

Why Do Consumers Return Products in E-Commerce? Evidence from Online Review Analysis

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Abstract: Product returns have become a critical challenge in e-commerce, affecting operational efficiency, costs, and customer satisfaction. This study adopts a data-driven approach to examine the drivers of product returns using consumer-generated online reviews. A publicly available dataset was filtered to identify return-related reviews, from which 400 samples were analyzed. The study employs thematic analysis to identify key return drivers and complements it with sentiment analysis based on review ratings. The findings reveal five primary drivers of product returns: defective or damaged products, size and fit issues, expectation mismatch, poor product quality, and return/refund process-related concerns. The results highlight that return behaviour is influenced by both operational inefficiencies and perceptual gaps between expectations and actual product performance. Sentiment analysis indicates a strong dominance of negative emotions associated with return experiences. The study provides actionable insights for e-commerce firms to reduce return rates through improved product representation, quality control, and return policy design.

Keywords: E-commerce returns, Product return behaviour, Online reviews, Thematic analysis, Sentiment analysis.

1 INTRODUCTION

The rapid expansion of e-commerce in past few decades has eventually transformed retail landscapes across the world, reshaping how consumers search for, evaluate, and purchase products. Advancements in digital technologies, increased internet penetration, and the growth of mobile commerce have significantly contributed to the growth of online retailing [1]. E-commerce platforms offer convenience, wider product assortment, competitive pricing, and accessibility to consumers. This makes e-commerce as an increasingly preferred option for shopping. However, alongside these merits, e-commerce has also brought in new challenges, one of the most prominent being the high incidence of product returns. Unlike traditional retail, where consumers can physically inspect products prior to purchase, online shopping involves a degree of uncertainty due to dependence on digital representations such as images, descriptions, and reviews [2].

This uncertainty often results in discrepancies between consumer expectations and actual perceptions about the product, leading to higher chances of returning. Product returns have become a pressing concern for e-commerce firms due to their substantial financial and operational implications. Reverse logistics, inspection, repackaging, and restocking processes impose considerable costs on firms [3]. In addition, returns contribute to environmental challenges, including additional transportation emissions and packaging waste, thereby raising concerns about sustainability in e-commerce operations. Despite the growth of product returns in e-commerce, understanding the underlying reasons for return behavior remains a critical challenge. Existing research has identified several factors influencing returns, including product quality, expectation mismatch, and return policies [2][4]. However, much of this research relies on survey-based methods or firm-level data, which may not fully capture the richness and authenticity of consumer experiences.

In recent years, the increasing availability of consumer-generated content (CGC), such as online reviews, has provided new opportunities to examine consumer behavior in naturalistic settings. Online reviews contain detailed accounts of consumer experiences, including dissatisfaction and product-related issues, making them a valuable data source for understanding return behavior [5][6]. However, there is a relative lack of research that systematically analyzes return-related insights from large-scale textual review data. Most prior studies have focused on structured data, such as transaction records or survey responses, limiting their ability to capture the nuanced reasons behind returns. Given these gaps, there is a need for a data-driven, consumer-centric exploration of return behavior, leveraging real-world reviews data to identify key drivers and patterns of dissatisfaction. To address the identified gaps, this study aims to explore product return behavior using consumer-generated online reviews.

By analyzing unstructured textual data, the study seeks to uncover the underlying drivers of returns and provide actionable insights for e-commerce firms. The specific objectives of the study are as follows:

- To identify the key drivers of product returns using consumer-generated review data.
- To analyze patterns of consumer dissatisfaction reflected in return-related experiences.
- To examine the sentiment associated with product return behavior.
- To develop insights that can help reduce product returns in e-commerce contexts.

2 LITERATURE REVIEW

2.1. E-commerce and the Emergence of Product Returns

The rapid growth of e-commerce has significantly altered consumer purchasing behavior, enabling convenient access to products but simultaneously increasing the prevalence of product returns. The absence of physical inspection in online shopping environments induces uncertainty, often leading to dissatisfaction and subsequent returns [2]. As a result, product returns have emerged as a critical issue affecting both operational efficiency and profitability for e-commerce firms. Returns are not merely logistical events but represent a key aspect of the customer journey. Rogers et al. (2002) conceptualize returns management as an integral part of supply chain processes, emphasizing its impact on cost structures and customer satisfaction [6].

