

# Consumer Perception and Adoption of Green Packaging in Dhaka City Area

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**Abstract:** Consumer perception and adoption of green packaging have become increasingly vital in the context of sustainable development and environmental conservation. This study delves into the multifaceted dynamics surrounding consumers' attitudes, behaviours, and preferences towards environmentally friendly packaging materials. Through a comprehensive review of existing literature and empirical research, this paper aims to elucidate key factors influencing consumer decision-making processes in the realm of green packaging. The research endeavours to identify levels of consumer awareness regarding green packaging options and assess the extent to which environmental considerations influence purchasing decisions. Additionally, it explores demographic variations in consumer perceptions, investigating how factors such as age, income, and geographic location impact attitudes towards sustainable packaging solutions. Furthermore, the study analyses the efficacy of various communication channels in disseminating information about green packaging and examines the role of branding in shaping consumer perceptions of environmentally responsible practices.

**Keywords:** Green Packaging, Consumer Perception, Consumer Attitude, Sustainability, Eco-Friendly

## 1. INTRODUCTION

(a) Background:

In recent years, heightened awareness of environmental issues and sustainability concerns has prompted a shift in consumer preferences towards more eco-friendly products and practices. Among the myriad facets of sustainable consumption, the domain of packaging has emerged as a focal point for innovation and scrutiny. (P.Mohanasundaram 2023) Green packaging, characterized by materials and practices that minimize environmental impact throughout the product lifecycle, has garnered increasing attention from consumers, businesses, and policymakers alike. (George, Susainathan and Parayitam 2023). The adoption of green packaging

represents a crucial step towards achieving broader sustainability goals, encompassing reductions in resource consumption, waste generation, and carbon emissions. However, the successful integration of green packaging into mainstream consumer markets hinges upon a nuanced understanding of consumer perceptions, attitudes, and behaviours. This necessitates an exploration of the factors driving consumer decision-making processes in relation to sustainable packaging options. (Christanto, Melisa and Cu 2017).

(b) Green Packaging in Bangladesh:

Green packaging in Bangladesh refers to environmentally friendly packaging solutions that minimize waste and reduce the carbon footprint associated with traditional packaging methods. This approach includes the use of biodegradable materials, recyclable products, and sustainable practices throughout the packaging supply chain. In recent years, there has been a growing awareness of environmental issues in Bangladesh, prompting both consumers and businesses to seek more sustainable options. (Mashrafi 2023) Local companies are increasingly adopting eco-friendly materials like paper, jute, and other biodegradable substances. Initiatives to reduce plastic use, especially single-use plastics, are gaining momentum, supported by government regulations and public campaigns. (Haque 2024)

Furthermore, organizations are focusing on innovative designs that reduce material usage while maintaining functionality and aesthetics. The shift towards green packaging not only addresses environmental concerns but also enhances brand image and caters to the rising demand for sustainable products among consumers. Overall, green packaging in Bangladesh is part of a broader movement toward sustainability, aiming to balance economic growth with environmental responsibility. (Md Zahid Hasan 2024)

## 2. RATIONALE OF STUDY

The rationale for investigating consumer perception and adoption of green packaging stems from the pressing need to address environmental challenges associated with conventional packaging practices. Packaging plays a pivotal role in modern consumer society, serving as a vessel for the protection, transportation, and promotion of goods. (Alencar Bravo 2024) However, the prevalent use of non-biodegradable materials and unsustainable packaging practices has precipitated a range of environmental repercussions, including resource depletion, pollution, and ecosystem degradation. In response to these challenges, there has been a growing impetus to transition towards more sustainable packaging alternatives that minimize environmental impact and promote circularity within the economy. Green packaging, encompassing materials and practices designed to enhance environmental sustainability throughout the product lifecycle, represents a promising avenue for mitigating the environmental footprint of packaging.

## 3. LIMITATIONS

One significant limitation in the study of consumer perception and adoption of green packaging is the variability in consumer awareness and understanding of environmental issues. Despite growing awareness of sustainability, there remains a significant gap in consumer knowledge regarding the specific benefits and implications of green packaging. (Chevtchouk Y 2021) This disparity can lead to inconsistent adoption rates, as some consumers may prioritize eco-friendly packaging more highly than others based on their level of environmental education and personal values. Furthermore, consumer perceptions of green packaging can be influenced by a range of factors including marketing messages, media coverage, and individual experiences, which can result in varying interpretations and expectations. This variability makes it challenging for companies to design universally effective green packaging strategies that resonate with all segments of the market.

