



The Sustainable Shift: How Green Packaging Initiatives Influence Consumer Awareness And Behaviour

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Abstract: Green packaging refers to packaging materials and practices that are designed to have minimal impact on the environment. This study, based on a comprehensive review of existing literature and empirical data, focuses on consumer perception, preferences, attitudes, and buying behaviour, investigating how green packaging influences consumer preferences and buying decisions. Highlighting its role in reducing environmental impact and promoting sustainability. Green packaging is characterised by the use of eco-friendly materials, such as biodegradable, recyclable, and compostable resources, and is designed to minimise waste, energy consumption, and the use of non-renewable resources. Existing studies suggest that green packaging influences consumer behaviour and positively affects consumer preferences for the product's packaging. The findings reveal a complex relationship between consumer awareness, environmental attitude, and packaging design. While there is a growing consumer interest in eco-friendly products, awareness of the benefits and functionalities of green packaging varies significantly.

Keywords: Green packaging, eco-friendly, environment, perception, awareness, and consumer behaviour

1. Introduction

Packaging refers to the process and materials used to enclose or protect products for distribution, storage, sale, and use (Sook-Fern Yeo et al., 2020). Packaging helps safeguard the product from damage, provides essential information to consumers, enhances the product's appeal, and facilitates transportation and storage (Duarte et al., 2024). The product has no value without its packaging, so packaging plays a crucial role in all types of products. After use, the product packaging is often discarded, resulting in pollution and a negative impact on the environment. Therefore, green packaging has been introduced to help reduce waste and pollution (Sustainable Packaging in FMCG). "Green" in green packaging refers to packaging that has a minimal environmental impact. Green packaging is made using materials and methods that minimize energy consumption and mitigate the environmental impact of packaging. Green packaging, also referred to as eco-friendly and sustainable packaging, refers to packaging solutions designed to have a minimal environmental impact (Shaikh & Hyder, 2023). It utilizes environmentally safe materials and production methods throughout the packaging's lifecycle, from production to disposal (Rajendran et al., 2019). Green packaging offers a solution to several environmental challenges by reducing waste, conserving natural resources, and decreasing carbon emissions. Our daily lives involve countless products, from food and cosmetics to decorations and toiletries, all of which come with packaging. It's a common misconception that the primary source of waste comes from the product itself; in reality, a significant portion of the waste we generate is derived from the packaging of these everyday items (Abdel-Shafy & Mansour, 2018). Most of these

packaging materials are discarded into landfills, burned in the open, or dumped into rivers or oceans (Kan & Miller, 2022). If they are non-biodegradable and nonrecyclable, they contribute to environmental pollution and introduce toxic chemicals into the air, land, water, and soil, and human actions harm wildlife, degrade ecosystems, and directly affect human health, as we are an integral part of the environment (G. Usman et al., 2023). Green packaging utilizes materials and manufacturing techniques to minimize energy consumption and mitigate the environmental harm caused by packaging. Its solutions often incorporate biodegradable and recyclable materials, prioritizing alternatives to plastic and Styrofoam (What Is Green Packaging). Green manufacturing processes take steps to reduce their power consumption and minimize the number of greenhouse gas emissions they produce (Haleem et al., 2023). The importance of green packaging has grown in response to increasing environmental awareness and consumer demand for more sustainable products. As concerns about climate change, pollution, and resource depletion become more pressing, businesses and consumers seek solutions to support a more sustainable future. Green packaging addresses these concerns by promoting the use of materials that can be recycled, composted, or safely returned to the environment. It also often incorporates innovative design and manufacturing practices that enhance efficiency and reduce environmental impact (Herbes et al., 2024).

Green packaging represents a significant shift towards sustainability in the packaging industry, aiming to balance environmental impact with functional and economic considerations. Consumers increasingly prioritise environmental sustainability (Siuda & Grębosz-Krawczyk, 2025)

2. Objective

To study a comprehensive literature review on green packaging, focusing on its consumer perception, preferences, attitude, and buying behaviour. By reviewing and synthesizing existing literature, this paper aims to provide insights into the factors influencing consumer preferences for green packaging and identify areas that require further investigation.