More recent studies further highlight that returns are embedded within broader consumer decision-making processes, influenced by both pre-purchase expectations and post-purchase evaluations [4]. Despite the importance of returns, research in this domain has historically been limited, particularly in comparison to other aspects of online consumer behavior. However, the increasing financial burden associated with reverse logistics and return handling has led to a growing body of literature focused on understanding return drivers and mitigation strategies.

2.2. Consumer Behavior Perspectives on Returns

2.2.1. Cognitive Dissonance and Post-Purchase Behavior

From a psychological perspective, product returns can be explained through post-purchase dissonance, where consumers experience discomfort when a purchase does not meet expectations or is perceived as sub-optimal [7]. Returns serve as a mechanism for reducing this dissonance, allowing consumers to reverse their decisions and restore psychological equilibrium. This perspective highlights that returns are not solely driven by product attributes but also by post-purchase emotional responses, such as regret and dissatisfaction.

2.2.2. Impulse Buying and Regret

Impulse buying is another important factor influencing return behavior. The ease of online purchasing and the presence of promotional stimuli often lead consumers to make unplanned purchases [8][9], which may later be reconsidered. Prior research suggests that such impulsive purchases are more likely to result in post-purchase regret, leading consumers to engage in corrective actions such as returns [10][11]. This highlights the role of behavioral biases in shaping return decisions.

2.3. Role of Online Reviews and Consumer-Generated Content

The emergence of online reviews has significantly influenced consumer decision-making in e-commerce. Reviews provide valuable information about product quality, performance, and user experiences, thereby reducing uncertainty and improving purchase decisions. Prior research demonstrates that online reviews significantly influence consumer decision-making and product performance, highlighting their role as a form of electronic word-of-mouth [12]. Beyond purchase decisions, reviews also shape post-purchase evaluations and behaviors, including product returns.

Research indicates that informative and unbiased reviews can reduce return rates by helping consumers make better-informed decisions. Conversely, misleading or insufficient information may increase the likelihood of returns. Despite their importance, relatively few studies have utilized textual review data to directly analyze return behavior, creating a gap in the literature. Most prior research relies on structured datasets, limiting the ability to capture nuanced consumer experiences [13]-[15].

2.4. Returns as an Operational and Strategic Challenge

From an operations perspective, product returns represent a significant challenge for e-commerce firms. Reverse logistics processes, including transportation, inspection, and restocking, incur substantial costs and complexity [3]. Recent literature emphasizes the need for integrated return management strategies, combining operational efficiency with customer-centric approaches. This includes leveraging data analytics to predict returns, improving product design, and optimizing return policies. Moreover, returns have implications beyond cost, affecting customer satisfaction, brand perception, and long-term loyalty. As such, they must be viewed as a strategic issue rather than a purely operational concern.

2.5. Research Gap

Although existing literature provides valuable insights into product returns, several gaps remain. First, much of the research relies on survey-based or transactional data, which may not fully capture the richness of consumer experiences. Second, there is limited research that leverages consumer-generated textual data to explore return behavior in depth. Third, prior studies often examine individual drivers of returns in isolation, without considering the interplay between operational, informational, and psychological factors. Finally, there is a lack of research that integrates qualitative insights with sentiment analysis, providing a comprehensive understanding of return behavior.

2.6. Positioning of the Present Study

This study addresses these gaps by adopting a data-driven, qualitative approach using consumer-generated online reviews. By applying thematic analysis and sentiment analysis, the study provides a holistic understanding of product return behavior. In doing so, the study extends existing literature and provides actionable insights for both researchers and practitioners.

3 METHODOLOGY

3.1. Research Design

This study adopts a qualitative research design supported by descriptive quantitative elements to explore the drivers of product returns in e-commerce. Specifically, the research employs a consumer-generated content (CGC) analysis approach, utilizing publicly available online reviews, downloaded from Kaggle, as the primary data source. The choice of a qualitative design is appropriate given the exploratory nature of the research objective, which seeks to understand why consumers return products.

