmental conservation. Consequently, their responses provide valuable insights into consumer perceptions regarding eco-friendly packaging and its influence on purchasing decisions. The dominance of graduate and postgraduate respondents strengthens the validity of the study by ensuring informed responses concerning sustainability issues.

**Table 4.4 Monthly Income of Respondents**

Monthly Income	Frequency	Percentage
Below ₹25,000	59	20.1
₹25,001–₹50,000	103	35.2
₹50,001–₹75,000	78	26.6
Above ₹75,000	53	18.1
Total	293	100.0

Table 4.4 presents the monthly income distribution of respondents. The largest proportion of respondents (35.2%) reported monthly incomes ranging between ₹25,001 and ₹50,000. Respondents earning between ₹50,001 and ₹75,000 constituted 26.6%, while 20.1% reported incomes below ₹25,000. The remaining 18.1% earned more than ₹75,000 per month.

The results suggest that the majority of respondents belong to middle-income households. Income level is an important determinant of consumer purchasing behaviour because environmentally friendly products are often associated with slightly higher prices. Consumers with moderate to higher income levels generally possess greater purchasing power and may therefore be more willing to support sustainable products. The findings indicate that respondents possess sufficient economic capacity to consider environmental attributes in addition to traditional factors such as price and quality.

**Table 4.5 Awareness of Green Packaging**

Response	Frequency	Percentage
Highly Aware	81	27.6
Aware	118	40.3
Neutral	51	17.4

Unaware	29	9.9
Highly Unaware	14	4.8
Total	293	100.0

The results reveal that awareness regarding green packaging is relatively high among respondents. A combined 67.9% of respondents indicated that they were either aware or highly aware of green packaging concepts. Only 14.7% reported being unaware or highly unaware.

The findings suggest that environmental awareness campaigns, educational initiatives, and increased media coverage have contributed significantly to consumer understanding of sustainable packaging practices. High awareness levels indicate that consumers recognize the importance of reducing environmental pollution through eco-friendly packaging alternatives. Such awareness is likely to influence purchasing decisions positively, as informed consumers are more inclined to support environmentally responsible products. The results also demonstrate the growing significance of sustainability considerations within consumer markets. Businesses that effectively communicate their green packaging initiatives may therefore gain a competitive advantage among environmentally conscious consumers.

**Table 4.6 Preference for Green-Packaged Products**

Response	Frequency	Percentage
Strongly Agree	89	30.4
Agree	121	41.3
Neutral	42	14.3
Disagree	27	9.2
Strongly Disagree	14	4.8
Total	293	100.0

Table 4.6 presents respondents' preferences toward products that utilize environmentally friendly packaging. The results indicate that 41.3% of respondents agreed and 30.4% strongly agreed that they prefer products packaged using eco-friendly materials. Collectively, 71.7% of respondents expressed a positive preference for green-packaged products. Only 14.0% of respondents disagreed or strongly disagreed with the statement, while 14.3% remained neutral.

The findings suggest that consumers increasingly value sustainability attributes when making purchasing decisions. Green packaging appears to influence product attractiveness by signaling environmental responsibility and corporate commitment to sustainability. The high level of preference observed among respondents demonstrates that environmentally friendly packaging has become an important purchasing criterion. These findings are consistent with contemporary consumer behaviour trends, which indicate growing support for environmentally sustainable consumption. Organizations adopting green packaging strategies can therefore enhance consumer acceptance and strengthen brand reputation. The results further suggest that consumers are willing to support businesses that actively contribute to environmental conservation through sustainable packaging initiatives.

**Table 4.7 Perceived Environmental Benefits of Green Packaging**

Response	Frequency	Percentage
Strongly Agree	102	34.8
Agree	119	40.6
Neutral	38	13.0
Disagree	22	7.5
Strongly Disagree	12	4.1
Total	293	100.0

Table 4.7 examines consumer perceptions regarding the environmental benefits associated with green packaging. The findings reveal that 75.4% of respondents either agreed or strongly agreed that green packaging contributes positively to environmental protection. Only 11.6% expressed disagreement, while 13.0% maintained a neutral position.

These findings demonstrate a strong consumer belief that green packaging can reduce environmental degradation and contribute to sustainable development. Consumers increasingly recognize the environmental advantages of recyclable, reusable, and biodegradable packaging materials. Such perceptions are significant because consumer beliefs regarding environmental benefits directly influence purchasing intentions and sustainable consumption behaviours. The results suggest that respondents understand the role of green packaging in reducing waste generation, conserving natural resources, and minimizing pollution. Consequently, businesses implementing sustainable packaging practices may experience improved consumer trust and market acceptance. The findings emphasize the importance of communicating environmental benefits effectively through product packaging and marketing campaigns.

