

Exploring the impact and adoption of green packaging

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Research topic:-.

Abstract :-

Green packaging also referred to as eco-friendly or sustainable packaging has become increasingly important in efforts to address the environmental challenges posed by conventional packaging materials. With the expansion of online shopping, packaging waste has surged, raising significant concerns about environmental responsibility. This study focuses on how the e-commerce industry is responding to these concerns by adopting environmentally sustainable materials and practices. Examples include biodegradable mailers, recyclable paper wraps, and simplified packaging designs intended to reduce waste and improve sustainability throughout the supply chain.

Through an examination of consumer preferences and industry trends, the research identifies a rising demand for sustainable packaging alternatives. Companies that invest in green packaging often experience improved brand reputation and a reduced ecological footprint. Ultimately, the findings emphasize the need for joint efforts by consumers, businesses, and policymakers to support and scale the use of sustainable packaging within the online retail sector.

Keywords:-

Compostable mailers, Paper-based wraps, Minimalist packaging, design Packaging waste, Environmental sustainability

Introduction :-

The rapid growth of e-commerce has significantly increased the demand for packaging materials, raising concerns over environmental sustainability. In response, green packaging solutions have gained traction as both consumers and companies seek more eco-friendly alternatives. One of the most widely adopted materials in this shift is corrugated cardboard paper, known for its recyclability, biodegradability, and

relatively low environmental impact. Its use in online shopping packaging offers a promising balance between functionality, cost, and environmental responsibility. As the push for sustainable practices intensifies, understanding the impact and adoption of corrugated cardboard in e-commerce packaging becomes essential for evaluating progress toward greener supply chains and reducing the ecological footprint of digital retail.

With the continued rise of online shopping, the environmental impact of packaging has become a growing concern. Traditional packaging materials, such as plastics and non-recyclable composites, contribute significantly to global waste and pollution. In response, many e-commerce businesses are turning to green packaging alternatives to reduce their ecological footprint. One widely adopted option is corrugated cardboard paper, valued for its durability, recyclability, and biodegradability. This material not only offers sufficient protection for goods during transit but also aligns with sustainable packaging goals. As environmental awareness increases among consumers and companies alike, exploring the impact and adoption of corrugated cardboard in online shopping presents a vital step toward more sustainable and responsible retail practices. However, higher costs and supply chain limitations remain barriers to widespread adoption. This study highlights the critical role of consumer awareness, regulatory incentives, and corporate responsibility in driving the transition to sustainable packaging practices in the digital marketplace.

Review of literature:-

1.Koch, J., Frommeyer, B., & Schewe, G. (2022).

The pandemic has accelerated the expansion of online retail, but the heavy reliance on packaging in this sector poses serious environmental concerns. Although sustainable packaging solutions are becoming more popular, the factors that drive consumers' willingness to adopt them are not yet fully understood. Using structural equation modeling, data from 1,491 German shoppers were analyzed. The study shows that gain-related and normative motives significantly encourage consumers to choose sustainable packaging, whereas hedonic motives play only a minor role. These insights advance the theoretical understanding of sustainable consumption by highlighting the key motivational frames influencing eco-friendly packaging adoption. Furthermore, practical recommendations are provided for online retailers to align functional packaging requirements with consumer expectations when implementing sustainable packaging solutions.

2.Sunita, C. (2023). Consumer Perception Towards Sustainable

identify the multiple mediation effects of perceived value, brand attitude, and trust. attachment. Therefore, this study implies that online merchants should pay considerable attention to the role of green packaging in brand attachment and formulate their green marketing plans based on the viewpoint of the consumer.

Consumer Perception Towards Sustainable Packaging in E-Commerce Industry:

3..Nguyen, N. T., Nguyen, L. H. A., & Tran, T. T. (2021). While green packaging related concerns are mainly studied in developed countries, there is a lack of knowledge to observe purchase behavior toward green packaging in developing countries, especially in Vietnam. Hence, this present research aims to understand the gap attitude-behavior existing on FMCG green packaged products among Vietnamese young consumers with psychosocial factors (environmental concern, environmental knowledge of green packaging and green trust) and contextual factors (availability of desired green packaging and product attributes). The results reveal that all psychosocial factors are positively related to attitudes while purchase behavior is positively influenced.

