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A Study on Factors Influencing Logistics Efficiency in FMCG Sector in Coimbatore City

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Abstract: ***Logistics efficiency plays a crucial role in determining operational performance and customer satisfaction in the Fast-Moving Consumer Goods (FMCG) sector. This study examines the factors influencing logistics efficiency in FMCG companies operating in Coimbatore city. Primary data were collected from 102 respondents working in distribution, retail, and manufacturing firms using a structured questionnaire. Statistical tools such as percentage analysis, descriptive statistics, and the Friedman Rank Test were applied to analyze the data. The findings reveal that cost control is the most significant performance factor, while traffic congestion is the major challenge affecting logistics efficiency. Warehousing emerged as the most important logistics activity influencing operational effectiveness. Although improvement factors did not show significant statistical differences, better infrastructure ranked first among them. The study concludes that logistics efficiency is a strategic determinant of organizational success and that companies investing in technology, infrastructure, and workforce development can achieve higher efficiency, improved customer satisfaction, and sustainable competitive advantage.***

Keywords: Logistics Efficiency, FMCG Sector, Supply Chain, Transportation, Warehousing, Customer Satisfaction

I. INTRODUCTION

Logistics efficiency is a critical factor in the success of the FMCG sector, as these products require fast movement, continuous replenishment, and timely delivery to meet customer demand. Efficient logistics ensures that goods reach the right place, at the right time, and at the lowest possible cost, thereby improving operational performance and customer satisfaction. In today's competitive business environment, companies must optimize transportation, warehousing, inventory management, and distribution processes to maintain market competitiveness. Therefore, understanding the factors influencing logistics efficiency is essential for enhancing supply chain performance and achieving sustainable business growth.

II. REVIEW OF LITERATURE

Previous studies show that logistics efficiency plays a vital role in improving supply chain performance and organizational competitiveness. Research highlights that effective coordination, information flow, and performance measurement systems help firms enhance delivery speed, reduce costs, and improve customer satisfaction. Scholars also emphasize that technology adoption—such as tracking systems, automation, and forecasting tools—significantly increases logistics accuracy and reliability. Recent studies further indicate that advanced analytics, real-time data sharing, and sustainable logistics practices strengthen decision-making and operational efficiency. Overall, the literature confirms that logistics efficiency is influenced by key factors such as infrastructure, technology, workforce capability, and supply chain coordination.

III. OBJECTIVES OF THE STUDY

1) To study the concept of logistics efficiency in the FMCG sector.
2) To identify the factors influencing logistics efficiency.
3) To analyze the impact of these factors on FMCG logistics operations.
4) To suggest measures to improve logistics efficiency.

IV. RESEARCH METHODOLOGY

Research Design:Descriptive research design
Area of Study:Coimbatore city
Sample Size:102 respondents
Sampling Technique: Simple random sampling

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Sources of Data

- Primary data collected through questionnaires
- Secondary data from journals, reports, and publications

Statistical Tools Used

- Percentage analysis
- Friedman Rank Test
- Descriptive statistics

V. RESULTS AND ANALYSIS

TABLE 1
AGE OF RESPONDENTS

Age Group	Frequency	Percentage
Below 25	29	28.43%
25–35	37	36.27%
36–45	23	22.55%
Above 45	13	12.75%
Total	102	100%

INTERPRETATION

The age distribution of respondents shows that 36.27% belong to the 25–35 age group, representing the majority and indicating that FMCG logistics operations are largely handled by young professionals. Additionally, 28.43% of respondents are below 25 years, showing significant participation of fresh graduates and entry-level employees in the sector. Respondents aged 36–45 constitute 22.55%, reflecting the presence of experienced mid-level professionals who contribute managerial knowledge and operational expertise. Finally, 12.75% of respondents are above 45 years, indicating comparatively lower involvement of senior employees in day-to-day logistics activities.

TABLE 2
FRIEDMAN RANK TEST (LOGISTICS ACTIVITIES)

Logistics Activities	Mean Rank	Rank	Chi-Square	Sig
Warehousing	2.14	I	15.754	0.001
Transportation	2.28	II	15.754	0.001
Order Processing	2.36	III	15.754	0.001
Inventory Control	2.67	IV	15.754	0.001

INTERPRETATION

Since the significance value (0.001) is less than 0.05, there is a statistically significant difference among logistics activities. Warehousing is ranked first, indicating it plays the most important role in ensuring smooth logistics performance. Efficient warehousing improves storage management, reduces delays, and enhances service reliability.

VI. FINDINGS

The findings demonstrate that logistics efficiency in the FMCG sector is influenced by a combination of operational, technological, and infrastructural factors. Cost control emerges as the most important performance determinant, suggesting that organizations prioritize financial efficiency when evaluating logistics systems. At the same time, infrastructure limitations such as traffic congestion significantly affect delivery speed and reliability.Organizations with efficient warehouse systems and accurate inventory tracking are more likely to achieve higher service reliability and customer satisfaction.

