

Adoption of Sustainable Packaging in the FMCG Sector

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Abstract

This research examines consumer knowledge, perceptions, and actions related to sustainable packaging within the FMCG sectors. A survey was carried out to gather data from 200 consumers of FMCG products. The findings show that most consumer recognize recyclable packaging and are prepared to spend more for eco-friendly packaging. The research also discovered that awareness, readiness to pay, and how often consumer check packaging for sustainability attributes all significantly enhance the importance of sustainability to consumers. These results indicate that FMCG firms can enhance their sustainability efforts by raising consumer awareness about eco-friendly packaging choices and by promoting the benefits of such packaging.

Key words: FMCG Industry, Sustainable Packaging, Recyclable Materials, Biodegradable Materials, Environmental Impact, Regression Analysis.

Introduction

The **Fast-moving consumer goods (FMCG)** industry ranks as the 4th major sector in the Indian economy. It is defined by rapid turnover of consumer-packaged goods, meaning products that are created, circulated, promoted, and expended quickly. Currently, the market is primarily led by FMCG products such as detergents, toiletries, oral care items, cosmetics, and more. The FMCG industry in India additionally encompasses pharmaceuticals, consumer electronics, soft drinks, packaged food items, and chocolates. As the industry includes a wide array of products, various companies lead the market in distinct sub-sectors. Nonetheless, among the leading FMCG firms in India are Dabur (60%), and Colgate (54.7%), and Hindustan Unilever (54%).

The Fast-Moving Consumer Goods (FMCG) sectors in India are a crucial component of the nation's economy, characterized by urban supremacy and swift rural expansion. Urban region generates 60% of FMCG income, while rural and semi-urban areas represent more than 40%, spurred by increasing consumption and demographic importance. Top FMCG firms such as Dabur and Hindustan Unilever obtain a significant share of their income from rural areas, emphasizing their growth opportunities. Indian's youthful population, rising urbanization, and technological progress have significantly propelled FMCG growth. E-commerce, supported by the rise of smartphones and improved net access, is predictable to account for 11% of FMCG sales by 2030. The government has aided the sector by introducing measures such as 100% FDI in SBRT and cash-and-carry formats and implementing GST, which has lowered taxes on necessary items.

Types of FMCG

FMCGs comprise multiple subcategories:

- ✓ Processed foods: Cheese items, breakfast cereals, and packaged pasta.
- ✓ Prepared meals: Meals ready for consumption.
- ✓ Drinks: Packaged water, energy beverages, and fruit drinks.
- ✓ Pastries: Cookies, croissants, and bagels.
- ✓ Perishable items, frozen items, and self-stable products: Produce, green, and seeds.
- ✓ Medications: aspirin, analgesics, and various drugs available for purchase over the counter.
- ✓ Cleaning Supplies: Baking soda, oven cleanser, and glass and window cleaner.
- ✓ Makeup and personal care items: hair care items, Correctors, dental cream, and cleanser.
- ✓ Office materials: writing instruments, graphite sticks, and highlighters.

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10 Biggest Fast-Moving Consumer Goods Firms by Revenue

The world's 10 biggest FMCG companies are as follows (all amounts in U.S. dollars, as of mid-2024)

- ✓ Nestle: A Swiss global corporation specializing in the processing of food and beverages. It produces a range of items, such as candy, baby formula, bottled water, dairy items, and cereals. As of mid-2024, the company boasts a marketplace capitalization of \$279 billion and described income of \$99.32 billion for 2023.

Nestle's main objectives for circularity:

By 2025: Over 95% of plastic packaging will be created for recycling processes.

- ✓ PepsiCo: A United States-based food corporation that manufactures beverage and snack items. Its market cap stands at \$228 billion, while its revenue for 2023 was \$91.47 billion.

PepsiCo's primary objectives for circularity:

By 2025: Ensure all of its packaging is designed to be decomposable, compostable, biodegradable.

By 2023: Decrease virgin plastic from non-renewable bases per serving in its global beverages and convenience foods range by 50%.

- ✓ Procter and Gamble Company (PG): Procter and Gamble is a U.S. consumer goods firm that produces a range of health, personal care, and hygiene items, including soaps, textile, and beauty products. The firm boasts a market capitalization of \$395.32 billion and generates \$84.06 billion in revenue in 2023.

Procter and Gamble's main objectives for circularity:

By the year 2030: All packaging must be recyclable or reusable.

By 2030: 50% decrease in new petroleum plastic resin in its packaging.

