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A Study on Impact of Sustainable Logistics Practices on Customer Choice in Grocery and Food Delivery

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Abstract: ***This study examines the impact of sustainable logistics practices on customer choice in grocery and food delivery services. With the rapid growth of platforms such as Swiggy, Zomato, Blinkit, and Zepto, environmental issues like carbon emissions and packaging waste have increased significantly. To address these concerns, companies are adopting sustainable practices such as electric vehicle deliveries, biodegradable packaging, and route optimization. The study uses a descriptive research design and is based on primary data collected from 102 respondents through structured questionnaires. Simple percentage analysis was applied to interpret the data. The findings reveal that most customers are aware of sustainable initiatives and show preference for eco-friendly delivery options. Although price remains an important factor, sustainability strongly influences customer satisfaction and brand loyalty. The study concludes that sustainable logistics not only supports environmental protection but also provides long-term competitive advantage for businesses.***

Keywords: Sustainable logistics, customer choice, green delivery, eco-friendly packaging, electric vehicles, grocery delivery services.

I. INTRODUCTION

Sustainable logistics has become an important concept in the grocery and food delivery industry due to increasing environmental concerns and changing customer preferences. With the rapid growth of online platforms such as Swiggy, Zomato, Blinkit, and Zepto, the demand for quick and convenient delivery services has increased significantly. However, this expansion has also resulted in higher carbon emissions, fuel consumption, and packaging waste. To reduce these environmental impacts, companies are adopting green logistics practices such as electric vehicle deliveries, biodegradable packaging, and route optimization.

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II. OBJECTIVES

1) To study the different sustainable logistics practices used in grocery and food delivery.
2) To identify whether customer's prefer sustainable practices over price,speed and offer.
3) To see how sustainable practices, influence customer satisfaction and loyalty.
4) To suggest ways companies can use green practices to attract more customers.

III. REVIEW OF LITERATURE

1) Kunkel, C.E. (2020) – Emissions in Grocery Delivery vs. Store Visits

Kunkel analyses the emission levels of grocery delivery compared to customers travelling to stores. Results show that grouped deliveries can significantly reduce carbon output, influencing environmentally conscious customers.

2) Lord, C. (2023) – Ethical and Sustainable Food Delivery

Lord examines sustainability concerns and labour conditions in platform-based food delivery. Customers increasingly consider ethical and environmental aspects before choosing a delivery app. Negative environmental practices reduce trust and affect purchase decisions.

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IV. RESEARCH METHODOLOGY

The study adopts a descriptive research design to understand how sustainable logistics practices influence customer choice in grocery and food delivery services. The research focuses on examining customer awareness, perception, and preference toward eco-friendly initiatives. Both primary and secondary data are used to ensure a reliable analysis. Primary data was collected directly from customers through structured questionnaires focusing on sustainability practices. Secondary data was gathered from company reports, research articles, journals, and online sources related to green logistics...

V. ANALYSIS AND INTERPRETATION

Table 1: Awareness of sustainable practices

Response	Number of Respondents	Percentage
Aware	62	60.8%
Not Aware	40	39.2%
Total	102	100%

Interpretation: The majority (60.8%) of respondents are aware of sustainable logistics practices in delivery services.