4..Ahmed, A. (2022).

To Buy or Not to Buy? Green Packaging, Gender Variations, and Purchase Intention

This research investigates how gender differences shape consumers' intentions to purchase products with green packaging.

Originality/Value

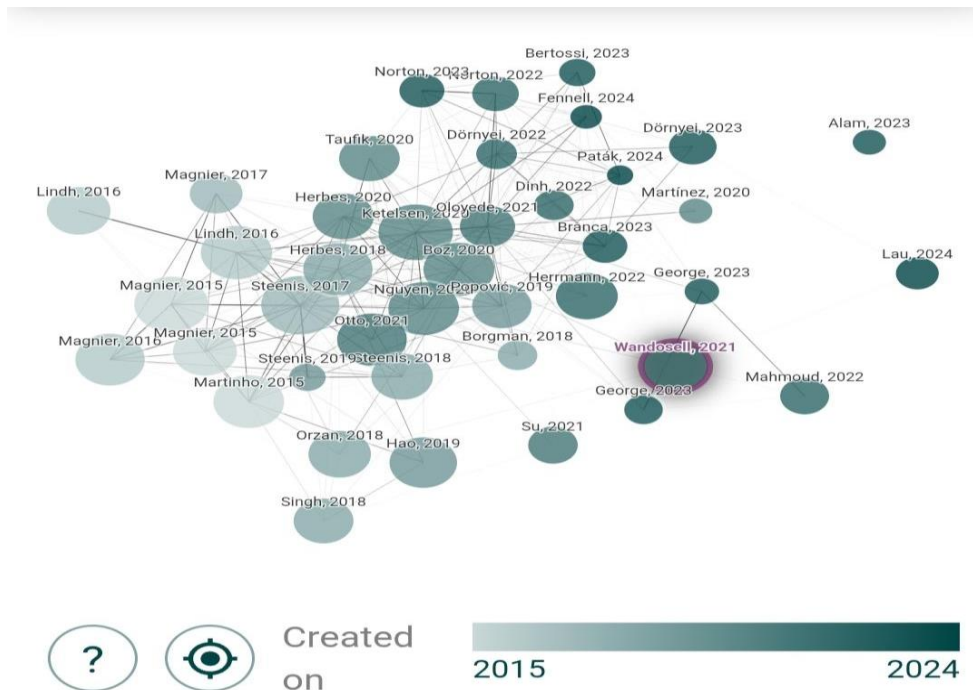
The study adds to the relatively small body of literature on consumer behavior toward eco-friendly packaging and offers practical insights for industry professionals regarding the role of gender in green product purchasing. Additionally, it provides fresh academic contributions by examining how elements of the green marketing mix influence consumer decision-making

5.Jeevan, P., & Bhargav, V. (2016).

Sustainability has entered into every aspect of business and commerce. Every sector of the economy is heading towards it be it agriculture, transportation, services, energy, packaging etc.

Research gap:-

Although awareness about eco-friendly packaging and its environmental advantages is increasing, most studies have concentrated on traditional retail sectors or broader sustainability initiatives. With the swift growth of online shopping, packaging waste has surged considerably, yet research into how e-commerce businesses are tackling this problem with sustainable packaging remains limited. This gap underscores the necessity for more targeted investigations into the adoption and consumer effects of green packaging within the digital retail space.



Objective:-

- 1.To assess consumer awareness and perceptions of green packaging in e-commerce.
- 2.To analyze the influence of green packaging on online purchase behavior.
- 3.To identify key factors affecting the adoption of green packaging by e-commerce companies.

Hypothesis:-

- Awareness and preference for eco-friendly packaging.

H₀: There is no relationship between consumer environmental awareness and preference for green packaging.

H₁: There is a significant relationship between consumer environmental awareness and preference for green packaging.

Research methodology:-

Here descriptive research design is being used and primary and secondary sources of data collection is used. This study adopts a quantitative cross-sectional survey design aimed at examining consumer perceptions, awareness, and behavioral tendencies toward green packaging in the context of online shopping. Special attention is given to exploring any gender-based differences in these attitudes. Sampling Technique: The study employed non-probability convenience sampling, targeting respondents who were easily accessible via digital platforms.