- ✓ JBS foods (JBSAY): JBS Foods is a Brazilian company engaged in meat processing, offering beef, chicken, salmon, pork, and various meat byproducts. It boasts a marketplace cap of \$11.85 billion and generated \$72.92 billion in revenue for 2023.
- ✓ Unilever plc (UL): Unilever is a UK-based FMCG firm that produces beauty items, breakfast cereals, energy beverages, health products, and various other everyday essentials. It boasts a market capitalization of \$142.40 billion and generated approximately \$63.91 billion in revenue for 2023.
- ✓ Anheuser-Busch InBev SA (BUD): AB InBev is a beer company based in Belgium. It is the biggest beer producer globally, including Budweiser. Its market capitalization stands at \$107.38 billion, with revenue of \$59.40 billion for 2023.

AB InBev's main objectives for circularity:

By 2025, all of its products will be packaged in material that can be returned or consist primarily of recycled content.

By the year 2025: All of its acquired electricity will be sourced from renewable energy.

By 2025: A 25% decrease in CO₂ emissions throughout the entire value chain.

- ✓ Tyson Food Inc. (TSN): Tyson Foods is a U.S. company that processes meat, specializing in chicken, pork, and beef. It is associated with prominent names like Jimmy Dean and Hillshire Farms. Its market cap is \$19.43 billion, with a revenue of \$52.88 billion recorded in 2023.
- ✓ Coca-Cola Co. (KO): Coca-Cola is a U.S. beverage firm that manufactures soda, athletic drinks, and various other drinks. It boasts a market cap of \$273.94 billion and generated \$45.75 billion in revenue in 2023.

The main circularity objectives of the Coca-Cola Company:

By 2030: Decrease total greenhouse gas emissions by 25%

By 2030, Incorporate a minimum of 50% recycled content in its packaging.

- ✓ L'Oreal Co. (LRYCY): A French company that produces cosmetics such as skincare, makeup, fragrances, hair dye, and hair care items. It boasts a market capitalization of \$239.84 billion and generated revenue of \$44.57 billion in 2023.
- ✓ British American Tobacco (BTI): British American Tobacco is a company based in the UK that specializes in cigarettes and various nicotine-containing products. It boasts a market capitalization of \$68.52 billion and generated revenue of \$34.80 billion in 2023.

Sustainable Packaging

Sustainable packaging encompasses materials and techniques aimed at reducing environmental harm while ensuring functionality and economic practicality. It highlights the importance of life cycle assessments (LCA) for assessing the

complete supply chain, from design and material choice to recycling or reuse at the end of life. The aim is to minimize ecological footprints and promote the sustainability of natural ecosystems while safeguarding the needs of future generations.

Current sustainable packaging efforts extend beyond mere “green” assertion, emphasizing the reduction of carbon footprints, the use of recycled materials, and the promotion of reuse. Initiatives are motivated by consumer needs, social activism, and regulatory influences, encompassing every phase of packaging, distribution, and logistics. Although packaging makes up a minor portion of a product's total environmental effect, it is frequently regarded as a significant indicator of a company's sustainability initiatives.

Threats in Traditional Packaging over Eco-Friendly Packaging

Traditional packaging techniques are largely based on non-biodegradable substances like plastic, which present considerable dangers to the environment. Plastic packaging adds to pollution during its manufacturing, use, and disposal. It frequently finds its way into landfills or the ocean, taking centuries to break down and harming oceanic creatures. Moreover, the extraction and manufacturing of materials such as plastic and metal lead to greenhouse gas emissions and the reduction of resources.

Compensations of Biodegradable Packaging

- a. **Environmental Advantages:** Eco-Friendly Packaging minimizes waste, utilizes renewable resources, and incorporates sustainable methods. It encourages the use of recyclable and compostable resources that decompose through recycling and decrease the carbon emissions linked to manufacturing and shipping.
- b. **Economic advantages:** Implementing sustainable packaging methods can result in long-term cost reduction. By minimizing packaging waste, companies can decrease disposal expenses. Sustainable packaging frequently demands less energy and fewer resources in its production, leading to lower operational expenses.
- c. **ESG compliance:** Factors related to Environmental, Social, and Governance (ESG) are becoming more significant for both consumers and investors. By adopting sustainable packaging, businesses can showcase their dedication to environmental stewardship, which can help recover their product reputation, draw in customers, and appeal to socially conscious investors.

Why is Sustainable Packaging important for FMCGs?

