

A Study on Customer Satisfaction in Reverse Logistics Operation with Special Reference to Flipkart in Coimbatore Region

Ms. TRINITA FELCY D, Associate Professor in Business Administration, Rathinam Technical Campus, Coimbatore.

RAKESH KUMAR M, MBA, Department of Business Administration, Rathinam Technical Campus, Coimbatore.

ABSTRACT

This study investigates customer satisfaction in the reverse logistics operations of Flipkart, India's leading e-commerce platform, with a specific focus on the Coimbatore region. Using a structured questionnaire administered to 100 Flipkart customers between January and March 2026, the research analyses key dimensions of the returns experience including ease of return, tracking transparency, refund timeliness, and overall policy satisfaction. Quantitative methods — simple percentage analysis, chi-square tests, and Pearson correlation — were employed to uncover relationships between return process attributes and customer satisfaction. The study finds that customer satisfaction with Flipkart's reverse logistics system ranges from 68% to 82%, that return-process ease and tracking quality are significantly correlated with overall satisfaction ($r = 0.466$, $p < 0.001$), and that unmet quality expectations drive the majority of returns (42.39%). Findings offer actionable insights for e-commerce operators seeking to optimise reverse supply chains and strengthen customer loyalty.

Keywords: Reverse Logistics, Customer Satisfaction, E-Commerce, Flipkart, Chi-Square, Correlation

1. INTRODUCTION

The rapid expansion of e-commerce has fundamentally transformed consumer behaviour and supply chain management in India. As digital shopping becomes mainstream, the volume of product returns has grown commensurately, making reverse logistics — the process of moving goods from end consumers back through the supply chain — a strategic priority for e-commerce firms. Unlike forward logistics, reverse logistics encompasses product returns, refunds, refurbishment, recycling, and disposal, all of which carry direct financial and reputational implications.

Flipkart Private Limited, founded in 2007 and headquartered in Bangalore, is one of India's dominant e-commerce players, commanding a 48% market share as of FY2023. Acquired by Walmart in 2018 for approximately USD 16 billion, the company has invested heavily in supply chain infrastructure — including smart warehouses, data analytics, and the Flipkart Assured quality programme. Coimbatore, a major commercial hub in Tamil Nadu, hosts a Flipkart fulfilment centre and represents a growing market for the platform.

Despite growing scholarly attention to forward logistics, reverse logistics in the Indian e-commerce context — particularly from the customer's perspective — remains underexplored.

This study aims to fill that gap by measuring customer satisfaction with Flipkart's return and refund processes in Coimbatore, identifying key satisfaction drivers, and providing evidence-based recommendations for practitioners. The study objectives are: (i) to assess customer satisfaction with Flipkart's reverse logistics operations; (ii) to examine the relationship between return-process attributes and overall satisfaction; and (iii) to identify barriers that discourage product returns.

2. LITERATURE REVIEW

The academic literature on reverse logistics has grown significantly over the past two decades. Amini and Retzlaff-Roberts (1999) highlighted that reverse logistics process re-engineering can substantially improve service quality, while Jayaraman and Luo (2007) argued that effective return management creates competitive advantage. Alinovi et al. (2012) demonstrated that optimised reverse logistics reduces inventory costs without compromising customer

satisfaction, and Souza et al. (2005) examined return chain motivations, emphasising the financial and environmental imperatives of sound reverse-flow management.

In the e-commerce domain, Zhang et al. (2011) showed that repeat purchase intentions are strongly influenced by post-purchase service experiences, including the ease of returns. Omar et al. (2015) established that service quality is the central determinant of customer satisfaction in digital markets. Senthil and Sridharann (2015) noted that 86% of reverse logistics decision-makers believe that outsourcing returns management enhances operational control, while Mothilal et al. (2012) identified responsiveness and reliability as key success factors in Indian third-party logistics operations.

