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A Study on Causes and Impact of Packaging Damage in E-Commerce Deliveries

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Abstract: ***Packaging plays a crucial role in ensuring product safety and customer satisfaction in e-commerce logistics. This study examines the causes and impacts of packaging damage in online deliveries and evaluates customer responses toward such incidents. Primary data were collected from 105 respondents using a structured questionnaire. Percentage analysis was used for interpretation. The findings reveal that rough handling and transportation issues are the major causes of packaging damage. Packaging damage significantly affects customer satisfaction, trust, and repurchase intention. The study suggests improvements in packaging materials, handling practices, and delivery procedures to minimize damages. Effective packaging strategies can enhance customer confidence and reduce reverse logistics costs.***

Keywords: E-commerce, Packaging Damage, Customer Satisfaction, Reverse Logistics, Online Retail

I. INTRODUCTION

The rapid growth of e-commerce has transformed traditional retailing by enabling customers to purchase products conveniently through online platforms. However, along with growth, challenges related to packaging and logistics have increased. Packaging acts as a protective barrier during storage, handling, and transportation. Inadequate or poor-quality packaging often leads to damaged products, which negatively affects customer satisfaction and trust. Packaging damage not only results in customer dissatisfaction but also increases return rates, replacement costs, and operational inefficiencies. In competitive online markets, customer experience plays a major role in retaining consumers. Therefore, understanding the causes and effects of packaging damage is essential for improving logistics performance and customer relationships. This study focuses on identifying major causes of packaging damage in e-commerce deliveries and analyzing its impact on customer satisfaction and future purchasing behaviour.

II. OBJECTIVES OF THE STUDY

1) To identify the major causes of packaging damage in online deliveries.
2) To analyse the impact of packaging damage on customer satisfaction and trust.
3) To examine customer responses to damaged products.
4) To suggest suitable measures to reduce packaging damage in e-commerce.

III. RESEARCH METHODOLOGY

The study is based on primary data collected through a structured questionnaire.
A sample of 105 respondents who had experience with online shopping was selected using convenience sampling.
The collected data were analyzed using percentage analysis and presented in tabular form for easy interpretation.

IV. RESULTS AND ANALYSIS

Table 1: Gender of Respondents

Gender	Frequency	Percentage
Male	57	54.3
Female	48	45.7
Total	105	100

Interpretation: The sample consists of 54.3% male and 45.7% female respondents, indicating balanced representation.

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Table 2: Educational Qualification

Qualification	Frequency	Percentage
Schooling	28	26.7
Undergraduate	29	27.6
Postgraduate	26	24.8
Ph.D	22	21.0
Total	105	100

Interpretation: Most respondents are undergraduates (27.6%), followed by schooling and postgraduate categories, showing diverse educational backgrounds.

Table 3: Occupation

Occupation	Frequency	Percentage
Student	34	32.4
Employed	30	28.6
Business	27	25.7
Others	14	13.3
Total	105	100

Interpretation: Students form the largest group (32.4%), indicating higher online shopping usage among young consumers.

Table 4: Platforms Used

Platform	Frequency	Percentage
Amazon	63	60.0
Flipkart	69	65.7
Meesho	72	68.6
Myntra	51	48.6
Ajio	35	33.3

Interpretation: Meesho (68.6%) and Flipkart (65.7%) are the most used platforms, indicating strong penetration of budget-friendly platforms.

Table 5: Causes of Packaging Damage

Cause	Frequency	Percentage
Poor packaging	25	23.8
Rough handling	41	43.0
Transportation issues	28	26.7
Weather conditions	9	8.6
Total	105	100

Interpretation: Rough handling (43%) is the major cause of damage, followed by transportation issues (26.7%). Weather conditions have comparatively lower impact.

V. DISCUSSION

The results indicate that packaging damage remains a significant issue in e-commerce logistics. Rough handling and transportation inefficiencies are the major contributors to damage. Customer satisfaction is strongly influenced by packaging condition. Damaged packaging increases return behaviour and negatively impacts trust and future purchase decisions. These findings align with previous studies which emphasized the importance of protective packaging and proper handling practices.

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VI. FINDINGS

1) Rough handling is the major cause of packaging damage.
2) Packaging damage significantly affects customer satisfaction and trust.
3) Most customers opt for replacement or return of damaged products.
4) Poor packaging increases operational and reverse logistics costs.
5) Customers consider good packaging as very important for safe delivery.