## 4. RESEARCH OBJECTIVE

a) To Examine Demographic Variations in Consumer Perception: Investigate how demographic factors such as age, gender, income, education, and geographic location influence consumer perceptions and adoption rates of green packaging.

b) To Identify Consumer Awareness Levels: Determine the extent to which consumers are aware of green packaging options and their environmental benefits.

c) To Assess Consumer Behaviour Patterns: Examine consumer behaviours related to the purchase and use of products packaged in environmentally friendly materials, including factors influencing adoption or resistance.

## 5. METHODOLOGY

### (a). Research Design

This study employed a mixed-methods approach, combining both quantitative and qualitative research to gain a comprehensive understanding of consumer perception and adoption of green packaging in Dhaka City. The quantitative component focused on surveying consumer attitudes, while the qualitative component will involve in-depth interviews to explore motivations and barriers. (Md Zahid Hasan 2024) This paper embarks on an inquiry into the realm of consumer perception and adoption of green packaging, aiming to elucidate the intricate interplay between environmental considerations, consumer preferences, and market dynamics. Through a synthesis of existing literature and empirical research, we seek to delineate the key drivers shaping consumer attitudes towards green packaging, as well as the barriers impeding its widespread adoption. In order to gather primary data, we utilized a self-structured questionnaire. In this research, primary data were gathered from various sources using a structured questionnaire, while secondary sources were used to develop a literature analysis for context.

### (b) Population and Sample

The target population will include consumers residing in Dhaka City. A stratified random sampling method will be used to ensure representation across different demographics (age, gender, income level, and education). The sample size will consist of approximately 150 respondents for the survey, and 15-20 participants will be selected for in-depth interviews based on their survey responses. Data was collected using a self-structured questionnaire from consumers who purchase green packaged convenience products from stores.

## 6. LITERATURE REVIEW

a) Consumer Perception of Green Packaging: Green packaging is increasingly becoming a focal

point in consumer decision-making processes, driven by growing environmental concerns and sustainability awareness. (E Rahbar 2011) Studies have shown that consumers perceive green packaging positively when it aligns with their environmental values and reflects corporate social responsibility efforts (Armstrong 2020). However, the effectiveness of green packaging in influencing consumer behaviour is contingent upon factors such as perceived credibility of environmental claims, perceived quality of the product, and perceived personal benefits. (E Rahbar 2011)

b) **Factors Influencing Consumer Adoption of Green Packaging:** The adoption of green packaging is influenced by a complex interplay of individual, social, and situational factors. Research suggests that consumer demographics, such as age, education level, and income, play a role in shaping attitudes towards green packaging, with younger, more educated consumers exhibiting greater environmental consciousness (Zhao and Zhu 2023). Additionally, situational factors such as product category, price sensitivity, and convenience impact consumer willingness to choose green packaging alternatives. Social influences, including peer norms and social identity, also play a significant role in driving adoption behaviour. (Lucyana Trimo n.d.)

c) **Communication Strategies and Packaging Design:** Effective communication strategies and packaging design are crucial for enhancing consumer perception and adoption of green packaging. Eco-labelling and environmental messaging have been shown to increase consumer awareness and willingness to pay for products packaged in environmentally friendly materials. (Md Zahid Hasan 2024) Moreover, packaging design elements such as colour, shape, and material choice can evoke positive emotions and associations with nature, further reinforcing green packaging preferences. However, the proliferation of green washing practices poses challenges to consumer trust and credibility in green packaging claims (Trimo, Rochdiani and Suminartika 2021)

d) **Market Trends and Industry Initiatives:** In response to growing consumer demand for sustainable packaging solutions, industries across various sectors are increasingly adopting green packaging practices. Food and beverage companies, in particular, have been at the forefront of implementing biodegradable, compostable, and recyclable packaging materials (Geyer et al., 2016). Cosmetic and personal care brands are also leveraging green packaging as a means of differentiating their products and appealing to

environmentally conscious consumers (Huang & Liu, 2018). Government regulations and industry-led initiatives, such as extended producer responsibility programs and circular economy initiatives, are further driving the adoption of green packaging practices. (Mardiyah, Anggraeni and Muzdalifah 2022)

e) **Challenges and Future Directions:** Despite the growing momentum towards green packaging adoption, several challenges remain. These include the need for standardized sustainability metrics and labelling schemes, infrastructure limitations for recycling and composting, and consumer scepticism towards green claims. Future research should focus on addressing these challenges through interdisciplinary approaches that integrate insights from consumer psychology, marketing, packaging engineering, and environmental science. (L Hamzaoui-Essoussi 2011) Longitudinal studies tracking changes in consumer attitudes and behaviours over time, cross-cultural comparisons of green packaging perceptions, and experimental research on the efficacy of intervention strategies are also warranted to advance our understanding of consumer perception and adoption of green packaging. (Fadhilla, Eko and Astuti 2022).