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Furthermore, the presence of a young and moderately experienced workforce indicates strong potential for skill development and technological adoption. Overall, the study confirms that logistics efficiency is not determined by a single factor but by a combination of coordinated activities including transportation, storage, technology integration, and workforce capability.

VII. SUGGESTIONS

1) Improve warehouse infrastructure and layout planning.
2) Adopt route optimization software to reduce delivery delays.
3) Strengthen inventory management systems.
4) Implement digital tracking systems.
5) Enhance coordination among supply chain partners.

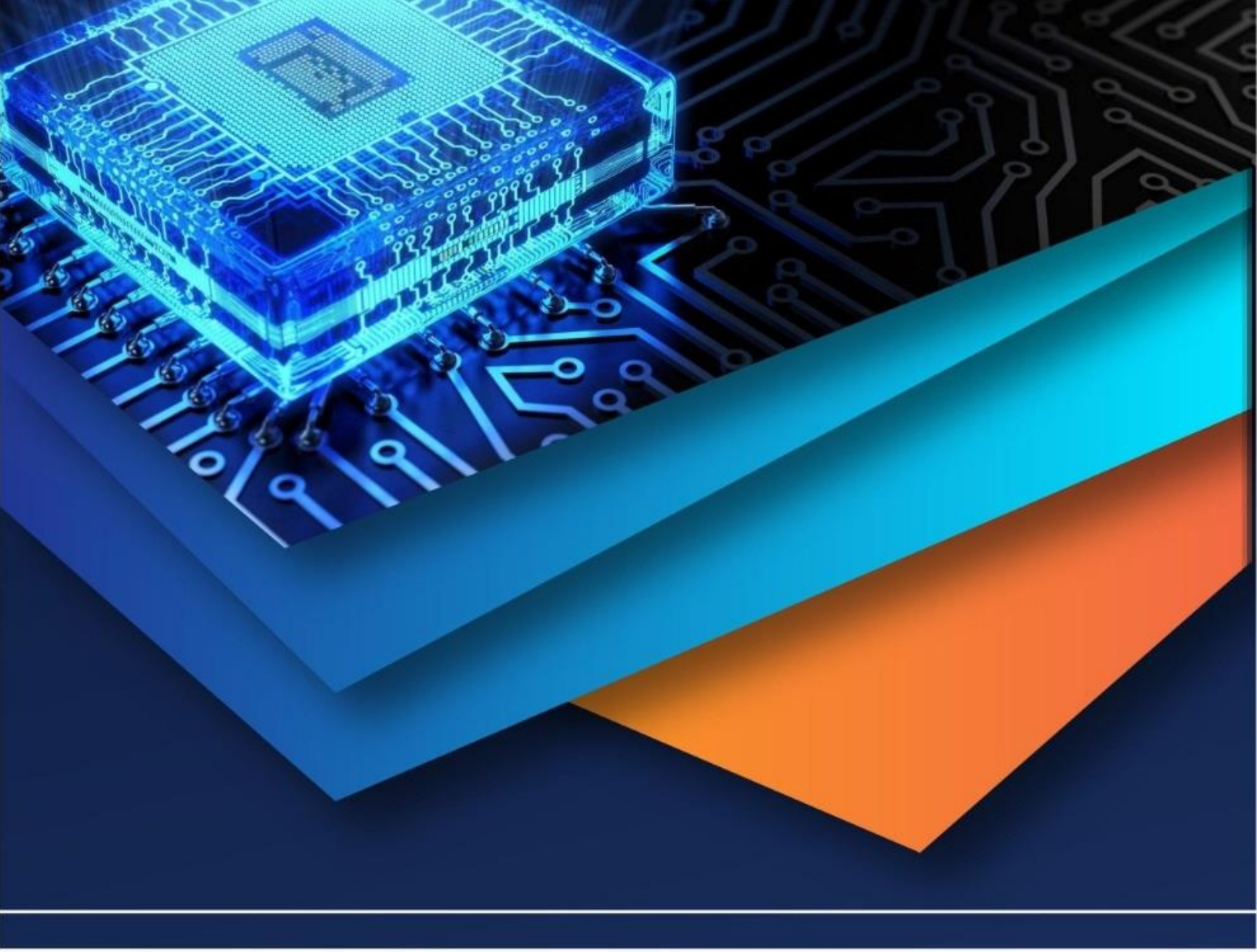
VIII. CONCLUSION

The study concludes that logistics efficiency significantly influences operational success in the FMCG sector. Among logistics activities, warehousing and transportation have a major impact on performance. Companies in Coimbatore must adopt advanced technology, strengthen inventory systems, and improve infrastructure to maintain competitive advantage. Efficient logistics operations lead to cost reduction, improved service quality, and enhanced customer satisfaction.

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