Online reviews provide rich, unstructured textual data reflecting authentic consumer experiences, making them particularly suitable for identifying patterns of dissatisfaction and return behavior. In addition, a basic quantitative sentiment analysis was incorporated using review ratings to complement the qualitative findings. This mixed approach enhances the robustness of the analysis by combining depth (qualitative insights) with pattern recognition (quantitative indicators).

3.2. Data Source and Sampling

The data for this study were obtained from a publicly available dataset of Amazon product reviews sourced from Kaggle. The dataset includes multiple attributes such as reviewer information, product ratings, review titles, and detailed review text. The use of secondary data offers accessibility and efficiency in data collection, availability of large-scale real-world consumer feedback and it has enhanced ecological validity due to naturally occurring data. A purposive sampling technique was employed to extract relevant data from the dataset. Since the research focuses specifically on product returns, only reviews that contained indicators of return-related experiences were selected.

The sampling process involved a keyword-based filtering approach, where reviews containing the following terms were identified: “return” / “returned”, “refund”, “replacement”, “defective” / “damaged”, “size issue” / “did not fit” and “not as expected.” This approach ensured that only return-relevant consumer experiences were included in the analysis. From the filtered dataset, a total of 400 reviews were selected for detailed analysis. This sample size is considered adequate for qualitative thematic analysis, as it allows for the identification of recurring patterns while maintaining manageability in coding and interpretation. The selected reviews represent a diverse set of product categories and consumer experiences, thereby enhancing the generalizability of the findings.

3.3. Data Collection and Preparation Procedure

Since the study utilizes secondary data, the data collection process involved data extraction and preparation rather than primary data gathering. The procedure consisted of the following steps as shown in Table 1.

Table 1. Data Collection and Preparation Procedure

Stage	Description
Dataset Acquisition	Dataset downloaded from Kaggle in CSV format and imported into spreadsheet environment
Data Screening	Relevant variables identified with focus on review text and rating fields
Keyword-Based Filtering	Return-related reviews extracted using keywords such as return, refund, replacement
Data Cleaning	Duplicates removed, irrelevant/ambiguous reviews excluded, incomplete records eliminated
Final Dataset Preparation	Cleaned dataset structured and organized for thematic and sentiment analysis

AI-assisted analytical support was utilized to enhance efficiency in identifying patterns and grouping themes. However, all outputs were manually reviewed and validated to ensure accuracy and consistency. Fig. 1 shows the proposed system architecture.