Chart

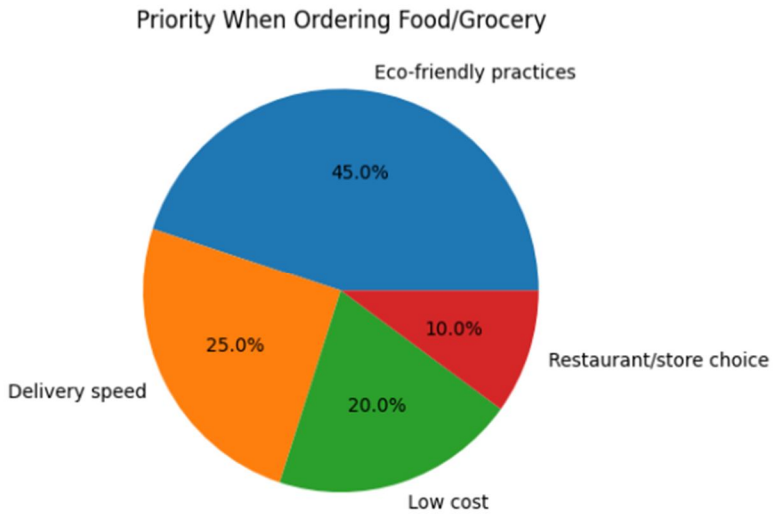
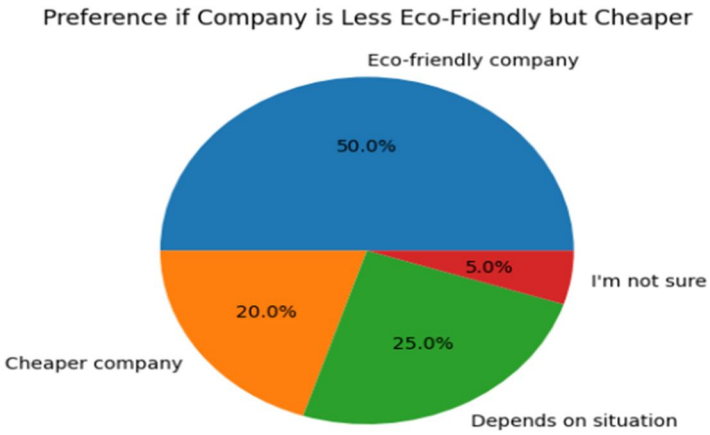


Table 2: Factor Influencing Customer Choice

Factor	Number of Respondents	Percentage
Eco-friendly Practices	62	60.8%
Delivery Speed	34	33.3%
Low Cost	5	4.9%
Restaurant/Store Choice	1	1%
Total	102	100%

Interpretation: Eco-friendly practices are the most influential factor (60.8%) affecting customer choice.

Chart



VI. FINDINGS

1) The majority of respondents (64.7%) are below 35 years of age, indicating that young consumers form the main customer segment.
2) Female respondents (54.9%) slightly outnumber male respondents (45.1%), showing balanced gender participation.
3) Most respondents have higher educational qualifications (UG and PG), indicating an educated sample group.
4) A high percentage of respondents are highly aware (54.9%) or moderately aware (29.4%) of sustainable practices.
5) Eco-friendly packaging is frequently used by respondents, with 59.8% stating they use it very often.
6) Green delivery slots are widely recognized, as 52.9% frequently experience them and none reported complete unawareness.
7) Electric bikes/scooters (57.8%) are the most preferred delivery vehicles, showing strong support for eco-friendly transportation.
8) Biodegradable packaging (47.1%) is the most preferred sustainable initiative among respondents.
9) Nearly half of the respondents (49%) always choose eco-friendly options even when cost is involved.
10) Price (44.1%) is the most important factor in choosing a delivery service, followed by sustainable practices (32.4%).