3. Results and Discussions

The results of studies on green packaging have generally demonstrated positive outcomes in terms of environmental impact, including reduced carbon emissions and waste through the use of biodegradable and recycled materials. Consumer preferences also indicate a strong demand for green packaging and sustainable business practices. Overall, the trend toward green packaging presents opportunities to enhance brand loyalty and promote sustainability.

Sr. No.	Author's name and year of publication	Title of the paper	Objectives	Methodology used	Findings
1	(Ling & Mustaffa Halab, 2024)	Exploring the Influence of Green Packaging Design on Consumer Purchasing Behavior: A comprehensive analysis	<ul style="list-style-type: none"> To identify governmental and trade regulations affecting the marketing and distribution of green agricultural products in China and the USA. 	Data: Secondary data	This study highlight the complex relationship between green packaging design and consumer purchasing behavior; understanding these dynamics is crucial for businesses and policymakers because consumer preferences shift towards environmental consciousness.
2	(Hyder & Amir, 2023)	Impact of green packaging on Consumers' buying behavior: the mediating role of Attitude	<ul style="list-style-type: none"> To investigate the impact of Eco-labelling on consumer buying behaviour. To investigate the impact of willingness to pay on consumer buying behaviour. To investigate the impact of environmental concerns on consumer buying behaviour. To investigate the attitude as a mediating variable between eco-labelling, willingness to pay, environmental concerns and consumer buying behaviour. 	Data: Primary data Data collection: questionnaire Sample size: 290 Statistical analysis: Descriptive statistics, simple regression in SPSS.	Consumers are increasingly concerned about the environment, so they prefer products packaged in green. In this paper, the impact of green packaged products on consumer buying behavior is significant, whether attitude mediates the relationship between eco-labeling, willingness to pay, and environmental concern on consumer buying behavior.

3	(George et al., 2023)	The relationship between green packaging awareness, initiatives, and behavior: an exploratory study on Indian rural population	<ul style="list-style-type: none"> To investigate the antecedents and consequences of green packaging behavior. 	Data: Primary data. Data collection: questionnaire Sample size: 395 Statistical analysis: Descriptive statistics, SEM	This study explores the factors influencing green packaging and its outcomes. The research highlighted that awareness of green packaging significantly drives positive attitudes and initiatives towards it. To encourage eco-friendly behaviour, it's crucial to raise awareness through campaigns and ensure packaging is clearly labeled as reusable or recyclable.
4	(Pandey & Khilwani, 2022)	Consumer attitude towards green packaging on food products in Bilaspur district	<ul style="list-style-type: none"> To identify consumer attitude towards green packaging on food product in Bilaspur district, To identify consumer attitudes towards green packaging in providing protection and convenience for consumers. To identify consumer attitude towards green packaging in relation to promoting the food products. 	Data: Primary and secondary data. Data collection: questionnaire Sample size: 50 Statistical analysis: Mean, standard deviation.	The study aimed to investigate consumer attitudes towards the functions of green packaging, which are protecting quality, promoting products, and providing convenience. Recycling and reusing used packages can transform waste into valuable materials for new products, helping to reduce landfill contributions and pollution. The study shows that consumers are aware of green packaging and the 3R principles-reduce, reuse, recycle.
5	(Mahmoud et al., 2022)	Green packaging, environment awareness, willingness to pay, and consumers' purchase decisions	To examine green packaging, environmental awareness, and willingness to pay for green products in consumer's purchase decisions.	Data: Primary data was collected through a questionnaire. Statistical analysis: using SPSS software for descriptive statistics and testing hypotheses through PLS-SEM.	The study reveals that consumers' environmental awareness of green packaging has a positive impact on their purchase decisions, reflecting a growing concern about the materials used in packaging. However, green packaging alone does not significantly influence consumer choices, indicating