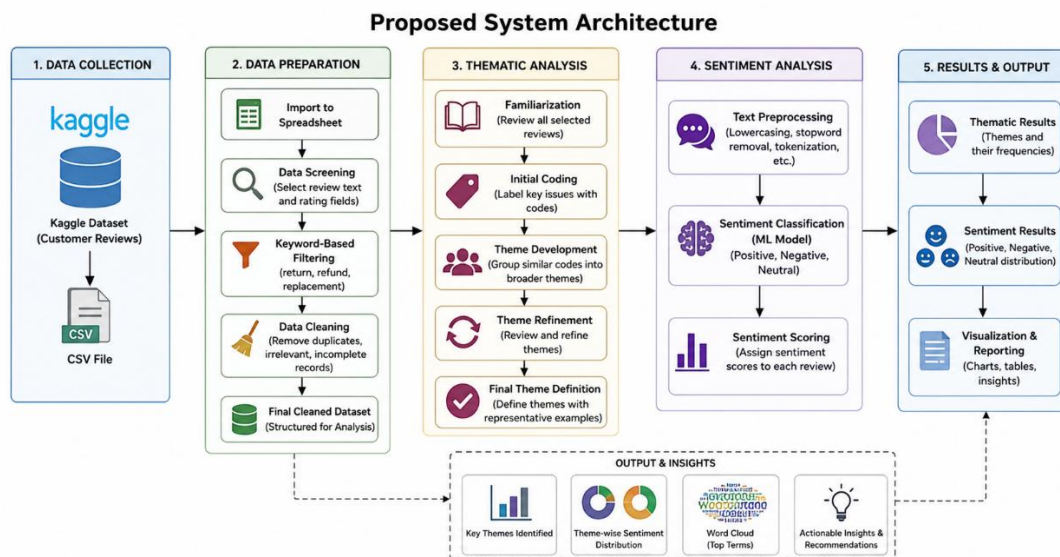


Figure: Proposed System Architecture

Fig. 1. System Architecture of the Proposed Method

3.4. Data Analysis Plan

The data analysis was conducted in two stages: thematic analysis and sentiment analysis. The thematic analysis was applied to systematically examine the textual content of selected consumer reviews and identify recurring patterns related to product return experiences. This process enabled the classification of return-related issues into meaningful categories representing key drivers of return behavior. In addition to qualitative interpretation, sentiment analysis was performed using review ratings to assess the emotional tone associated with return-related experiences. The sentiment categories were structured to reflect varying levels of consumer satisfaction and dissatisfaction. The integration of thematic and sentiment analysis provided a comprehensive understanding of both the underlying causes of returns and the associated consumer perceptions.

3.4.1. Thematic Analysis

The study employed thematic analysis, following a structured approach to identify recurring patterns in the data. The procedure is explained in Table 2.

Table 2. Thematic Analysis Procedure

Stage	Description
Familiarization	The researcher reviewed all selected reviews to gain an overall understanding of the data.
Initial Coding	Each review was examined to identify key issues related to returns, labeled as codes such as size issue, defective product, and poor quality.
Theme Development	Similar codes were grouped into broader themes (e.g., size issue and fit problem → Size and Fit Issues; damaged product and not working → Defective/Damaged Product).
Theme Refinement	Themes were reviewed to ensure internal consistency and clear distinction between different themes.
Final Theme Definition	Each theme was clearly defined and supported with representative examples from the dataset.

3.4.2. Sentiment Analysis

To complement the qualitative findings, a basic sentiment analysis was conducted using review ratings. The ratings were categorized as follows:

- 1-star → Highly Negative
- 2-star → Negative
- 3-star → Neutral
- 4-star → Slightly Positive
- 5-star → Positive

Frequency counts were calculated to determine the distribution of sentiment across the dataset. This approach provides a quantitative overview of consumer emotions, supporting the qualitative insights derived from thematic analysis.

3.5. Reliability, Validity and Ethical Considerations

To ensure the credibility of the findings, a systematic coding process: A structured approach to thematic analysis was followed. Both textual data and rating-based sentiment incorporating Data Triangulation. Manual Validation was also conducted where AI-assisted outputs were reviewed and refined by the researchers. To maintain Transparency, clear documentation of data filtering and analysis procedures is done. The study relies exclusively on publicly available data, ensuring that no personal or sensitive information was accessed. All reviews were anonymized, and no attempt was made to identify individual users. The research adheres to ethical standards for secondary data usage and respects user privacy.

4 FINDINGS

4.1. Overview of Analysis

The present study analyzed a total of 400 return-related consumer reviews extracted from a larger dataset of e-commerce product reviews. The analysis aimed to identify the underlying drivers of product returns and to understand the associated consumer sentiment. A thematic analysis approach was employed to uncover recurring patterns in the textual data, while sentiment analysis was conducted using review ratings. The findings reveal that product return behavior is influenced by a combination of operational, informational, and consumer-centric factors. Five dominant themes emerged from the analysis:

- Return and refund process
- Defective or damaged products
- Size and fit issues
- Expectation mismatch
- Poor product quality

These themes collectively provide a comprehensive understanding of the reasons behind product returns in e-commerce contexts.

4.2. Thematic Analysis of Product Return Drivers

The key drivers of product returns are shown in Table 3.

