

# Consumer Perception of Sustainable Packaging in FMCG: An Age-Based Comparative Study in Ernakulam District

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**Abstract:** *Growing environmental concerns and increasing packaging waste have encouraged FMCG companies to adopt sustainable packaging solutions. This study examines consumer perception towards sustainable packaging in FMCG products across different age groups in Ernakulam District. A quantitative research approach was adopted, and primary data were collected from 310 respondents using a structured questionnaire. The study evaluates the influence of environmental awareness, environmental concern, consumer knowledge of sustainable packaging, packaging quality/functionality, and trust in sustainability claims on consumer perception. Data were analysed using descriptive statistics, correlation analysis, and multiple regression analysis. The findings reveal that packaging quality/functionality is the most significant predictor of consumer perception towards sustainable packaging, while other variables exhibit varying levels of influence across age groups. The study highlights the importance of balancing environmental benefits with packaging performance to enhance consumer acceptance of sustainable packaging in the FMCG sector.*

**Keywords:** Sustainable Packaging, Consumer Perception, FMCG, Environmental Awareness, Packaging Quality, Consumer Behaviour, Ernakulam District

## 1. Introduction

Growing environmental concerns and increasing packaging waste have encouraged businesses to adopt sustainable packaging practices, particularly in the Fast-Moving Consumer Goods (FMCG) sector. Sustainable packaging aims to minimize environmental impact through recyclable, reusable, and biodegradable materials while maintaining product quality and functionality.

Consumer perception plays a crucial role in determining the success of sustainable packaging initiatives. Although consumers often express positive attitudes toward environmental sustainability, these attitudes do not always translate into purchasing behaviour. Factors such as environmental awareness, environmental concern, consumer knowledge, packaging quality, and trust in sustainability claims influence how consumers evaluate sustainable packaging. Therefore, this study examines consumer perception towards sustainable packaging in FMCG products and compares perceptions among different age groups in Ernakulam District.

## 2. Review of Literature

Sustainable packaging has emerged as an important component of environmental sustainability and responsible consumption. Jain and Hudnurkar (2022) found that environmental awareness positively influences consumer attitudes toward sustainable packaging. Similarly, Popović et al. (2020) reported that awareness and perceived usefulness significantly affect purchase intention.

The Theory of Planned Behaviour (Ajzen, 1991) explains that consumer behaviour is influenced by attitudes, subjective norms, and perceived behavioural control. In the context of sustainable packaging, packaging quality and functionality influence consumers' perceptions regarding convenience and usability.

The Value-Belief-Norm Theory (Stern, 2000) emphasizes the importance of environmental concern and moral responsibility in promoting sustainable behaviour. Consumers with stronger environmental values are more likely to support environmentally responsible packaging alternatives.

Several studies also highlight the importance of trust and communication. Sustainable packaging claims influence consumer decisions only when consumers perceive such claims as credible and authentic. Greenwashing concerns often create scepticism among consumers and reduce acceptance of sustainability initiatives.

Existing literature indicates that while environmental awareness and concern are important, practical considerations such as packaging performance, convenience, durability, and trust continue to influence purchasing behaviour. The literature also reveals an attitude-behaviour gap, where consumers express environmental concern but do not always translate it into actual purchasing decisions. These findings provide the conceptual foundation for the present study.

### 3. Methodology

#### 3.1 Research Design

The study adopts a quantitative and empirical research design.

#### 3.2 Data Collection

Primary data was collected from 310 respondents in Ernakulam District using a structured questionnaire based on the research variables identified through the literature review and conceptual framework.

#### 3.3 Sampling Design

A simple random sampling technique was used. The sample size was based on Cochran's Formula (1977); however, 310 valid responses were considered for analysis (Setiawan & Rizkalla, 2023).

The questionnaire consisted of multiple sections covering demographic details and measurement of variables using a five-point Likert scale ranging from "strongly disagree" to "strongly agree." Each construct was measured using multiple items adapted from previous studies to ensure validity. The structured design of the questionnaire helped in capturing consistent and reliable responses from the participants.

#### 3.4 Variables of the Study

##### Dependent Variable:

- Consumer Perception towards Sustainable Packaging

##### Independent Variables:

- Environmental Awareness
- Environmental Concern
- Consumer Knowledge of Sustainable Packaging
- Packaging Quality/Functionality
- Consumer Trust in Sustainability Claims

#### 3.5 Reliability and Analysis

Cronbach's Alpha values for all constructs exceeded 0.7, confirming acceptable internal consistency. Data were analysed using SPSS software through descriptive statistics, correlation analysis, and multiple regression analysis (Setiawan & Rizkalla, 2023).

### 4. Results and Discussion

The analysis of the study indicates a generally positive perception towards sustainable packaging among consumers in Ernakulam District. Descriptive statistics reveal relatively high levels of environmental awareness and environmental concern across both age groups, suggesting increasing consumer recognition of sustainability issues in the FMCG sector.

The demographic profile consists of respondents equally distributed between the age groups of 18–30 years and 31–60 years. This balanced representation provides a comprehensive understanding of age-based differences in consumer perception towards sustainable packaging.

Correlation analysis shows that all independent variables exhibit positive relationships with consumer perception towards sustainable packaging. Environmental awareness, environmental concern, consumer knowledge, packaging quality/ functionality, and trust in sustainability claims were all positively associated with consumer perception, indicating their relevance in shaping consumer evaluations of sustainable packaging.

The results of multiple regression analysis confirm that the overall model is statistically significant. However, the influence of individual variables differs across age groups. Among consumers aged 18–30 years, packaging quality/functionality ( $\beta = 0.128$ ,  $p < 0.05$ ) demonstrates a significant positive effect on consumer perception towards sustainable packaging. This suggests that younger consumers are more likely to develop favourable perceptions when sustainable packaging meets expectations regarding durability, convenience, and product protection.

In contrast, environmental awareness, environmental concern, consumer knowledge of sustainable packaging, and trust in sustainability claims do not exhibit statistically significant effects. Similarly, among consumers aged 31–60 years, none of the independent variables demonstrate a statistically significant individual influence on consumer perception, although positive relationships are observed.

The findings suggest that consumers value environmental sustainability, but practical considerations remain important in shaping perceptions. The significance of packaging quality/functionality highlights the need for sustainable packaging solutions that not only address environmental concerns but also maintain performance standards expected by consumers

Overall, the results indicate that consumer perception towards sustainable packaging is influenced by a combination of environmental and functional considerations, with packaging performance emerging as the most important determinant among younger consumers.

### 5. Conclusion

Consumer perception towards sustainable packaging is influenced by both environmental and functional considerations. While consumers generally demonstrate positive attitudes towards sustainability and environmental responsibility, packaging quality and functionality emerge as the most important factors shaping their perception of sustainable packaging. The findings indicate that consumers expect environmentally friendly packaging to maintain the same level of convenience, durability, and product protection as conventional packaging.

FMCG companies should focus on improving the functional performance of sustainable packaging while effectively communicating its environmental benefits. Transparent sustainability claims can help strengthen consumer confidence and acceptance. Policymakers and marketers should also promote awareness initiatives that encourage sustainable consumption and support the adoption of environmentally responsible packaging practices.

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