					that food manufacturers need to enhance public education on benefits of green packaging.
6	(Kacker & Mishra, 2022)	Consumer perception towards green packaging for environmental sustainability: a study on FMCG sector	<ul style="list-style-type: none"> To understand consumer awareness towards green packaging. To analyze consumer preference towards green packaging in the FMCG sector. To find the consumer consciousness for environmental sustainability with respect to green packaging. 	Data: primary data. Data collection: questionnaire. Sample size: 100 Statistical analysis: SPSS and chi-square test is used.	The study highlights consumer awareness towards green packaging and indicates the positive and significant results of green packaging and environmental sustainability. Consumer awareness levels are very high, and young consumers are increasingly attracted to green packaging and reduced plastic use.
7	(Ilangasekara & Siriwardana, 2022)	Consumer Buying Behaviour Towards Sustainable Packaging in FMCG Market: A Study among High-income Earners in Colombo	<ul style="list-style-type: none"> To identify the association of each dimension of sustainable packaging towards consumer buying behaviour in FMCG market in Sri Lanka To identify the most significant dimension that affects the consumer buying behaviour in FMCG market in Sri Lanka 	Data: Primary data Data collection: Questionnaire Statistical analysis: correlation analysis, regression analysis	The study shows that the researcher discovered a strong positive correlation in each dimension towards consumer buying behavior and also identified consumer awareness as the most significant dimension that affects consumer buying behavior.
8	(Wahab et al., 2021)	Exploring Green Packaging Acceptance in Fast-Moving Consumer	<ul style="list-style-type: none"> To establish a model to understand the motivational drivers of 	Data: Primary Data Data Collection Tool: Questionnaire Method Sample Size: 426	Findings of this paper contribute to consumer awareness and factors that motivate consumers to shift from traditional packaging to green

		Goods in Emerging Economy: The Case Of Malaysia	green packaging acceptance from the lens of the Theory of Consumption Value.	Statistical Analysis Tool: PLS-SEM	packaging, and results indicate that there is a significant impact on consumers' green packaging purchase acceptance, which is emotional, functional, and social value, while conditional and epistemic have no statistical impact on consumers' green packaging acceptance
9	(Pan et al., 2021)	The influence of green packaging on consumers' green purchase intention in the context of online-to-offline commerce	<ul style="list-style-type: none"> To explore the influence of green packaging on green purchase intention in the context of online to offline commerce. To explore indirect effects of perceived value, perceived risk, and green satisfaction. 	Data: Primary data Data collection: questionnaire Sample size: 365. Statistical analysis: structural equation modelling.	The results indicated that green packaging has a significant impact on consumers' green purchase intentions in online-to-offline commerce. O2O commerce enterprises primarily focus on the perceived value of the product rather than its packaging or environmental protection. This enterprise improves the functional benefit of green products.
10	(Vijayakumar & Reddy, 2020)	A study on green packaging through green marketing practices in flexible packaging of FMCG industries	<ul style="list-style-type: none"> To define and study about the functions of packaging in FMCG industry To analyze the impact and integration of packaging on consumer buying behaviour patterns To understand the characteristics and nature of flexible packaging materials used in FMCG To understand the consumers perception towards green attitude and environmental 	Data: Primary and secondary data. Data collection method: Questionnaire, Research Paper, websites. Statistical analysis: descriptive statistics, correlation, regression, ANOVA.	Green packaging plays a crucial role in the FMCG industry by minimizing waste and optimizing energy use. This study addresses several driving factors behind the adoption of green packaging, including the limited availability of environmentally friendly options, lack of consumer awareness, difficulty in distinguishing between eco-friendly and non-eco-friendly packaging, higher costs and insufficient environmental information on packaging.

			<p>concepts and issues towards going green</p> <ul style="list-style-type: none"> To identify green packaging and green purchase behaviour of FMCG due to value created by green packaging. 		
11	(Sahayaselvi, 2020)	Green Packaging: a practice of sustainable management in consumer perspective	<ul style="list-style-type: none"> To study the demographic profile of the sample respondent. To analysis the usage pattern of green packaging behaviour of the respondents which will lead to ecological sustainability. <p>To identify the difficulties faced by the respondents in adopting green packaging.</p>	<p>Data: Primary and secondary data.</p> <p>Data collection: Questionnaire</p> <p>Sample size: 395</p> <p>Statistical tool: ANOVA, mean, standard deviation.</p>	Promote sustainable packaging, reduce plastic use, and take a step towards greener packaging. The findings suggest that consumers are becoming increasingly environmentally conscious and desire green packaging; however, the limited availability of such packaging remains a significant barrier. This presents an opportunity for manufacturers to innovate and adopt sustainable practices.
12	(Jerda & Sahayaselvi, 2020)	Green packaging and 3R's: A journey towards ecological sustainability	<ul style="list-style-type: none"> To study the demographic profile of the sample respondent. To identify awareness on green packaging of sample respondents in the study area. To analysis the feature of green packaging initiatives or 3R, this lead to ecological 	<p>Data: Primary and secondary data.</p> <p>Data collection: Primary data was collected through a questionnaire.</p> <p>Sample size: 395</p> <p>Statistical analysis: Percentage analysis, Friedman's test, and factor analysis.</p>	The result of the study positively influenced the respondents, who have awareness of green packaging for ecological sustainability. In this study, manufacturers and consumers strive to contribute to sustainable development and be part of the solution, rather than contributing to pollution.