Table 3. Key Drivers of Product Returns

Theme	Frequency (n=400)	Percentage (%)	Description
Return/Refund Process Issues	353	88.3%	Explicit mention of return, refund, or replacement
Defective/Damaged Product	58	14.5%	Product malfunction, breakage, or damage
Size and Fit Issues	47	11.8%	Incorrect sizing or poor fit
Expectation Mismatch	32	8.0%	Product differs from images/description
Poor Product Quality	20	5.0%	Low durability or inferior materials

4.2.1. Return and Refund Process as a Central Experience

The most frequently observed theme in the dataset relates to the return and refund process, with 353 out of 400 reviews (88.3%) explicitly mentioning return-related actions such as requesting a refund, initiating a replacement, or returning the product. This high frequency indicates that returns are not merely outcomes of dissatisfaction but are integral to the consumer experience in e-commerce. Many consumers described their experiences in terms of the ease or difficulty of initiating returns, reflecting the importance of return policies in shaping post-purchase behavior. While some reviews indicated smooth return processes, a substantial proportion highlighted dissatisfaction, particularly when refunds were delayed or when replacement procedures were cumbersome. This suggests that the efficiency and transparency of return systems play a crucial role in overall customer satisfaction.

4.2.2. Defective and Damaged Products

The second most prominent driver of returns is the receipt of defective or damaged products, identified in 58 reviews (14.5%). Consumers frequently reported issues such as malfunctioning items, broken components, or products arriving in visibly damaged condition. These issues reflect operational inefficiencies in quality control and logistics, which directly contribute to return behavior. Unlike perceptual factors, defects represent objective product failures that necessitate returns. Illustrative examples of this theme include:

“Product arrived damaged, had to return immediately.”
 “The item stopped working within a day, requested replacement.”

The presence of such issues suggests gaps in pre-dispatch inspection and packaging standards, indicating that improvements in operational processes could significantly reduce return rates.

4.2.3. Size and Fit Issues

A significant proportion of reviews (47 instances; 11.8%) highlighted size and fit issues, particularly in categories such as apparel and footwear. Consumers frequently reported that products did not match expected sizing standards, leading to dissatisfaction and eventual return. Typical concerns included: Inconsistent sizing across products, Poor fit despite selecting standard sizes and Lack of accurate size guidance. Example reviews include:

“Size didn’t fit as expected, returned it.”
 “Ordered my usual size but it was too tight.”

These findings emphasize the role of product category-specific uncertainty, especially in fashion e-commerce where physical trial is not possible. The inability to accurately assess fit prior to purchase leads to increased reliance on returns as a corrective mechanism.

4.2.4. Expectation Mismatch

Another key theme identified is expectation mismatch, present in 32 reviews (8.0%). This occurs when the received product differs from the consumer’s expectations formed based on online representations such as images, descriptions, and specifications. Consumers frequently expressed disappointment when products did not align with their perceived value or appearance.

This mismatch often results from Overly enhanced product images, Incomplete or misleading descriptions or Differences in color, material, or functionality. Representative quotes include:

“Not as shown in images, very disappointing.”
 “Product looks completely different from what was advertised.”

This theme highlights the importance of accurate and realistic product representation, as discrepancies between expectation and reality significantly influence return decisions.

4.2.5. Poor Product Quality

The final theme relates to poor product quality, observed in 20 reviews (5.0%). Unlike defective products, which involve functional failures, quality issues are more subjective and relate to perceived value, durability, and material standards. Consumers reported dissatisfaction with Low-quality materials, Poor finishing, Lack of durability. Example reviews include:

“The quality is very poor, not worth the price.”
 “Material feels cheap and flimsy.”

These findings suggest that perceived value plays a critical role in return decisions, particularly when the product fails to meet consumer expectations in terms of quality. In summary, the frequency distribution of themes indicates that operational factors (defects, damage) and perceptual factors (expectation mismatch, quality) jointly influence return behavior. However, the prominence of return process mentions suggests that returns themselves are embedded within the consumption experience, rather than being isolated post-purchase events. Furthermore, the presence of size and fit issues underscores the importance of category-specific challenges, particularly in fashion-related purchases.

4.3. Sentiment Analysis

Sentiment categorization based on rating values provides a structured and efficient approach to interpreting consumer emotional responses associated with return experiences. This method enables the identification of overall dissatisfaction trends without requiring complex natural language processing techniques. By linking numerical ratings with sentiment polarity, the study ensures consistency and transparency in classification. The resulting sentiment distribution further supports the interpretation of thematic findings by highlighting the intensity of consumer reactions related to product return situations.

