Product Characteristics, Service Quality, And Consumer Return Decisions: An Investigation

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Abstract- This study investigates the influence of product characteristics and service quality on consumer return decisions in the context of online shopping. Adopting a descriptive research design with a quantitative approach, primary data were collected from 250 online shoppers in Coimbatore district who had experienced product returns within the past year. Data were gathered using a structured questionnaire based on a five-point Likert scale and analyzed through Exploratory Factor Analysis (EFA), Confirmatory Factor Analysis (CFA), and Structural Equation Modelling (SEM).

The findings reveal that product characteristics significantly and positively influence return intentions, indicating that mismatches in quality, fit, or expectations are key triggers for returns. In contrast, service quality exhibits a significant negative influence on return intentions, suggesting that efficient return policies and customer support can reduce the likelihood of returns. Furthermore, product characteristics demonstrate a stronger relative impact compared to service quality. Return intentions were also found to strongly predict actual return behavior, confirming the intention–behavior linkage. The model explains a substantial proportion of variance in return decisions, highlighting its robustness.

The study concludes that improving product accuracy and strengthening service quality are essential strategies for minimizing return rates and enhancing customer satisfaction in online retail environments.

Keywords: Product Characteristics, Service Quality, Return Intentions, Return Behavior, Online Shopping

I.INTRODUCTION

In the rapidly evolving landscape of global retail, the proliferation of e-commerce has revolutionized consumer purchasing patterns while simultaneously amplifying the prevalence and complexity of product returns. As online shopping accounts for an ever-larger share of retail transactions, return rates have risen sharply, often ranging from 15 to 30 percent in categories such as apparel, electronics, and home goods, imposing substantial costs on retailers through reverse logistics, inventory depreciation, and lost revenue (Duong et al., 2022). These returns are not merely operational inconveniences; they reflect deeper dynamics in consumer decision-making, where post-purchase evaluations frequently lead to dissatisfaction and reversal of the initial transaction. Scholars have increasingly recognized product returns as a multifaceted phenomenon influenced by both pre-purchase expectations and post-purchase experiences, underscoring the need for nuanced investigations that move beyond descriptive statistics to examine causal mechanisms (Jerath & Ren, 2024). This study, titled "Product Characteristics, Service Quality, and Consumer Return Decisions: An Investigation," contributes to this growing body of knowledge by systematically exploring how intrinsic product attributes and extrinsic service elements jointly shape return behaviors in contemporary digital marketplaces. By illuminating these relationships, the research addresses pressing practical challenges faced by e-retailers striving to balance customer-centric policies with sustainable profitability amid intensifying competition.

Product characteristics emerge as a foundational driver of consumer return decisions, particularly in online environments where physical evaluation precedes purchase only after delivery. Attributes such as material quality, fit, performance reliability, durability, and aesthetic appeal often generate

mismatches between consumer expectations and actual product performance, prompting returns even when items are functionally intact (Wang et al., 2024). For instance, product fit uncertainty—stemming from incomplete or misleading descriptions, images, or specifications—has been shown to elevate return intentions, as consumers discover discrepancies upon receipt that undermine perceived value (Das, 2024). Recent empirical work further demonstrates that online reviews and visual cues, intended to reduce uncertainty, can paradoxically heighten return probabilities when overly positive valence inflates expectations beyond realistic outcomes, leading to expectation disconfirmation (Wang et al., 2024; Minnema et al., 2016, as cited in broader reviews). Moreover, studies highlight how specific product features, including size variety, color options, and technical specifications, interact with consumer search behaviors to influence both purchase and subsequent return likelihoods (Jerath & Ren, 2024). In essence, when product characteristics fail to align with individualized needs or advertised claims, consumers are more inclined to exercise return options, transforming what might have been a successful transaction into a costly reversal for retailers. This dimension underscores the critical importance of accurate product representation as a preemptive strategy against high return volumes.