Moreover, sustainable packaging is crucial for FMCG companies for a variety of compelling reasons:

1. **Buyer Anticipations-**
 - Today's consumer is placing greater importance on sustainability in their buying choice. They Favor its wrapped in eco-friendly material and are more inclined to back brands that show dedication to sustainability.
 - By implementing sustainable packaging strategies, FMCG companies can boost brand loyalty, appeal to environmentally aware consumers, and set themselves apart in a competitive market.
2. **Regulatory Adherence-**
 - Authorities and regulatory agencies are implementing tougher rules and requirements to minimize environmental effects and encourage sustainable practices. FMCG firm need to adhere to these regulations to prevent penalties, fines, and harm to their reputation.
 - By adopting sustainable packaging, FMCG companies can remain proactive regarding regulatory shifts and showcase corporate responsibility.
3. **Efficiency in Resources and savings on costs-**
 - Sustainable packaging frequently entails maximizing material efficiency, decreasing waste, and lowering energy use across the packaging lifecycle. Consequently, FMCG firm can attain resource efficiency, reduce production expenses, and enhance operational sustainability through the use of environmentally friendly packaging options.
 - Moreover, advancements in eco-friendly packaging materials and technologies may result in lasting cost savings and competitive benefits.

4. Brand Image and Reputation

- Sustainable packaging efforts help enhance a brand's reputation and image positively. Customers view brands that emphasize sustainability as more socially responsible and trustworthy.
- Thus, FMCG firms that adopt sustainable packaging in their offerings can showcase their dedication to environmental responsibility and corporate social responsibility. Consequently, this improves brand value, encourages customer loyalty, and draws in socially aware investors.

5. Mitigation of environmental effects

- Conventional packaging material, such as disposable plastics, leads to environmental pollution, ecosystem harm, and global warming. By adopting sustainable packaging options, FMCG companies can decrease their environmental impact, lessen plastic waste production, and alleviate ecological damage.
- Sustainable packaging options emphasize renewable materials, recyclability, biodegradability, and the principle of a circular economy. Overall, these elements promote a more sustainable planet and safeguard natural resources for future generations.

6. Supply Chain Strength and Risk Mitigation

- FMCG firms depend on intricate global supply chains to obtain, produce, and deliver products. Environmental disturbance, resource scarcity, and alteration in regulation can risk the continuity of supply chains and the stability of operations.
- Therefore, employing sustainable packaging methods can strengthen supply chain flexibility by expanding substantial sources, lessening reliance on limited resources, and improving risks linked to environmental challenges.

Existing trends and approaches for biodegradable packaging

While sustainable packaging has historically been linked to standard choices like cardboard or recycled materials, contemporary companies now have many alternatives available to them.

- Applying downgauging to reduce your carbon emissions. Sometimes called “lightweighting,” downgauging involves decreasing the thickness of packaging film in items. This method preserves packaging effectiveness while simultaneously decreasing waste production.
- Incorporating high-barrier mono-materials into packaging, particularly ideal for perishable goods. Mono materials are created for straightforward recyclability. Nonetheless, it contains particular chemicals that block UV, water vapor, or oxygen from passing through the film.
- Substituting single-use plastics with reusable metal or glass containers. Many FMCG brands have embraced this strategy, motivating customer to return their empty packaging when they get their new product. Stores have drop-off bins for brands, allowing customers to return their used packaging and minimize landfill waste. It offers a convenient way for customer to responsibly dispose of their packaging while also strengthening the brand's dedication to sustainability.

Digital Campangins

1. Dabur Indian limited

- Dabur Indian Limited (Dabur), a prominent Fast-Moving Consumer Goods (FMCG) firm in India, declared that it has achieved the status of being India's first 100% Plastic Waste Neutral Company.
- Dabur is the first FMCG company to reach this milestone. Dabur gathers, processes, and recycles and equivalents quality of plastic waste equivalent to what is used in its product packaging annually, leading the company to become a “Plastic Waste Neutral Company”.
- Dabur introduced its initiative for managing plastic waste in 2017-2018. As of February 2022, through this initiative, Dabur has gathered more than 54,000 MT of plastic waste from various locations in India.