4.3.1. Sentiment Distribution

The analysis revealed the sentiment distribution shown in Table 4.

Table. 4 Sentiment Distribution (Based on Ratings)

Rating	Frequency	Sentiment
1-star	320	Highly Negative
2-star	23	Negative
3-star	8	Neutral
4-star	9	Slightly Positive
5-star	40	Positive

4.3.2. Interpretation of Sentiment

The results indicate a strong dominance of negative sentiment, with more than 80% of the reviews categorized as highly negative. This suggests that return-related experiences are typically associated with high levels of dissatisfaction and frustration. The emotional tone of the reviews frequently reflected Disappointment, Regret and Frustration. Even in cases where the return process was smooth, the initial dissatisfaction with the product often overshadowed the overall experience. Interestingly, a small number of positive reviews were observed, primarily reflecting satisfaction with the return process rather than the product itself. This highlights the dual role of returns as both a service recovery mechanism and a source of dissatisfaction.

4.4. Integrated Insights

The combined analysis of themes and sentiment provides several important insights:

- Returns are multi-dimensional,
- Product returns are influenced by a combination of product-related, informational, and psychological factors
- Operational failures remain critical
- Defects and damage continue to be major drivers, indicating areas for process improvement
- Perceptual gaps drive dissatisfaction
- Expectation mismatch and perceived quality issues highlight the importance of accurate product representation,
- Category-specific challenges persist
- Size and fit issues remain a significant concern, particularly in apparel categories
- Returns are emotionally charged experiences
- The strong negative sentiment associated with returns underscores their impact on customer satisfaction and brand perception.

4.5. Summary of Findings

In summary, the study identifies five key drivers of product returns: return process, defective products, size and fit issues, expectation mismatch, and poor quality, alongside a dominant negative sentiment associated with return experiences. These findings highlight the complexity of return behavior and underscore the need for both operational and strategic interventions in e-commerce systems.

5 DISCUSSION

5.1. Interpretation of Findings

The primary objective of this study was to understand the drivers of product returns in e-commerce using consumer-generated review data. The findings reveal that return behavior is shaped by a combination of operational inefficiencies, informational gaps, and consumer perceptual factors. This multi-dimensional nature of returns highlights that they are not merely transactional outcomes but are deeply embedded within the broader consumption experience. One of the most prominent observations from the analysis is the centrality of the return and refund process in consumer narratives. A large proportion of reviews explicitly referenced return-related actions, indicating that returns are not isolated events but form an integral part of the post-purchase journey. This suggests that consumers increasingly perceive returns as a standard feature of e-commerce, rather than an exception. The prominence of return-related discourse aligns with the notion that lenient return policies reduce perceived purchase risk, thereby encouraging online buying behavior.

At the same time, the findings indicate that the return process itself can become a source of dissatisfaction when it is perceived as inefficient or cumbersome. This dual role of returns as both a risk-reduction mechanism and a potential friction point, highlights the need for firms to carefully design their return systems. A second key insight is the importance of product-related failures, particularly defective or damaged products. These issues represent objective shortcomings in the product or supply chain and are among the most direct triggers of return behavior. Unlike perceptual drivers, defects leave little room for interpretation and almost inevitably result in returns. This finding underscores the continued relevance of operational excellence, even in highly digitized retail environments. In addition to operational factors, the study identifies expectation mismatch as a critical driver of returns.

Consumers frequently expressed dissatisfaction when products did not align with their expectations formed through online descriptions and images. This highlights the role of information asymmetry in e-commerce, where consumers must rely on mediated representations rather than physical inspection. The resulting gap between expectation and reality often leads to post-purchase dissatisfaction and return decisions. Closely related to expectation mismatch is the issue of perceived product quality. While defects represent objective failures, quality concerns are more subjective and relate to the perceived value of the product. The findings suggest that consumers evaluate products not only in terms of functionality but also in terms of whether they meet their expectations of quality relative to price. Another important driver identified is size and fit issues, particularly in apparel-related purchases.