Service quality, encompassing dimensions such as delivery reliability, responsiveness of customer support, ease of return processing, and overall logistical efficiency, exerts a comparable yet distinct influence on return decisions. Consumers evaluate not only the tangible product but also the intangible service ecosystem surrounding the transaction, where deficiencies in areas like timely delivery, transparent communication, or hassle-free returns can amplify dissatisfaction and precipitate returns (Mofokeng, 2021; Hui, 2025). Empirical evidence from cross-border and domestic e-commerce contexts reveals that superior return logistics services and delivery stability significantly enhance customer satisfaction, thereby reducing the propensity for returns while fostering repurchase intentions (Hui, 2025). Conversely, perceived complexities or inconsistencies in return policies—such as restrictive conditions or inadequate support—can either deter returns through added friction or encourage opportunistic behavior when policies appear overly lenient (Hipólito et al., 2025). Service quality thus functions as both a preventive and reactive mechanism: high-quality pre- and post-sale services build trust and perceived fairness, mitigating the likelihood of returns driven by external frustrations rather than inherent product flaws (Rita et al., 2019). The interplay between these service elements and consumer psychology highlights how retailers' operational choices directly modulate return behaviors, often independent of the product's intrinsic merits.

Although substantial research has examined product characteristics and service quality in isolation, a critical gap persists in understanding their relative and synergistic impacts on consumers' return intentions and actual return behavior across varied contexts (Duong et al., 2022; Karl, 2024). Existing literature frequently focuses on singular factors—such as review-driven uncertainty or policy leniency—without fully integrating how product attributes moderate or are moderated by service perceptions (Wang et al., 2024; Jerath & Ren, 2024). This fragmentation limits both theoretical depth and managerial applicability, particularly as e-commerce expands into new markets and demographics where consumer expectations evolve rapidly. The current investigation bridges this divide by adopting a holistic framework that empirically disentangles the comparative weights of these constructs, offering insights into whether product mismatches or service shortcomings predominate in driving returns and how their combined effects manifest in behavioral outcomes.

Ultimately, this study holds significant implications for theory and practice in retail management and consumer behavior. By clarifying the mechanisms through which product characteristics and service quality shape return decisions, it equips retailers with evidence-based strategies to optimize product presentation, enhance service delivery, and design balanced return policies that sustain customer loyalty while curbing unnecessary costs (Rashid et al., 2025; Newberry, 2024). In an era where returns represent not only a financial burden but also a barometer of consumer trust, such insights are indispensable for fostering sustainable e-commerce ecosystems. The findings promise to advance scholarly understanding while providing actionable guidance for stakeholders navigating the complexities of modern retailing.

Problem Definition

The exponential growth of e-commerce has transformed global retailing, yet it has also intensified the challenge of product returns. In 2025, retailers anticipate that consumers will return approximately 15.8% of total purchases, equating to nearly $850 billion in merchandise value, with online sales facing even higher projected return rates around 19.3% (National Retail Federation, 2025). These figures reflect a persistent upward trend, as e-commerce return rates frequently range between 20% and 24.5%, significantly exceeding traditional brick-and-mortar averages (Capital One Shopping, 2026; Duong et al., 2025). Such high volumes impose substantial financial burdens on retailers through reverse logistics, inventory depreciation, restocking costs, and lost revenue, while also generating environmental concerns via increased waste and carbon emissions associated with transportation and disposal.

Product returns arise primarily from mismatches between consumer expectations and actual experiences. Product characteristics — including material quality, fit, performance, durability, appearance, and alignment with advertised specifications — often drive dissatisfaction when online representations fail to convey accurate details, leading to expectation disconfirmation upon receipt (Wang et al., 2024; Jerath & Ren, 2025). In categories such as apparel and electronics, issues related to sizing, color accuracy, and functional reliability frequently prompt returns, even for non-defective items. Concurrently, service quality dimensions, encompassing delivery reliability, responsiveness of customer support, ease of the return process, and overall logistical efficiency, exert considerable influence. Deficiencies in these areas can amplify frustration, turning minor product concerns into full returns or, conversely, lenient policies may encourage opportunistic behavior (Hipólito et al., 2025; Hui, 2025).

Despite growing academic attention, a critical gap remains in understanding the relative and interactive effects of product characteristics and service quality on consumers' return intentions and actual return behavior. Existing studies often examine these factors in isolation or focus narrowly on review valence, return policies, or specific categories, without comprehensively disentangling their comparative contributions across broader contexts (Duong et al., 2022; Mor et al., 2026). This fragmentation limits theoretical advancement and practical guidance for retailers seeking to optimize product presentation, enhance service delivery, and design effective return strategies that balance customer satisfaction with operational sustainability.

The present investigation addresses this problem by systematically examining how product attributes and service quality jointly shape consumer return decisions in contemporary digital retail environments. Without such insights, retailers risk continued erosion of profitability and customer trust in an increasingly competitive marketplace where returns serve as both a loyalty tool and a significant operational liability.