Fig. 1

2. ITC Limited

- They have adopted a 3- strong strategy for the eco-friendly packaging. They are: Better plastics, Less Plastics, No plastics.
- Sustainable Packaging Objectives: ITC guarantees that 100% all its packaging is either reusable, recyclable, or biodegradable.
- Sustainable Product: Provide recyclable and compostable options such as the filo series, Indo Bowl, and Tribe Kraft.
- Green Manufacturing: Utilizes sustainable natural fibres for packaging at its facility in Madhya Pradesh.
- Brand Initiative: FMCG brands such as Aashirvaad and Sunfeast use sustainable packaging.
- Environmental Impact: Decreased plastic packaging to 30%, handling 70,000 tonnes of plastic waste in FY'24.

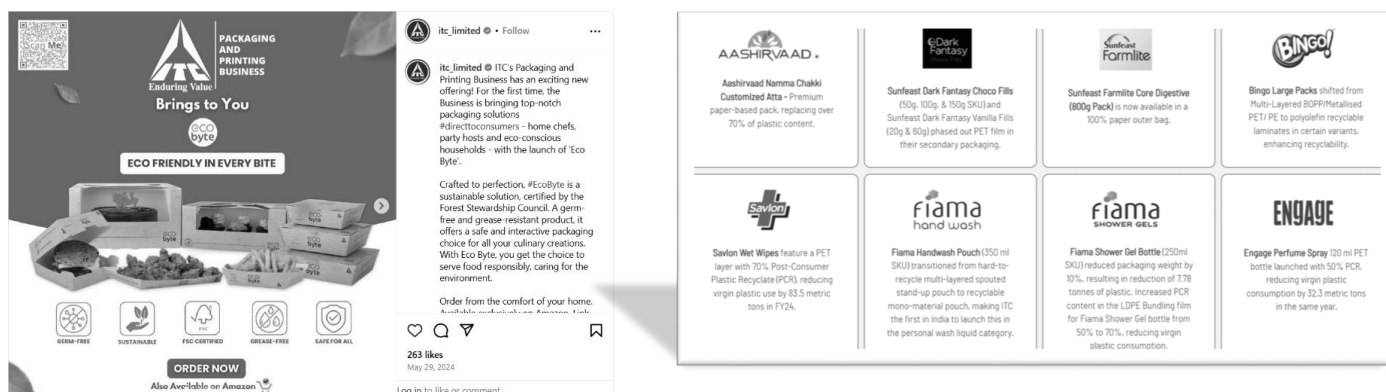


Fig. 2

3. Unilever

- Decreasing Virgin Plastic: Unilever plans to cut its virgin plastic usage by 30% by 2026 and 40% by 2028.
- Recyclable and Reusable Packaging: The organisation aims for its plastic packaging to be reusable, recycle, or compostable by 2030 for firm plastics and 2035 for flexible plastics.
- Rise in Recycled Plastic Utilization: Unilever aims for 25% recycled plastic in its packaging by 2025, with 22% accomplished in 2023.
- Plastic collection and Processing: The organisation intends to gather and handle a greater amount of plastic packaging than its market by 2025, achieving 61% in 2023.
- Support for Global Plastics Treaty: Unilever is promoting a UN treaty aimed at plastic pollution that established legally enforceable global regulations to enable systemic transformation.



Fig. 3

4. Britannia

- Sustainability Vision: Emphasise reducing ecological impact and improving the food value chain.
- Renewable Energy: Aiming for 57% electricity from renewable by 2026.
- Sustainable Packaging: By 2024, 70.3% of Packaging is expected to be recycle.
- The Campaigns highlights Britannia's effort in ESG, including plastic neutrality and responsible water management.
- The initiative supports Britannia's wider strategy of advocating for responsible environmental practices.



Fig. 4

Literature Review

(Dr. Sukhmani¹, 2013)- This study analyses 100 FMCG firms implementing sustainable packaging, emphasizing the difficulties and innovative strategies needed for environmental accountability. It investigates the effects, motivations, and differences in implementing sustainable packaging methods. The research employs statistical methods such as ANOVA and Factor Analysis to emphasize the necessity for companies to manage both social and environmental performance.

(Wong Ker Xin, 2019)- This qualitative research examines the advantages of environmentally friendly packaging in sustainable supply chain management in the FMCG sector. Conversations with industry experts were held to explore the connection between advantages such as cost savings, brand reputation, adherence to regulations, and ecological effects. The results demonstrate a direct connection between environmentally friendly packaging and enhanced sustainable supply chain practices in FMCG firms.

(Priyanshi Jain, 2022)- The FMCG sector encounters heightened pressure to implement sustainable packaging because of rising consumer awareness about environmental effects. This study investigates consumer attitudes and actions regarding eco-friendly packaging, analysing factors that impact buying choices. An examination of 30 research articles and focus group discussions revealed inconsistencies between consumer comprehension and the product on the market. Findings from this research intend to address these gaps and showcase trends and practices that can aid the FMCG industry.