VII. SUGGESTIONS

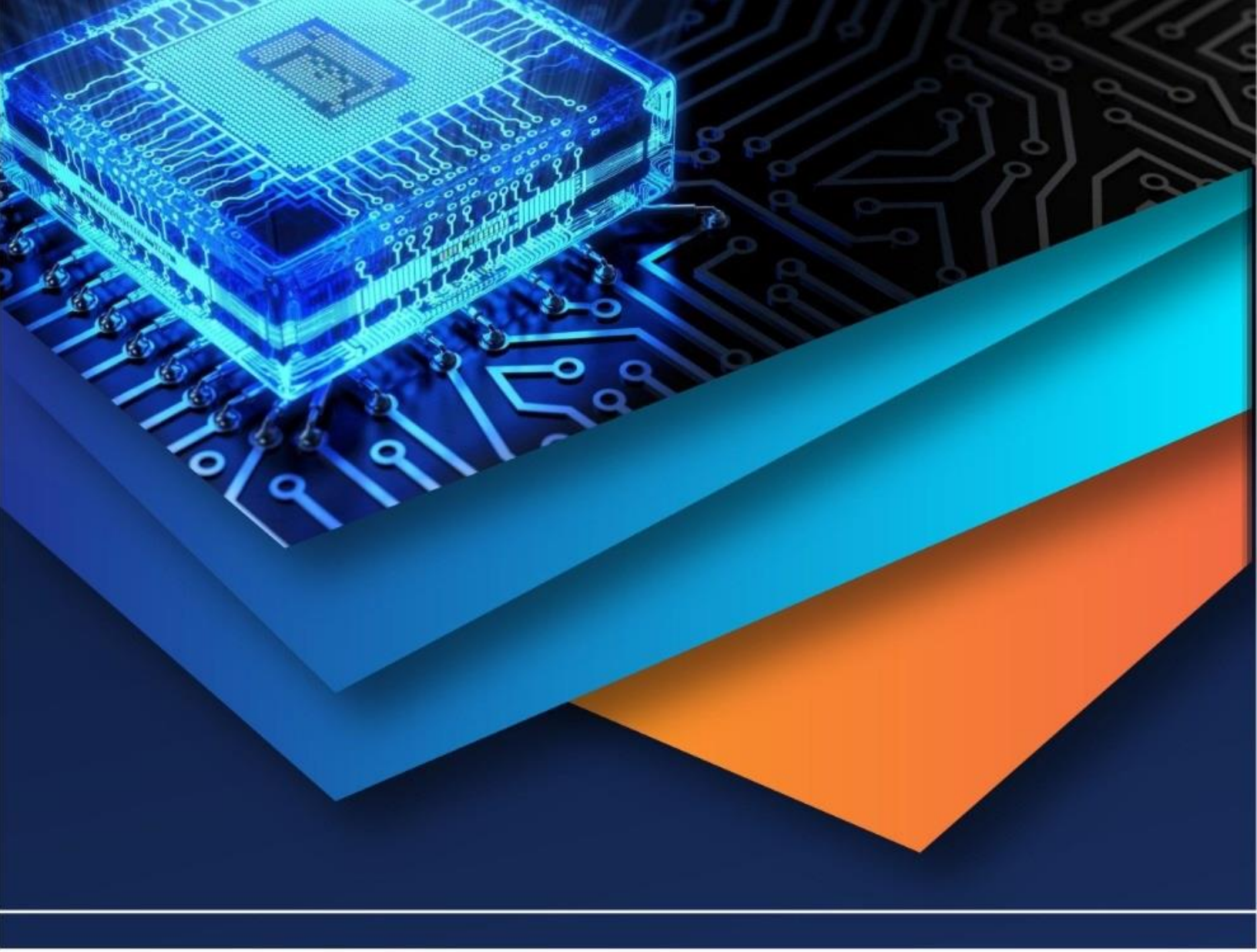
Companies should increase the use of electric vehicles in their delivery operations to reduce carbon emissions and fuel consumption. They need to adopt biodegradable and reusable packaging materials to minimize environmental impact and reduce waste. Clear communication about sustainable initiatives can help improve customer awareness, trust, and brand image. Businesses can also introduce incentives or reward programs to encourage customers to choose eco-friendly delivery options. Continuous monitoring and improvement of green logistics practices will support long-term sustainability, customer satisfaction, and competitive advantage.

VIII. CONCLUSION

The study concludes that sustainable logistics practices play a significant role in influencing customer choice in grocery and food delivery services. Increasing environmental awareness has made customers more conscious about eco-friendly delivery options. Initiatives such as electric vehicle delivery, biodegradable packaging, and route optimization positively impact customer perception and satisfaction. The findings show that sustainability, along with price and convenience, affects brand preference and loyalty. Customers are willing to support companies that demonstrate environmental responsibility.

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