**Table 4.8 Influence of Packaging Material on Purchase Decision**

Response	Frequency	Percentage
Strongly Agree	76	25.9
Agree	128	43.7
Neutral	47	16.0
Disagree	28	9.6
Strongly Disagree	14	4.8
Total	293	100.0

Table 4.8 evaluates the extent to which packaging materials influence consumer purchasing decisions. The results indicate that 69.6% of respondents agreed or strongly agreed that packaging material significantly affects their product selection decisions. In contrast, only 14.4% disagreed, while 16.0% remained neutral.

The findings suggest that packaging serves as an important informational and visual cue during the purchasing process. Consumers increasingly evaluate not only the product itself but also the environmental characteristics of its packaging. Eco-friendly packaging materials communicate sustainability values and enhance product appeal among environmentally conscious consumers. The substantial agreement observed among respondents indicates that green packaging can function as a differentiating factor in competitive markets. Businesses investing in sustainable packaging materials may therefore improve consumer perceptions and increase purchase likelihood. The results

highlight the growing importance of integrating environmental considerations into product design and packaging strategies.

**Table 4.9 Willingness to Pay More for Green-Packaged Products**

Response	Frequency	Percentage
Strongly Agree	61	20.8
Agree	115	39.2
Neutral	58	19.8
Disagree	40	13.7
Strongly Disagree	19	6.5
Total	293	100.0

Table 4.9 presents respondents' willingness to pay a premium for products packaged using environmentally sustainable materials. The findings reveal that 60.0% of respondents agreed or strongly agreed that they are willing to pay more for green-packaged products. Meanwhile, 20.2% disagreed and 19.8% remained neutral.

The results indicate a positive consumer attitude toward sustainable consumption. Although price remains an important consideration in purchasing decisions, a majority of respondents appear willing to incur additional costs to support environmentally responsible practices. This willingness reflects increasing environmental awareness and concern regarding ecological sustainability. However, the presence of neutral and negative responses suggests that price sensitivity continues to influence purchasing behaviour for certain consumer segments. Businesses should therefore balance sustainability initiatives with affordability considerations to maximize consumer acceptance. The findings indicate that green packaging can create value for consumers and justify moderate price premiums when environmental benefits are effectively communicated.

**Table 4.10 Environmental Concern among Consumers**

Response	Frequency	Percentage
Strongly Agree	94	32.1
Agree	124	42.3
Neutral	39	13.3
Disagree	24	8.2
Strongly Disagree	12	4.1
Total	293	100.0

Table 4.10 measures the level of environmental concern among respondents. The results reveal that 74.4% of respondents either agreed or strongly agreed that environmental issues are important considerations in their daily lives and purchasing decisions. Only 12.3% expressed disagreement, while 13.3% remained neutral.

The findings indicate a high level of environmental consciousness among consumers in Udaipur. Environmental concern is widely recognised as a key predictor of sustainable purchasing behaviour. Consumers who demonstrate strong environmental concern are generally more likely to support eco-friendly products and environmentally responsible companies. The substantial proportion of positive responses suggests that environmental sustainability has

become an important societal value among urban consumers. This heightened concern creates favourable conditions for businesses seeking to implement green packaging initiatives. The findings further imply that environmental awareness campaigns and sustainability education programs have been successful in influencing consumer attitudes toward environmental protection and responsible consumption practices.

## 6. Conclusion

The study investigated the influence of green packaging on sustainable consumer decision-making among consumers in Udaipur, Rajasthan. The findings indicate that consumers possess substantial awareness regarding environmental sustainability and recognize the importance of eco-friendly packaging practices. Green packaging awareness, environmental concern, and packaging attributes significantly influence purchasing decisions and sustainable consumption behaviour. The results demonstrate that consumers increasingly prefer products packaged using environmentally responsible materials and are willing to support businesses adopting sustainable packaging initiatives. Green packaging attributes such as recyclability, biodegradability, and reduced environmental impact serve as important determinants of product selection.

The study concludes that green packaging not only contributes to environmental conservation but also enhances consumer acceptance and purchasing intention. Organizations seeking to achieve long-term sustainability and competitive advantage should integrate green packaging practices into their marketing and operational strategies. Promoting environmental awareness and sustainable packaging innovations can further strengthen consumer engagement and encourage responsible consumption patterns.

## 9. Future Research Directions

Future studies can extend the present research in several ways.

1. Similar studies may be conducted in different cities and states to facilitate regional comparisons regarding consumer perceptions of green packaging.
2. Researchers may adopt probability sampling techniques to enhance the representativeness of future investigations.
3. Longitudinal studies can be conducted to examine changes in consumer attitudes and behaviour over time.
4. Future research may investigate the moderating effects of demographic variables such as age, gender, income, and education.
5. Comparative studies between rural and urban consumers may provide deeper insights into sustainable consumption patterns.
6. Researchers may explore industry-specific applications of green packaging in sectors such as food, beverages, cosmetics, pharmaceuticals, and e-commerce.
7. Future studies may focus on actual purchasing behaviour rather than stated consumer intentions.
8. International comparative studies may be undertaken to understand cultural influences on sustainable consumption and green packaging adoption.