(Sandhiya Vaidhyalingam¹, 2024)- This study explores how 100 FMCG companies are embracing sustainable packaging in response to growing demands from the government, media, and consumers. It emphasizes the necessity for businesses to adopt sustainable packaging to aid in the creation of environmentally friendly products. The research employed multiple assessments to examine the effects, motivations for adoption, and obstacles in executing sustainability within FMCG firms. It highlights the obligation of businesses to minimize emissions and waste by adopting sustainable methods.

(Adesoye, 2024)- This research explores the effect of sustainable packaging on brand loyalty within the FMCG industry, emphasizing eco-friendly materials and clear communication. It emphasizes the importance of sustainability in fostering consumer trust, emotional bonds, and lasting loyalty, while also considering the trade-offs involved with operational expenses. The results emphasize the necessity of integrating sustainable packaging into brand approaches.

(Ayodeji Abatan ¹, 2024)- This review examines how sustainable packaging innovations affect Health, Safety, and Environmental (HSE) practices in the FMCG sector. It emphasizes how sustainable materials, compostable packaging, and lightweight constructions lessen environmental effects, increase work safety, and boost operational efficiency. Embracing sustainable packaging enhances brand image, ensures adherence to regulations, and promotes lasting profitability.

Objectives of the Study

- ✓ Assess the degree of consumer knowledge about sustainable packaging practices in the FMCG industry.
- ✓ Determine the elements that affect consumer choices regarding sustainable packaging, including ecological issues, pricing, and moral values.
- ✓ Examine consumer buying habits, focusing on how often and why they select items with biodegradable packaging.

- ✓ Assess customers willingness to pay extra aimed at products featuring sustainable packaging and the consequences for FMCG companies.

To measure the effect of awareness, payment willingness, and behaviour on the significance of sustainable packaging through MLR

Research Methodology

1. **Research Design-** This study will utilize a quantitative design to examine consumer attitudes and activities relates to sustainable packaging in the FMCG industry. Structured survey will be active to gather information on consumer, awareness, attitudes and buying behaviour.
2. **Sampling-** A simple random sampling technique will be utilized to choose 200 FMCG consumers.
3. **Data Collection-** Information will be gathered through an online questionnaire, shared through platforms like Google Forms. The questionnaire will consist of a combination of Likert Scale, Multiple-Choice, and Yes/No questions addressing:
 - ✓ Awareness of sustainable packaging.
 - ✓ Attitudes towards sustainable packaging.
 - ✓ Consumer behaviour regarding sustainable packaging.
4. **Data Analysis-** Descriptive statistics will be employed to analyse the data, summarizing the behaviour of the sample. Advanced statistical methods, which includes Multiple Liner Regression (MLR), will be used to examines the relationship between variables, such as the Awareness of biodegradable packaging practices, willingness to pay a premium for sustainable packaging, then frequency of examining the packaging for sustainability features.

Scope of the Study

This study cores on the implementation of sustainable packaging within the

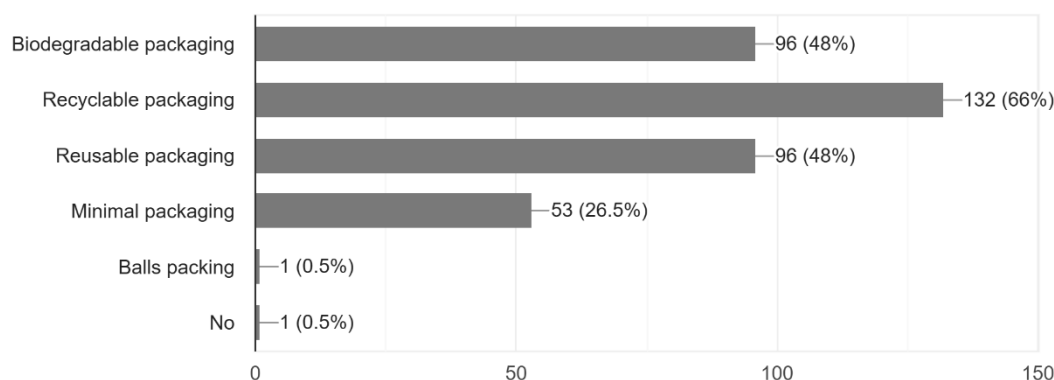
FMCG sectors, particularly examining consumer awareness, attitudes, and behaviours related to eco-friendly packaging. The study seeks to examine the elements that affect buying choices, the readiness to pay extra for eco-friendly items, and the effect of sustainable packaging on consumer trust and brand loyalty. It explores the link between consumer view and sustainable packaging methods, offering guidance for FMCG firms on incorporating sustainability into their business approach