Sample Size: 63 valid responses were collected.

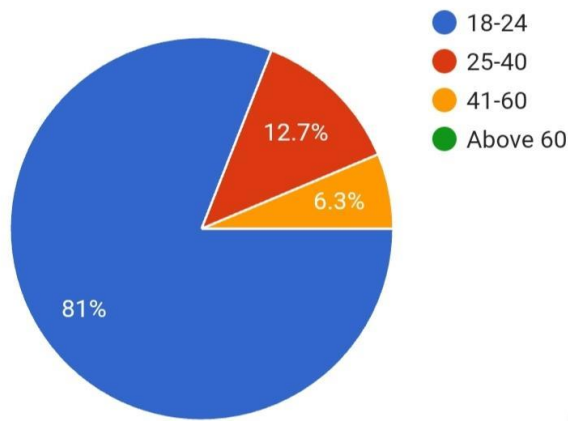
Data analysis and interpretation:-

Primary data:-

From my perspective, the three pie charts give a clear and comprehensive overview of the demographic profile of the 63 people who participated in the survey.

Age

63 responses

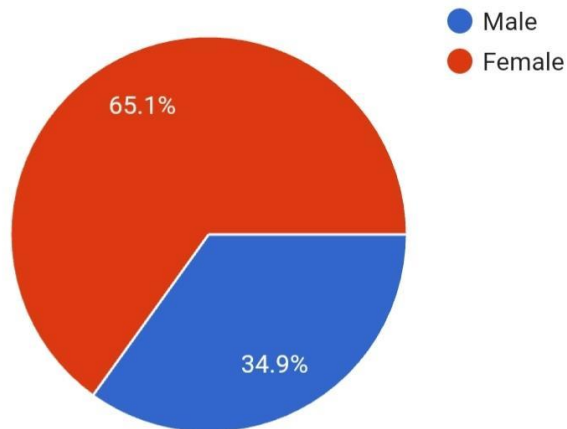


Starting with age, the majority of respondents—81%—belong to the 18–24 age group. This suggests that most of the participants are likely university or college students or young adults at the beginning of their professional lives. A smaller portion, 12.7%, fall in the 25–40 range, which may include early-career professionals or postgraduates. Only 6.3% of participants are aged 41–60, and interestingly, no one above the age of 60 took part in the survey. This indicates that the survey attracted or reached a relatively young audience.

Gender



63 responses

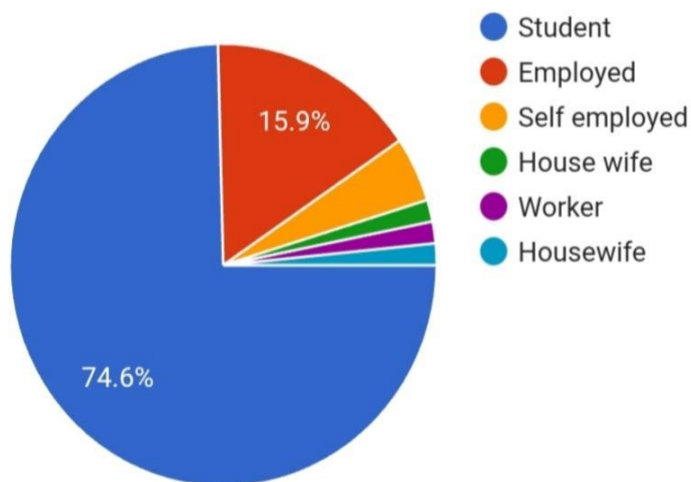


When looking at the gender distribution, 65.1% of the respondents are female, and 34.9% are male. This noticeable difference could reflect the demographics of the group being surveyed—perhaps more females were available or interested in participating. It might also suggest that the topic of the survey was more appealing or relevant to women.