Return policy design has emerged as a distinct research stream. Carrasco-Gallego and Ponce-Cueto (2009) found that liberal return policies reduce errors and improve inventory co-ordination. Bernon et al. (2011) reported that anticipated consumer returns cost retailers in the USA approximately USD 100 billion annually, underscoring the scale of the challenge. Collectively, the literature points to ease of process, transparent tracking, and timely refunds as the primary levers of reverse-logistics satisfaction — a gap this study addresses empirically in the Indian context.

3. RESEARCH METHODOLOGY

A descriptive quantitative research design was adopted. Primary data were collected via a structured, semi-open questionnaire distributed to Flipkart customers in Coimbatore between January and March 2024. Convenience sampling was used; 112 questionnaires were administered and 100 valid responses were retained for analysis. The questionnaire covered shopping frequency, pre-purchase decision parameters, return experiences, reasons for non-return, return cycle time, and overall satisfaction — measured on five-point Likert scales.

Three statistical techniques were employed: (i) Simple percentage analysis for descriptive profiling; (ii) Chi-square tests to examine whether categorical return-process variables are independent of overall satisfaction; and (iii) Pearson product-moment correlation to quantify the linear association between specific process attributes and satisfaction scores. All inferential tests used a significance threshold of $p < 0.05$.

4. ANALYSIS AND RESULTS

4.1 Descriptive Findings

The majority of respondents (50%) shop online five to ten times per month, with 30% purchasing more than ten times per month, reflecting a highly active buyer base. When ranking pre-purchase decision factors, customers prioritised timely delivery (72.4%), privacy and security (71.1%), product pricing (70.9%), and return or refund policy (70.7%), while sales promotions ranked last (36.7%). These findings suggest that an efficient reverse logistics system is not merely a support function but a core purchase driver.

Regarding return-policy awareness, only 7.8% of respondents read the return policy for all purchases; 48.3% read it only for high-value items; and 43.9% never read it. This low awareness level has practical implications: customers who encounter unexpected return restrictions are more likely to report dissatisfaction than those who are well-informed upfront.

4.2 Reasons for Product Returns

Quality not meeting expectations was the dominant reason for returns (42.4%), followed by change of mind (21.3%), receipt of only part of the order (18.5%), and deliberate return (10.7%). Minor reasons — incorrect quantity, damaged goods, wrong product, and late arrival — each accounted for less than 3%. The predominance of quality-related returns signals a need for more accurate product descriptions and stronger quality-control at the dispatch stage.

4.3 Customer Return Experience

Across all eight measured return-experience dimensions, positive experiences consistently outweighed negative ones, ranging from 76.96% to 87.83% satisfaction. The best-rated experience was repacking ease (87.83% positive), while being required to transport goods to a pickup centre generated the highest dissatisfaction (23.04% negative). When customers chose not to return a product, the primary barriers were inadequate staff support (39.1%), the cost-to-value

ratio of the return effort (23.9%), greater ease of repurchasing elsewhere (19.1%), and process complexity (17.8%).

4.4 Return Cycle Time

In 65% of cases the return cycle was completed within two to seven days, and in 30% of cases within one to two days. No returns exceeded two weeks, indicating that Flipkart's operational return processing is largely efficient within the Coimbatore area.

4.5 Chi-Square Tests

Three chi-square tests were conducted with overall return-policy satisfaction as the dependent variable. Test 1 examined the relationship between perceived convenience of the return process and overall satisfaction: $\chi^2(16) = 31.10$, $p = 0.013$. Test 2 examined ease of return and overall satisfaction: $\chi^2(16) = 46.46$, $p < 0.001$. Test 3 examined satisfaction with tracking status and overall satisfaction: $\chi^2(16) = 86.74$, $p < 0.001$. In all three cases the null hypothesis of independence was rejected, confirming that return-process convenience, ease, and tracking transparency are each significantly associated with overall satisfaction.