VII. SUGGESTIONS

1) E-commerce firms should adopt stronger and standardized packaging materials.
2) Delivery personnel should be trained in proper handling procedures.
3) Right-sized packaging should be used to avoid internal movement of products.
4) Weather-resistant and cushioning materials should be encouraged.
5) Quality checks should be conducted before dispatch.

VIII. CONCLUSION

Packaging damage in e-commerce deliveries has a significant influence on customer satisfaction, trust, and repeat purchase behaviour. The study highlights that inadequate packaging and rough handling are the primary causes of damage. By improving packaging quality, enhancing handling practices, and strengthening logistics coordination, e-commerce companies can reduce damages and

improve customer loyalty. Preventive packaging strategies are more economical than replacement and return costs. Thus, effective packaging management is essential for sustainable growth in e-commerce operations.

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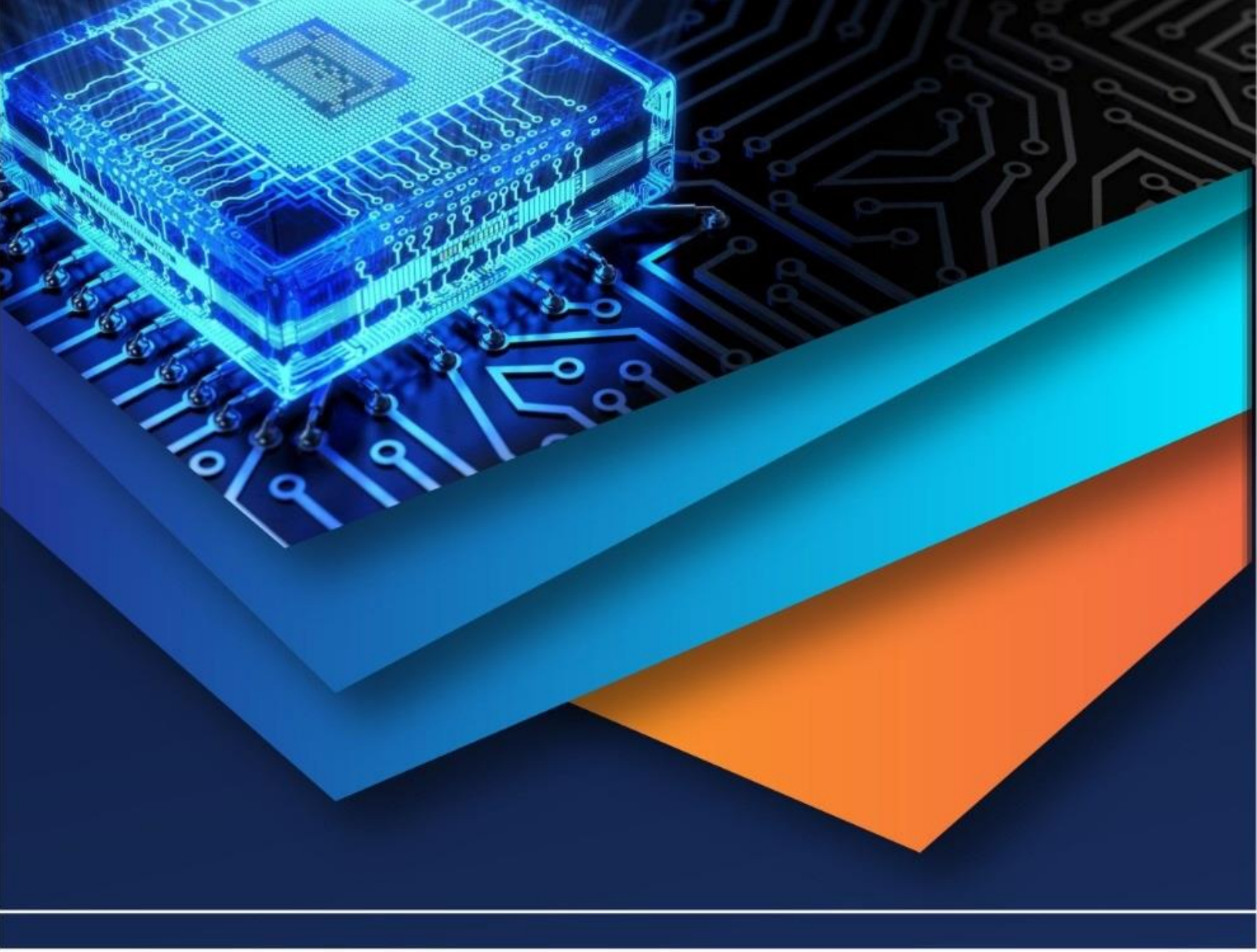

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