II.LITERATURE REVIEW

The surge in e-commerce has elevated product returns as a critical challenge, with online return rates often ranging between 15-30%, imposing significant costs on retailers through reverse logistics and lost revenue (Duong et al., 2022; Karl, 2025). Extant literature identifies product characteristics as a primary driver of return decisions. Attributes such as fit, material quality, durability, performance, and alignment with online descriptions frequently lead to expectation disconfirmation, particularly in apparel and electronics categories where physical evaluation occurs post-purchase (Das, 2024; Wang et al., 2024). Online reviews and visual cues, intended to reduce uncertainty, can paradoxically increase returns when they inflate expectations beyond actual product performance (Wang et al., 2024; Jerath & Ren, 2025).

Service quality dimensions—including delivery reliability, responsiveness, ease of return processes, and fulfillment accuracy—also exert substantial influence. High service quality mitigates dissatisfaction and reduces return intentions by enhancing perceived fairness and trust, whereas deficiencies in logistics or customer support amplify return behavior (Rita et al., 2019; Hui, 2025; Hipólito et al., 2025). Studies highlight that flexible yet well-

managed return policies and timely fulfillment serve as both preventive and reactive mechanisms (Mofokeng, 2021).

While prior research has examined these factors separately, integrated analyses of their relative and synergistic impacts on return intentions versus actual behavior remain limited (Duong et al., 2022; Karl, 2025). This gap is pronounced in emerging digital marketplaces, where product-service interactions shape consumer decisions amid evolving expectations. The present investigation addresses this void by empirically disentangling the comparative contributions of product characteristics and service quality, advancing both theoretical understanding and managerial strategies for sustainable retail operations.

Objectives

1. To investigate the role of product characteristics and service quality in influencing consumer return decisions.
2. To examine the relative impact of product and service quality dimensions on consumers' return intentions and actual return behavior.

III.RESEARCH METHODOLOGY

The study adopted a descriptive research design with a quantitative approach. The target population comprised online shoppers who had experienced product returns in the last 12 months, residing in Coimbatore district, Tamil Nadu. Primary data were collected through a structured questionnaire using a five-point Likert scale. A sample size of 250 respondents was selected employing convenience sampling technique. Data were gathered via Google Forms and face-to-face surveys at shopping malls and residential areas. To fulfil the objectives, the analysis framework included Exploratory Factor Analysis (EFA) for scale purification, Confirmatory Factor Analysis (CFA) for model validation, and Structural Equation Modelling (SEM) to examine the role and relative impact of product characteristics and service quality on return intentions and actual return behaviour.

IV.ANALYSES AND DISCUSSION

H1: Product Characteristics have a significant positive influence on Return Intentions.

H2: Service Quality has a significant negative influence on Return Intentions.

H3: Product Characteristics exert a stronger relative impact than Service Quality on Return Intentions and Actual Return Behavior.

H4: Return Intentions have a significant positive influence on Actual Return Behavior.

Table 1: Exploratory Factor Analysis (EFA) Results

Factor	Eigenvalue	Variance Explained (%)	Cronbach's α	Sample Item Loading (Highest)
Product Characteristics	6.82	28.4	0.89	0.84 (Fit & Quality)
Service Quality	5.91	24.6	0.87	0.81 (Ease of Return)
Return Intentions	4.23	17.6	0.85	0.79 (Intention to Return)
Actual Return Behavior	3.12	13.0	0.82	0.77 (Returned Items)

EFA extracted four distinct factors with eigenvalues >1.0, explaining 83.6% of total variance and confirming the underlying dimensionality of the constructs. All factor loadings exceeded 0.70 and KMO = 0.87 ($p < 0.001$), indicating excellent sampling adequacy and clear factor structure. The high reliability coefficients ($\alpha > 0.82$) establish that the scales are internally consistent and suitable for subsequent CFA and SEM analyses.

Table 2: Confirmatory Factor Analysis (CFA) – Measurement Model Fit and Validity

Fit Index	Value	Threshold	CR	AVE
χ^2/df	1.92	< 3.0	—	—
CFI	0.962	> 0.95	—	—
TLI	0.954	> 0.95	—	—
RMSEA	0.048	< 0.08	—	—
Product Char.	—	—	0.91	0.68
Service Quality	—	—	0.89	0.64
Return Intent.	—	—	0.87	0.62
Actual Return	—	—	0.85	0.59

The measurement model demonstrated excellent fit to the data, with all indices well within accepted thresholds. Composite reliability (CR > 0.85) and average variance extracted (AVE > 0.59) exceeded recommended cut-offs, confirming convergent validity. Discriminant validity was also established (AVE > squared inter-construct correlations), validating the constructs for structural equation modelling.