## 7. FINDINGS AND ANALYSIS

### (a) Growing Environmental Awareness

**Finding:** There is a noticeable increase in consumer awareness regarding environmental issues and the impact of packaging waste. Studies reveal that consumers are increasingly concerned about sustainability and are more likely to support brands that demonstrate environmental responsibility.

**Analysis:** This heightened environmental awareness creates a favourable environment for the adoption of green packaging. Consumers who prioritize sustainability are more inclined to choose products with eco-friendly packaging, suggesting that brands can leverage this trend to enhance their market appeal and build customer loyalty.

### (b) Influence of Marketing and Labelling

**Finding:** Effective marketing and clear labelling significantly impact consumer perception of green packaging. Products that prominently display sustainability certifications or eco-friendly claims are often perceived more positively.

**Analysis:** This finding underscores the importance of transparent and strategic communication. Companies that invest in clear, honest marketing about their green

packaging initiatives can more effectively capture consumer interest and reinforce their commitment to sustainability.

#### (c) Perceived Value and Trade-offs

**Finding:** While many consumers value green packaging, they are also concerned about potential trade-offs, such as higher costs or reduced functionality. Some consumers are willing to pay a premium for sustainable packaging, while others are deterred by increased costs.

**Analysis:** This highlights a critical balance that companies must achieve. To maximize adoption, green packaging must not only address environmental concerns but also offer practical benefits, such as cost-effectiveness and convenience. Brands that can demonstrate both environmental and functional advantages are likely to attract a broader consumer base.

#### (d) Variability in Adoption Rates

**Finding:** Adoption rates of green packaging vary significantly across different demographics and regions. Factors such as income level, education, and geographic location influence how consumers perceive and adopt green packaging.

**Analysis:** Companies need to tailor their green packaging strategies to address the specific needs and preferences of different consumer segments. For instance, premium green packaging options might be more suitable for higher-income markets, while cost-effective solutions may be necessary for price-sensitive consumers.

#### (e) Challenges in Material Availability and Cost

**Finding:** The availability and cost of sustainable materials pose significant challenges for widespread adoption of green packaging. Many companies face difficulties in sourcing eco-friendly materials at a scale that makes economic sense.

**Analysis:** To address this issue, increased investment in research and development is essential. Innovations in material science and improvements in supply chain efficiencies could help reduce costs and improve the availability of green packaging materials, making them more accessible for a wider range of products and businesses.

#### (d). Impact of Regulatory and Industry Standards

**Finding:** Regulatory frameworks and industry standards play a crucial role in shaping consumer perceptions of green packaging. Compliance with environmental regulations and industry certifications can enhance credibility and consumer trust.

**Analysis:** Companies should stay informed about evolving regulations and standards related to green packaging. Adhering to these guidelines not only helps in gaining consumer trust but also positions the company as a responsible player in the industry.

#### (e) Consumer Education and Engagement

**Finding:** There is a need for increased consumer education about the benefits and proper disposal of green packaging. Consumers who are better informed about how to recycle or compost green packaging are more likely to adopt it.

**Analysis:** Implementing educational initiatives and providing clear instructions on how to handle green packaging can improve adoption rates. Engaging consumers through educational campaigns and in-store information can help bridge the gap between environmental intentions and practical actions.

These findings and analyses suggested that while consumer perception of green packaging is largely positive, achieving widespread adoption requires addressing several key factors, including effective communication, balancing cost and functionality, and overcoming material and logistical challenges.

## 8. CONCLUSION

In conclusion, consumer perception and adoption of green packaging are influenced by a complex interplay of environmental awareness, perceived value, and practical considerations. As consumers become increasingly conscious of environmental issues, they are more likely to favour products with eco-friendly packaging. This shift in preference is driven by a growing recognition of the environmental impacts of traditional packaging materials and a desire to support sustainable practices. However, for green packaging to gain widespread adoption, it must not only align with consumers' environmental values but also offer practical benefits, such as convenience and cost-effectiveness.