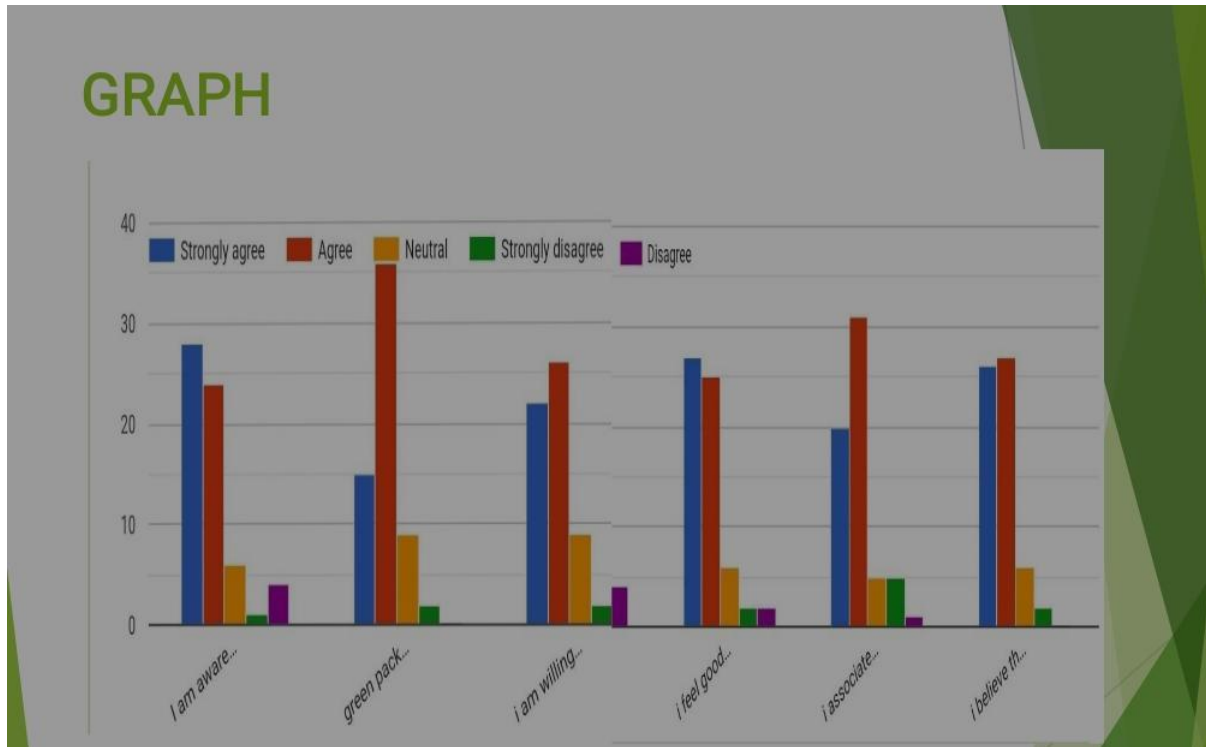
Occupation



63 responses



In terms of occupation, the data clearly shows that students dominate, making up 74.6% of all respondents. This is consistent with the age data, where most people were between 18 and 24. The second-largest group, employed individuals, represents 15.9%, followed by smaller portions who are self-employed, workers, and housewives. Interestingly,



Interpretation:-

Green packaging in online shopping is well-received, especially by young consumers who value sustainability and trust eco-friendly brands. Awareness is high, but adoption faces barriers like higher costs and limited recycling facilities. Businesses have an opportunity to boost brand image and meet consumer expectations by addressing these challenges.

- High awareness of environmental benefits.
- Positive impact on brand trust and image.
- Adoption slowed by higher costs and limited recycling infrastructure.
- Opportunity for businesses to lead in sustainability by overcoming these barriers.

Conclusion:-

Based on the primary data collected, I strongly believe that green packaging is becoming an important part of customer experience in online shopping. Most people, especially students and young adults, understand the importance of sustainability and are supportive of eco-friendly initiatives.

This insight should motivate companies to shift towards sustainable packaging, as it not only benefits the environment but also builds a positive brand image and customer loyalty.

The transition to sustainable packaging, particularly the use of corrugated cardboard in online shopping, highlights a growing commitment to reducing environmental harm. As a recyclable and biodegradable option, corrugated cardboard offers a practical replacement for plastic packaging. Increased environmental

awareness, customer preferences, and evolving regulations are encouraging businesses to adopt greener packaging methods. Despite some cost and durability concerns, ongoing innovation is making these eco-friendly alternatives more efficient and widely available. Overall, corrugated cardboard is proving to be a key component in promoting sustainability within the e-commerce industry.

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