Data Analysis and Interpretation

Section 1: Sustainable Packaging Awareness

2. Which of the following sustainable packaging practices are you familiar with? (Select all that apply)

200 responses

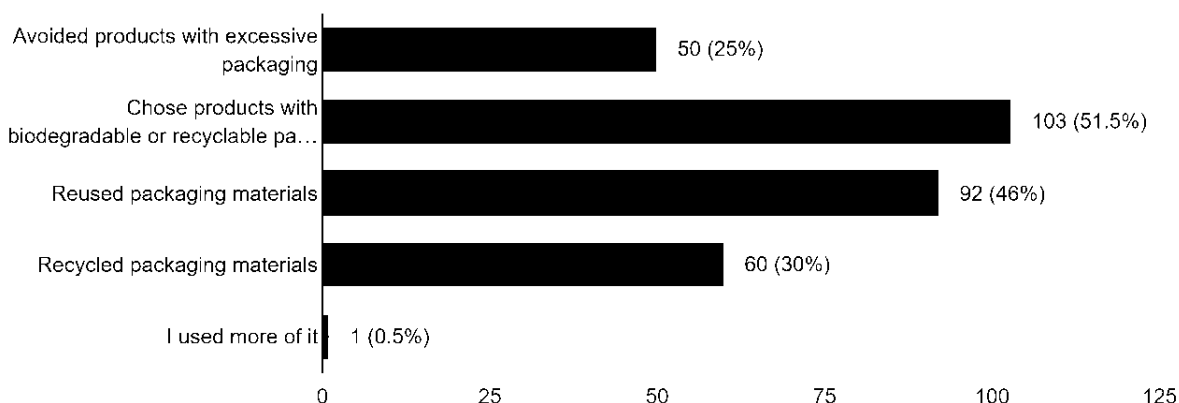


- larger portion (66%) of participants is aware of recycle packaging, establishing it as the most acknowledge sustainable method.
- 48% of respondents are equally aware of both biodegradable and reusable packaging.
- Just 26.5% of participants recognize minimal packaging as an eco-friendly approach.
- Balls packaging and No were selected only 0.5% each.
- In general, participants show a good understanding of essential sustainable packaging techniques, particularly highlighting recyclable packaging.

Section 2: Behaviour Towards Sustainable Packaging

2. Which of the following actions have you taken in the past year to reduce your use of non-sustainable packaging? (Select all that apply)

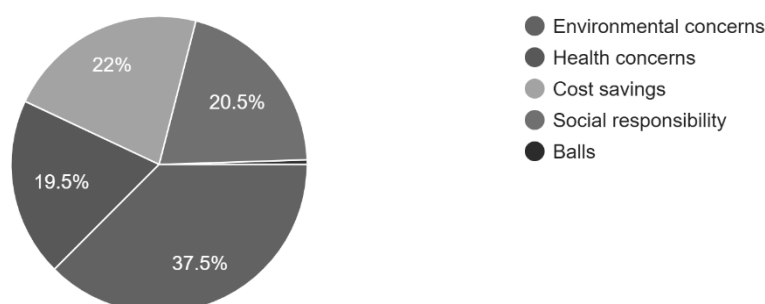
200 responses



- More than half (51.5%) of participants selected items with biodegradable or recyclable packaging to minimize the use of non-sustainable packaging.
- 46% of participants repurposed packaging material, reflecting a forward-thinking attitude towards sustainability.
- 30% of participants recycled their packaging, indicating a moderate level of involvement in recycling.
- 25% of participants avoided with the excessive packaging, indicating a restricted awareness or practicality of this behaviour.
- 0.5% of those surveyed acknowledge a rise in the use of non-sustainable packaging, indicating a robust overall dedication to reduction initiatives.