Companies that successfully integrate green packaging into their products and effectively communicate its benefits stand to gain a competitive edge in the marketplace. By addressing consumer

concerns and highlighting the tangible advantages of sustainable packaging, businesses can foster greater acceptance and encourage more widespread adoption. Ultimately, the continued evolution of green packaging will depend on ongoing innovation, transparent practices, and a commitment to meeting both environmental and consumer needs.

### 9. RECOMMENDATION

To enhance consumer perception and encourage the adoption of green packaging, businesses and stakeholders should consider the following recommendations:

(a) Educate Consumers: Implement educational campaigns to raise awareness about the advantages of green packaging and its role in reducing environmental impact. Use various platforms, including social media, in-store displays, and packaging itself, to educate consumers about how green packaging contributes to sustainability.

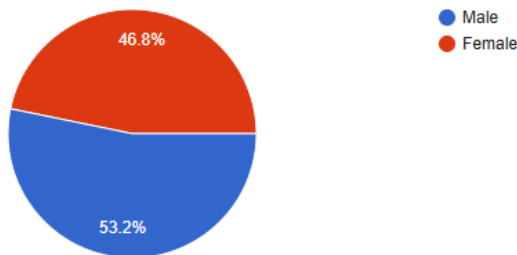
(b) Invest in Innovation: Support research and development in sustainable packaging technologies. Investing in new materials and packaging solutions that are both environmentally friendly and cost-effective can help overcome current limitations and drive broader adoption.

(c) Promote Cost-Effectiveness: Work towards reducing the cost of green packaging materials and processes. As the cost of green packaging decreases, it becomes more feasible for a wider range of products and companies to adopt these practices, making it a more accessible option for consumers.

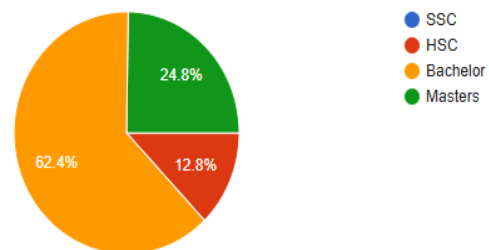
(d) Collaborate with Industry Partners: Engage in collaborations with other businesses, industry groups, and environmental organizations to share knowledge, resources, and best practices. Joint efforts can accelerate the development and adoption of green packaging solutions and create a more unified approach to sustainability.

### APPENDIX OF QUESTIONNAIRE & RESULT

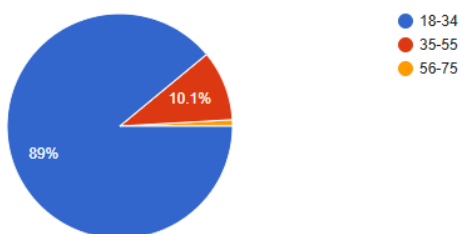
Gender Ratio



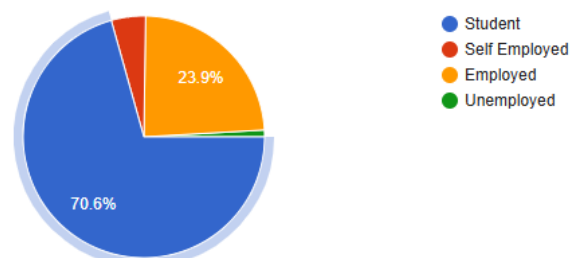
Educational level



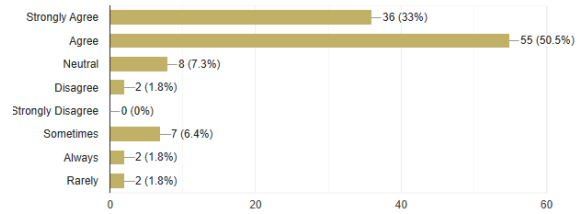
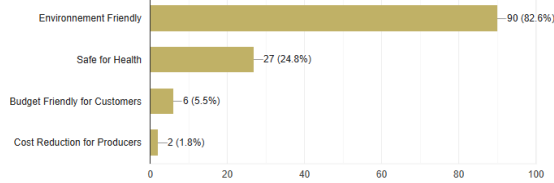
Age Level



Employment Status

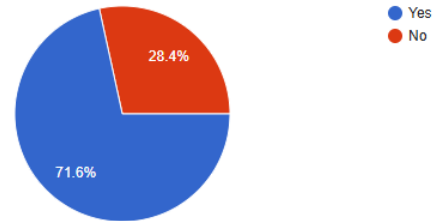
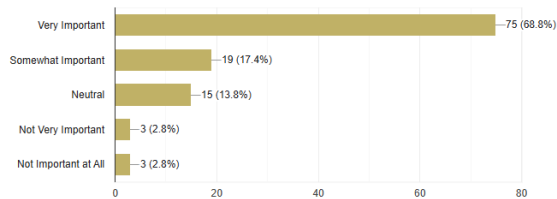


Q1. When you see products labelled as "green packaging" or "eco-friendly packaging," what does that mean to you?