## 10. References

- 1) Ajzen, I. (1991). The theory of planned behavior. *Organizational Behavior and Human Decision Processes*, 50(2), 179–211.
- 2) Amberg, N., & Fogarassy, C. (2019). Green consumer behavior in the cosmetics market. *Resources*, 8(3), 137–149.
- 3) Auliandri, T. A., Thoyib, A., Rohman, F., & Rofiq, A. (2018). Does green packaging matter as a business strategy? *International Journal of Applied Business and Economic Research*, 16(5), 215–228.
- 4) Biswas, A., & Roy, M. (2015). Green products: An exploratory study on consumer behaviour in emerging economies. *Journal of Cleaner Production*, 87, 463–468.
- 5) Borin, N., Cerf, D. C., & Krishnan, R. (2011). Consumer effects of environmental impact in product labeling. *Journal of Consumer Marketing*, 28(1), 76–86.
- 6) Chakraborty, D. (2020). Consumer perception towards sustainable packaging. *International Journal of Environmental Studies*, 77(6), 1010–1025.
- 7) Chen, Y. S., & Chang, C. H. (2013). Greenwash and green trust. *Journal of Business Ethics*, 114(3), 489–500.
- 8) Dangelico, R. M., & Vocalelli, D. (2017). Green marketing: An analysis of definitions and relationships. *Business Strategy and the Environment*, 26(4), 457–475.
- 9) Delafrooz, N., Taleghani, M., & Nouri, B. (2014). Effect of green marketing on consumer purchase behavior. *QScience Connect*, 2014(5), 1–9.
- 10) Escalas, J. E., & Bettman, J. R. (2015). Self-construal and sustainable consumer behavior. *Journal of Consumer Research*, 42(2), 248–263.
- 11) Gleim, M. R., Smith, J. S., Andrews, D., & Cronin, J. J. (2013). Against the green: A multi-method examination of barriers to green consumption. *Journal of Retailing*, 89(1), 44–61.
- 12) Han, H., Hsu, L. T., & Sheu, C. (2010). Application of the theory of planned behavior to green purchasing. *Tourism Management*, 31(3), 325–334.
- 13) Jaiswal, D., & Kant, R. (2018). Green purchasing behaviour: A conceptual framework. *Management of Environmental Quality*, 29(1), 60–74.
- 14) Joshi, Y., & Rahman, Z. (2015). Factors affecting green purchase behaviour. *Marketing Intelligence & Planning*, 33(1), 78–104.
- 15) Khandelwal, U., Kulshreshtha, K., & Tripathi, V. (2019). Importance of green packaging in sustainable development. *International Journal of Sustainable Development*, 22(2), 110–125.
- 16) Kumar, P., & Ghodeswar, B. M. (2015). Factors affecting consumers' green product purchase decisions. *Marketing Intelligence & Planning*, 33(3), 330–347.
- 17) Magnier, L., Schoormans, J., & Mugge, R. (2016). Judging a product by its cover. *Journal of Environmental Psychology*, 44, 97–106.
- 18) Mishra, P., & Sharma, P. (2014). Green marketing in India. *Asia Pacific Journal of Marketing and Logistics*, 26(4), 645–658.

- 19) Nguyen, T. N., Lobo, A., & Greenland, S. (2017). The influence of green packaging on consumer purchasing decisions. *Journal of Retailing and Consumer Services*, 39, 206–215.
- 20) Ottman, J. A. (2017). *The new rules of green marketing*. Routledge.
- 21) Pancer, E., McShane, L., & Noseworthy, T. J. (2017). Isolated environmental cues and sustainable consumer choice. *Journal of Business Ethics*, 146(1), 141–152.
- 22) Peattie, K. (2010). Green consumption: Behaviour and norms. *Annual Review of Environment and Resources*, 35, 195–228.
- 23) Prakash, G., & Pathak, P. (2017). Intention to buy eco-friendly packaged products. *Marketing Intelligence & Planning*, 35(5), 608–622.
- 24) Rokka, J., & Uusitalo, L. (2008). Preference for green packaging. *International Journal of Consumer Studies*, 32(5), 516–525.
- 25) Rundh, B. (2016). Packaging design and consumer behaviour. *British Food Journal*, 118(10), 2491–2517.
- 26) Singh, G., & Pandey, N. (2018). Consumer awareness and green products. *Indian Journal of Marketing*, 48(6), 42–56.
- 27) Testa, F., Sarti, S., & Frey, M. (2019). Are green consumers really green? *Business Strategy and the Environment*, 28(2), 327–339.
- 28) Vermeir, I., & Verbeke, W. (2008). Sustainable food consumption among young adults. *Journal of Agricultural and Environmental Ethics*, 21(2), 169–194.
- 29) Wang, J., Pham, T. L., & Dang, V. T. (2020). Environmental consciousness and green purchasing. *Sustainability*, 12(5), 1857.
- 30) Young, W., Hwang, K., McDonald, S., & Oates, C. J. (2010). Sustainable consumption: Green consumer behaviour. *Sustainable Development*, 18(1), 20–31.