4.6 Correlation Analysis

Pearson correlation between difficulty-free returns and overall satisfaction yielded $r =$

0.466 ($p < 0.001$, $n = 79$), indicating a moderate positive linear relationship. Customers who experienced fewer difficulties during the return process reported significantly higher overall satisfaction. Overall, customer satisfaction with Flipkart's reverse logistics ranged from 68.26% to 81.74% across the 14 measured attributes, suggesting a consistently positive but improvable experience.

5. CONCLUSION

This study demonstrates that Flipkart's reverse logistics operations in Coimbatore achieve satisfactory customer outcomes, with overall satisfaction rates between 68% and 82% and a return cycle predominantly completed within one week. Three chi-square analyses and a Pearson correlation confirm that return-process convenience, ease, and tracking transparency are the primary drivers of satisfaction — not promotional incentives or brand reputation. The dominant cause of returns — quality not matching expectations — points to a preventable upstream issue that better product descriptions and pre-dispatch quality checks could address.

Practically, Flipkart and competing e-commerce operators should focus on: (i) simplifying the return initiation process so customers can complete it without staff intervention;

(ii) expanding door-pickup coverage to eliminate the need for customers to visit drop-off centres; (iii) enhancing real-time tracking notifications throughout the return journey; and (iv) investing in more accurate product listings to reduce quality-mismatch returns. Given that more than 95% of consumers are willing to repurchase from a retailer with a positive return experience, optimising reverse logistics represents a direct lever for revenue retention and customer loyalty.

This study is limited by its geographic scope (Coimbatore) and convenience sampling. Future research should extend the framework to multiple cities, incorporate seller-side data, and apply structural equation modelling to test causal relationships among reverse logistics dimensions.

REFERENCES

- Amini, M. M., & Retzlaff-Roberts, D. (1999). Reverse logistics process reengineering: Improving customer service quality. *Issues in Supply Chain Management*.
- Alinovi, A., Bottani, E., & Montanari, R. (2012). Reverse logistics: A stochastic EOQ-based inventory control model for mixed manufacturing/remanufacturing systems. *International Journal of Production Research*, 50(5), 1243–1264.
- Bernon, M., Rossi, S., & Cullen, J. (2011). Retail reverse logistics: A call and grounding framework for research. *International Journal of Physical Distribution & Logistics Management*, 41(5), 484–510.
- Carrasco-Gallego, R., & Ponce-Cueto, E. (2009). Forecasting the returns in reusable container systems. An application to the Spanish beer industry. *DYNA Revista de la Facultad de Minas*, 76(158), 173–182.

- Jayaraman, V., & Luo, Y. (2007). Creating competitive advantages through new value creation: A reverse logistics perspective. *Academy of Management Perspectives*, 21(2), 56–73.
- Mothilal, S., Gunasekaran, A., Nachiappan, S. P., & Jayaram, J. (2012). Key success factors and their performance implications in the Indian third-party logistics (3PL) industry. *International Journal of Production Research*, 50(9), 2407–2422.
- Omar, M. W., Jusoff, K., & Hj Hussin, H. (2010). Customer satisfaction and loyalty in online shopping. *World Applied Sciences Journal*, 10(Special Issue of e-Commerce), 63–69.
- Sathish, T. S. J. J., & Jayaprakash, J. (2017). Optimizing supply chain in reverse logistics. *International Journal of Mechanical and Production Engineering Research and Development*, 7(6), 551–560.
- Senthil, S., & Sridharann, R. (2015). A framework for evaluation, selection and implementation of reverse logistics. *International Journal of Supply Chain Management*, 4(3), 12–19.
- Souza, G. C., Ketzenberg, M. E., & Guide, V. D. R. (2002). Capacitated remanufacturing with service level constraints. *Production and Operations Management*, 11(2), 231–248.
- Zhang, Y., Fang, Y., Wei, K. K., Ramsey, E., McCole, P., & Chen, H. (2011). Repurchase intention in B2C e-commerce: A relationship quality perspective. *Information & Management*, 48(6), 192–200.