This reflects the inherent challenges of purchasing products that require physical evaluation in an online environment. The inability to assess fit prior to purchase increases uncertainty, leading consumers to rely on returns as a corrective mechanism.

Finally, the sentiment analysis reveals a strong dominance of negative emotions, including frustration, disappointment, and regret. This indicates that return experiences are often emotionally charged and can significantly influence overall customer satisfaction and brand perception. Even when the return process is smooth, the initial dissatisfaction with the product tends to dominate the overall evaluation. Taken together, these findings suggest that product returns are the result of a complex interplay between operational performance, information quality, and consumer psychology. Understanding this interplay is critical for developing effective strategies to reduce return rates.

5.2. Implications

The study integrates operational and behavioral perspectives on returns, highlighting the need for interdisciplinary approaches in understanding e-commerce phenomena. While prior research has often focused on either supply chain issues or consumer psychology, this study demonstrates that both dimensions are critical. The findings of this study offer several important managerial implications for e-commerce firms seeking to reduce product return rates and improve customer satisfaction. First, the prominence of expectation mismatch highlights the need for firms to enhance the accuracy and richness of product representations. Investments in high-quality images, detailed descriptions, videos, and emerging technologies such as augmented reality can help align consumer expectations with actual product attributes, thereby reducing the likelihood of returns.

Second, the significant role of defective and damaged products underscores the importance of strengthening quality control mechanisms. E-commerce firms should focus on improving supplier standards, implementing rigorous pre-dispatch inspections, and enhancing packaging processes to minimize damage during transit. Addressing these operational inefficiencies can directly reduce return volumes and associated costs. Third, the findings related to size and fit issues suggest that category-specific solutions are necessary, particularly in fashion and apparel segments. Providing standardized size charts, detailed fit guidance, and personalized recommendations using data analytics can help consumers make more informed purchase decisions. Technologies such as virtual try-on tools can further reduce uncertainty and improve purchase accuracy.

Additionally, the analysis indicates that the return process itself plays a crucial role in shaping consumer experiences. While lenient return policies can enhance purchase confidence, firms must strike a balance between customer convenience and operational sustainability. Transparent, efficient, and user-friendly return systems should be complemented with measures to prevent misuse, ensuring that return policies remain both customer-centric and cost-effective. Finally, product returns should be viewed not merely as operational challenges but as valuable sources of customer feedback. By systematically analyzing return data and consumer reviews, firms can identify recurring issues related to product design, quality, and information accuracy.

Leveraging these insights can support continuous improvement efforts and enable firms to proactively address the root causes of returns. The significance of this study lies in its ability to provide a holistic understanding of product return behavior in e-commerce. By integrating insights from consumer-generated data with established theoretical frameworks, the study offers both academic and practical contributions. In an increasingly competitive e-commerce landscape, managing returns effectively is critical for reducing operational costs, enhancing customer satisfaction and improving sustainability outcomes. The findings underscore that addressing return behavior requires a multi-faceted approach, encompassing product design, information quality, and customer experience management.

6 CONCLUSION

This study explored the drivers of product returns in e-commerce using consumer-generated review data. The findings reveal that returns are driven by a combination of operational factors (defective or damaged products), informational gaps (expectation mismatch), and category-specific issues (size and fit), along with concerns related to perceived product quality and return processes. The dominance of negative sentiment further highlights that return experiences are often associated with dissatisfaction and frustration. The study contributes by offering a data-driven and consumer-centric understanding of product return behavior, moving beyond traditional survey-based approaches. From a managerial perspective, the findings emphasize the need for accurate product representation, improved quality control, and optimized return policies to reduce return rates and enhance customer satisfaction. Overall, the study underscores that product returns are not merely operational challenges but critical indicators of gaps in the online purchase experience, requiring integrated strategic attention from e-commerce firms.

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ETHICS STATEMENT

This study did not involve human or animal subjects and, therefore, did not require ethical approval.

STATEMENT OF CONFLICT OF INTERESTS

The authors declare that they have no conflicts of interest related to this study.

LICENSING

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