			sustainability in the study area.		
13	(Rajendran et al., 2019)	Malaysian consumers' preference for green packaging	<ul style="list-style-type: none"> To investigate the awareness of green packaging among Malaysian. To identify the factor which influence consumer to purchase green packaging product. 	Data: Both primary and secondary data. Data collection method: questionnaire, newspaper magazines. Sample size: 384 Statistical analysis: descriptive analysis and regression analysis.	The concept of green packaging is relatively new in Malaysia, but its adoption is growing. The study indicates that Malaysian consumers are increasingly focused on the quality of green packaging, which is crucial for safeguarding both the environment and public health. This study explores the factors influencing consumer preferences for green packaging, focusing on four key determinants: price, knowledge, quality and design.
14	(Sahayaselvi, 2018)	Green packaging: an emerging need for sustainable development	<ul style="list-style-type: none"> To find out the demographic profile of the sample respondents. To identify an awareness on the usage of green packaging among respondents. <p>To analyze the perception towards sustainable development in the coastal belt.</p>	Data: Primary data Data collection: questionnaire (140 respondents) Statistical tool: ANOVA	Green packaging helps reduce pollution. This study focuses on coastal villages that are heavily impacted by garbage, particularly from non-recyclable packaging, aiming to mitigate such pollution. The government frames rules and regulations regarding product packaging. Therefore, green packaging is beneficial, safe, and environmentally friendly for individuals and communities throughout its entire life cycle.
15	(Madushanka & Ragel, 2016)	Consumer's attitude towards green packaging: a study on	<ul style="list-style-type: none"> To find out the consumer's attitude towards green packaging 	Data: Both primary and secondary data Sample size: 200	Consumer attitudes towards green packaging are significant, and all variables have a positive relationship. The government also applies the rules

		Trincomalee district	<p>is positive or not in Trincomalee district.</p> <ul style="list-style-type: none"> • To identify what factors, which mostly effect on the consumer's attitude towards green package. • To identify the relationship of these factors and the consumer's attitude towards green package. To identify whether consumers' attitude towards green packaging varies with the demography of the consumers in the Trincomalee district. 	<p>Statistical Analysis: SPSS, univariate analysis, bivariate analysis, and chi-square analysis.</p>	<p>to prevent pollution, and consumers in the Trincomalee district are very concerned about their environment.</p>
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4. Conclusion

Green packaging represents a crucial step toward more sustainable practices in the global economy. Businesses can significantly lower their carbon footprint and resource consumption by prioritizing materials and processes that reduce environmental impact. The adoption of green packaging not only supports the conservation of natural resources and the reduction of waste but also meets the growing consumer demand for eco-friendly products. Green packaging is increasingly viewed as a crucial factor in influencing purchasing decisions. As awareness of environmental issues grows, consumers are more inclined to support brands that prioritize sustainability and demonstrate a commitment to reducing their environmental impact. Green packaging, which often includes materials that are recyclable, biodegradable, or made from renewable resources, helps consumers feel that their purchases contribute to a larger positive impact on the planet. Many consumers perceive green packaging as a mark of quality and corporate responsibility, which can enhance brand loyalty and trust. Green packaging is the future of sustainable packaging solutions. It represents a meaningful shift towards sustainability that resonates with consumers' growing environmental consciousness. It balances reducing ecological impact, maintaining product functionality, and addressing economic considerations. As consumers prioritize sustainability in their purchasing decisions, the role of green packaging will become increasingly prominent. Brands that effectively embrace and communicate their commitment to green packaging will meet consumer demand and contribute to a more sustainable future.

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