1. What motivates you to choose products with sustainable packaging? (Select one)

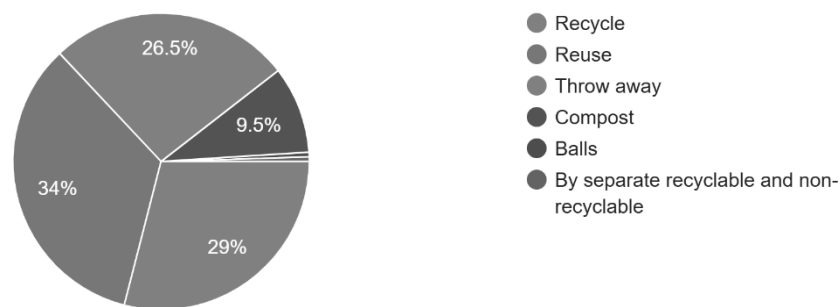
200 responses



- A significant portion (37.5%) of participants is influenced by environmental issues when selecting products with eco-friendly packaging.
- 22% of participants are motivated by feeling of social duty.
- 20.5% of those surveyed view cost savings as a key incentive.
- Balls received minimal responses.

2. How do you usually dispose of packaging waste? (Select one)

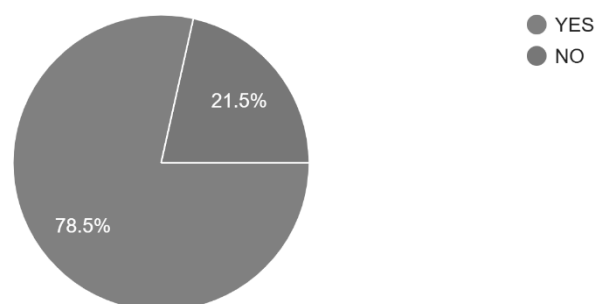
200 responses



- 34% of participants get rid of packaging waste by tossing it, establishing it as the prevalent approach.
- 29% of respondents recycle their packaging refuse, showing a strong awareness of waste management.
- 26.5% of packaging waste is reused, showcasing a significant tendency of repurposing.
- Just 9.5% of participants compost packaging waste, indicating potential for enhancements in handling organic waste.

3. Have you ever chosen a product because of its sustainable packaging?

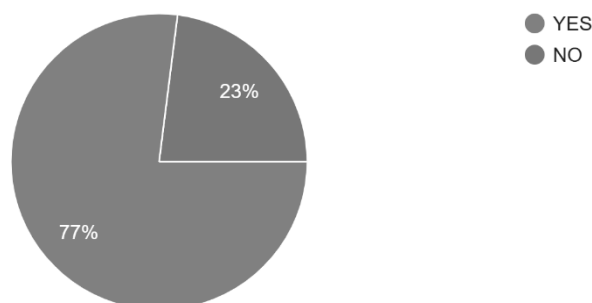
200 responses



- 78.5% of participants selected products due to their sustainability packaging, indicating a significant inclination towards environmentally friendly choices.
- 21.5% of participants have not emphasised sustainable packaging, showing a smaller group that is less influenced by environmental considerations in their buying choices.

4. Do you think sustainable packaging is more important than product price?

200 responses



- 77% of participants prioritize sustainable packaging over product cost, reflecting significant environmental concerns.
- 23% emphasize product cost more than eco-friendly packaging, indicating a limited demographic with budget-centred view.

Multiple Linear Regression (MLR) Analysis:

- H0- The model fails to account for a substantial portion of variance in sustainability importance.
- H1- The model accounts for a notable portion of variance in sustainability importance.

Variables Entered/Removed			
Model	Variables Entered	Variables Removed	Method
1	Frequency of Checking (X), Awareness (X), Willingness to Pay (X).		Enter
	a. Dependent Variable: Sustainability Importance (Y)		
	b. All requested variables entered.		

Source: Authors Original Source

Model Summary					
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	0.948	0.899	0.897	0.454	2.274

Source: Authors Original Source

ANOVA					
Model	Sum of Squares	df	Mean Square	F	Sig.
Regression	359.605	3	119.868	581.612	0
Residual	40.395	196	0.206		
Total	400	199			

Source: Authors Original Source

Coefficients						
Model	Variable	B	Std. Error	Beta	t	Sig.
1	(Constant)	-0.109	0.082		-1.333	0.184
	Awareness (X)	0.36	0.039	0.373	9.282	0
	Willingness to Pay (X)	0.346	0.04	0.348	8.626	0
	Frequency of Checking (X)	0.317	0.04	0.309	7.985	0

Source: Authors Original Source

Residuals Statistics					
	Minimum	Maximum	Mean	Std. Deviation	N
Predicted Value	0.91	5.01	3	1.344	200
Residual	-1.009	1.062	0	0.451	200
Std. Predicted Value	-1.551	1.495	0	1	200
Std. Residual	-2.223	2.339	0	0.992	200

Source: Authors Original Source

Interpretation

1. Variable Entered/ Removed

- Independent Variable (X)
 - X1: How aware are you of sustainable packaging practices in the FMCG sector? (**Awareness**)
 - X2: How willing are you to pay a premium for products with sustainable packaging? (**Willingness to Pay**)
 - X3: How often do you check the packaging of a product for sustainability features before making a purchase? (**Frequency of Checking**)
- Dependent Variable
 - How important is sustainable packaging to you when making purchasing decisions? (**Sustainability Importance**)

Method: Enter method where all variables were entered simultaneously.