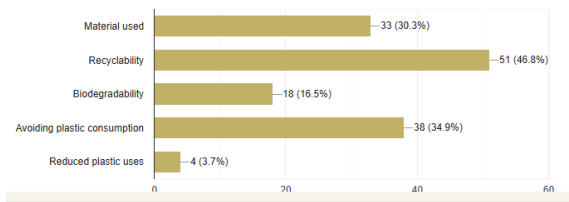


Q7. Have you ever been willing to pay more for a product simply because it was packaged in an environmentally friendly way?

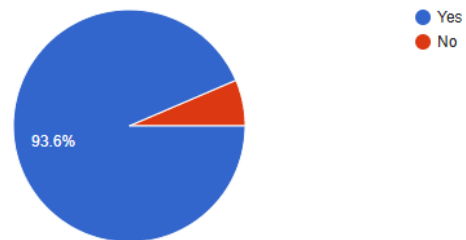
Q2. How important is environmentally friendly packaging when making purchasing decisions?



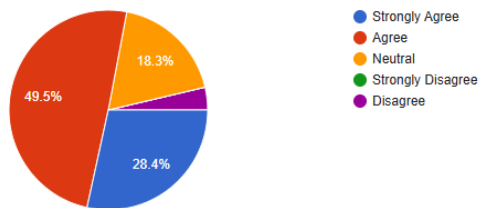
Q3. What factors influence your perception of green packaging?



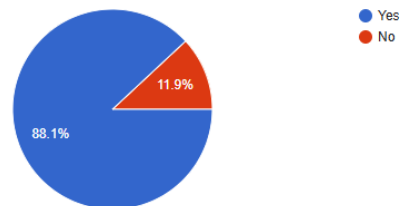
Q8. How likely are you to recommend products with green packaging to friends or family?



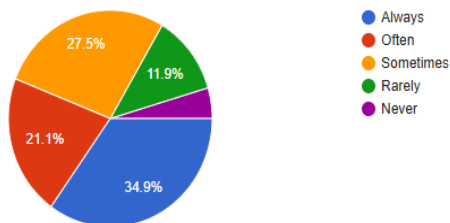
Q4. Do you believe that products in green packaging are generally of higher quality than those in traditional packaging?



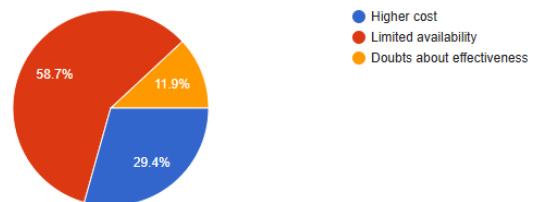
Q9. Would you be more likely to purchase products in green packaging if they were more widely available?



Q5. How often do you actively seek out products with green packaging?

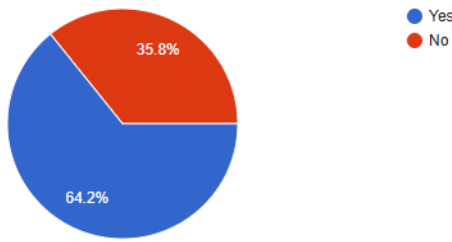


Q10. What factors, if any, prevent you from purchasing products in green packaging?

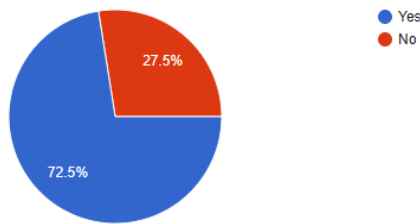


Q6. Do you think, Green Packaging will increase brand awareness?

Q11. Have you ever switched brands because a competitor offered products with greener packaging?



Q12. Have you ever been willing to pay more for a product simply because it was packaged in an environmentally friendly way?



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