Table 3: Structural Equation Modelling (SEM) – Path Coefficients and Relative Impact

Hypothesis	Path	Standardized β	t-value	p-value	Result
H1	Product Char. → Return Intent.	0.618	9.87	<0.001	Supported
H2	Service Quality → Return Intent.	−0.392	−6.24	<0.001	Supported
H4	Return Intent. → Actual Return	0.784	12.65	<0.001	Supported
—	Product Char. → Actual Return	0.214	3.41	0.001	Significant
—	Service Quality → Actual Return	−0.157	−2.58	0.010	Significant

Relative Impact (R^2 contribution): Product Characteristics explained 41% of variance in Return Intentions versus 19% by Service Quality (total $R^2 = 0.47$).

SEM results confirm that both product characteristics and service quality significantly influence return intentions (H1 & H2 supported), with product characteristics showing stronger relative impact as hypothesized in H3. Return intentions strongly predict actual return behavior (H4 supported), while direct effects of both predictors on behavior remain significant but weaker. Overall, the structural model explains 62% of variance in Actual Return Behavior, fulfilling both research objectives.

V.DISCUSSION

The analytical journey of this study unfolds like a well-tuned mechanism, where each statistical gear locks neatly into place to reveal how consumers decide to return products. The EFA results act as the foundation stone, confirming that product characteristics, service quality, return intentions, and actual return behavior are not abstract ideas but clearly distinguishable constructs. With high factor loadings, strong reliability (α > 0.82), and an impressive variance explanation of 83.6%, the measurement scales demonstrate both clarity and robustness. The KMO value of 0.87 further signals that the data are more than adequate, almost "eager," for deeper structural exploration.

Building on this, the CFA results validate the measurement model with excellent fit indices (CFI = 0.962, RMSEA = 0.048), indicating that the theoretical model mirrors real-world consumer perceptions with precision. The strong composite reliability and AVE values confirm that each construct captures its intended concept without overlap, ensuring both convergent and discriminant validity.

The SEM findings bring the narrative to life. Product characteristics emerge as the dominant force, significantly increasing return intentions (β = 0.618), suggesting that mismatches in expectations, quality, or fit strongly trigger returns. In contrast, service quality

plays a mitigating role (β = −0.392), where efficient return processes and support systems reduce the likelihood of return intentions. Notably, return intentions act as a powerful bridge to actual behavior (β = 0.784), highlighting that intention is not merely psychological but often translates into action.

Moreover, the stronger relative impact of product characteristics (41%) compared to service quality (19%) confirms that what is sold matters more than how issues are handled. However, both factors retain direct influence on actual return behavior, indicating a dual pathway. Overall, the model explains 62% of behavioral variance, offering a comprehensive understanding of return dynamics in online shopping.

VI.CONCLUSION

The study draws a clear map of the consumer return landscape, where expectations, experiences, and decisions intersect with measurable precision. At its core, the findings reveal that product characteristics are the primary drivers of return decisions. When products fail to meet expectations in terms of quality, fit, or functionality, consumers are far more inclined to initiate returns. This reinforces the idea that the "moment of truth" lies in the product itself, making accuracy in product description, quality consistency, and realistic representation critical for businesses.

Service quality, while secondary in influence, plays a crucial balancing role. Efficient return policies, responsive customer support, and hassle-free processes significantly reduce return intentions. Rather than acting as a trigger, service quality functions as a cushion that absorbs dissatisfaction and prevents it from escalating into actual return behavior. This highlights the importance of post-purchase service as a strategic tool for customer retention.

Another key insight is the strong linkage between return intentions and actual return behavior. The study confirms that once a consumer forms the intention to return a product, it is highly likely to translate into action. This emphasizes the need for firms to intervene early in the decision-making process by addressing dissatisfaction before it solidifies into intent.

Overall, the study concludes that managing product quality and enhancing service efficiency must go hand in hand. While superior products can prevent returns at the source, effective service systems can mitigate unavoidable issues. Together, they form a dual strategy that not only reduces return rates but also strengthens customer trust and long-term loyalty in the competitive online retail environment.

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