Model Summary

- * R (correlation coefficient): 0.948 indicates a strong positive correlation between the independent and dependent variables.
- * R square (coefficient of determination): 0.899 (89.9%) of the variation in sustainability is accounted for by the predictors.

Whereas, the independent variable can explain 89.9% variability in the dependent variable.

- * Adjusted R square: 0.897. Modified to account for the number of predictors in the model.
- * Standard Error of the Estimate: 0.454 reflects the usual prediction error.
- * Durbin- Watson Value: 2.274 Residuals show no significant autocorrelation (optimal range is 1.5 - 2.5).

3. ANOVA (Analysis of Variance)

- Significance(p-value)- p-value is 0.000 this means the model is statistically significant ($p < 0.05$), which means the H_0 is rejected and H_1 is accepted.
- Meaning independent variable collectively have a significant impact on sustainability importance.

4. Coefficients

- Contant (-0.109): The significance of sustainability when every predictor is null.
- Awareness: An increase of one unit boosts sustainability importance by 0.360.
- Willingness to Pay: An increase of one unit raises it by 0.346.
- Frequency of Checking: A one-unit increase advances it by 0.317

Standardized Coefficients (beta):

- Awareness (0.373): Most significant impact.
- Willingness to Pay (0.348): The second most significant.
- Frequency of Checking (0.309): The third most significant.

Every variable has a important effect on the importance of sustainability. Awareness exerts the greatest impact, with Willingness to pay and frequency of checking following closely.

(Sustainable Important= -0.109+0.306*Awarness+0.346*Willingness to pay+0.314*Frequency of Checking).

- A negative constant signifies that the importance of sustainability would be initially negative in the absence of the predictor's influence.

5. Residential Statistics.

- Estimated Value: Vary between 0.91 and 5.01, with an average of 3.00.
- Residuals (Errors): Vary between -1.099 and 1.062, having a mean of 0.000 and a standard deviation of 0.451.
- Standardized Residuals: Ranging from +2.5, showing no major outliers.

6. Conclusion

- The overall model is important where p value 0.000, R square is 0.899.
- Each predictor (X1, X2, X3) has a significant positive effect on sustainability importance (Y).

Findings and suggestion

- Awareness: 66% of participants know about recyclable packaging, while awareness of biodegradable and reusable packaging stands at 48%.
- Behaviour: 51.5% prefer biodegradable or recyclable packaging, motivated by environmental issues (37.5%).
- Purchase Influence: 78.5% favour eco-friendly packaging, and 77% choose it over price.
- Statistical Insight: Awareness, payment willingness, and checking frequency significantly influence the importance of sustainability.
- Corporate Initiatives: Companies in the FMCG sector, such as Dabur and Unilever, spearhead efforts focused on recyclable, reusable, and compostable packaging.
- Increase Awareness: Inform about lesser-known technique such as minimal and compostable packaging.
- Promote Activity: Implement rewards for recycling and repurposing.
- Corporate Focus: Employ lightweight, single-material packaging and enhance waste management system.
- Cost Strategies: Highlight the long-term benefits of sustainable packaging in term of savings.
- Policy Assistance: Promote enforced sustainable packaging regulations and financial incentives.

Conclusion

The research emphasizes the significance of eco-friendly packaging in the FMCG industry, as user awareness of recyclable and biodegradable alternative increases. consumers place sustainability above due to environmental issues, as indicated by the MLR model, which revels that awareness, willingness to pay, and examining packaging significantly shape preferences.

Prominent FMCG companies such as Dabur and Unilever are integrating recyclable, reusable, and compostable packaging to meet sustainability objectives and improve their brand perception. To advance future, businesses must emphasize raising awareness, encouraging recycling, and utilizing innovative materials, while managements can implement regulations and provide incentives. biodegradable packaging is vital for both environmental and marketable success.

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