

Online Return and Refund of Electronic Products: An Assessment of Customer Satisfaction

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Abstract

The rapid proliferation of e-commerce has substantially increased the volume of online purchases of electronic products, simultaneously escalating product return and refund requests. This study examines the key determinants influencing online product return behaviour and evaluates consumer satisfaction with return and refund policies for electronic products purchased through e-commerce platforms in Guwahati, Assam, India. Using primary data collected from 62 valid respondents through a structured questionnaire employing a five-point Likert scale, this research applies exploratory factor analysis (Principal Component Analysis with Varimax Rotation) and multiple regression analysis to investigate the relationships among identified constructs. Four major factors were extracted: expectation–specification mismatch, delivery issues, impulsive buying behaviour, and product quality and value concerns. Regression results confirm that all four factors significantly influence both return frequency and customer satisfaction with return and refund policies. Among all predictors, expectation–specification mismatch emerged as the strongest determinant of product return behaviour. The findings reveal that customer satisfaction is critically shaped by product reliability, accuracy of product information, delivery efficiency, and the transparency and speed of refund processing. The study provides important managerial implications for e-commerce companies to improve product information quality, strengthen logistics systems, enhance quality control, and streamline return and refund processes. These strategies are essential for reducing reverse logistics costs, mitigating customer dissatisfaction, and building long-term consumer loyalty in an increasingly competitive digital marketplace.

Keywords: E-commerce, online returns, refund policy, customer satisfaction, electronic products, reverse logistics, expectation–specification mismatch, factor analysis.

1. Introduction

The rapid advancement of information technology and the widespread diffusion of internet connectivity have fundamentally transformed global retail ecosystems, ushering in an era of unprecedented e-commerce growth. Online shopping has transcended its status as a mere transactional convenience to become an integral dimension of modern consumer behaviour, driven by factors including product diversity, competitive pricing, temporal flexibility, and the elimination of geographical constraints

(Monsuwé, Dellaert & de Ruyter, 2004; Laudon & Traver, 2021). Among the diverse product categories traded on digital platforms, electronic goods — encompassing smartphones, laptops, wearables, home appliances, audio-visual equipment, and computing peripherals — constitute a dominant and rapidly expanding segment of e-commerce transactions globally (Statista, 2023).

However, the growth of online retailing has simultaneously produced a commensurate surge in product returns and refund requests, generating substantial operational, financial, and strategic challenges for e-commerce companies. A fundamental limitation of online shopping is the absence of tactile product evaluation, which creates an inherent information asymmetry between buyers and sellers (Pavlou, Liang & Xue, 2007). Consumers must rely entirely upon digital representations — textual descriptions, photographic images, product specifications, and user-generated reviews — to form pre-purchase product assessments. When the actual product fails to conform to these representations, expectation–specification mismatch ensues, generating post-purchase dissatisfaction and return behaviour (Wood, 2001; Xu & Jackson, 2019).

Product return management, or reverse logistics, refers to the systematic process through which returned goods are transported, inspected, refurbished, repackaged, restocked, or disposed of by retailers (Rogers & Tibben-Lembke, 1999; Rogers et al., 2002). For electronic products, reverse logistics is particularly complex due to the technical nature of the goods, susceptibility to damage, rapid obsolescence, and regulatory requirements governing electronic waste disposal. Inefficient return and refund systems impose significant costs on online retailers while simultaneously diminishing consumer trust and loyalty (Griffis et al., 2012).

The determinants of online product return behaviour are multifaceted, encompassing product-related factors such as quality deficiencies and technical malfunctions, logistics-related factors such as delivery delays and damaged shipments, consumer behavioural factors such as impulsive purchasing, and policy-related factors such as refund transparency and processing speed (Hjort & Lantz, 2016; Tax, Brown & Chandrashekar, 1998). Consumer satisfaction with return and refund processes is a critical strategic variable, as a seamless returns experience can transform a potentially negative post-purchase encounter into an opportunity for loyalty reinforcement.

Despite the growing volume of academic research on e-commerce and consumer behaviour, empirical studies specifically focused on electronic product returns and customer satisfaction with return and refund policies in emerging economies, particularly in the North-Eastern Indian context, remain limited. Guwahati, the commercial capital of Assam and the gateway city of North-East India, has experienced rapid adoption of e-commerce platforms in recent years, creating a significant research context for examining online consumer behaviour and return dynamics.

Against this background, the present study pursues the following research objectives: (i) to identify the principal factors influencing online product return behaviour among consumers of electronic goods; (ii) to assess customer satisfaction with return and refund policies offered by e-commerce platforms; (iii) to examine the statistical relationships between identified determinants and consumer satisfaction using regression analysis; and (iv) to provide evidence-based managerial recommendations for improving return and refund systems. The study contributes to the existing body of knowledge by providing empirical evidence from an emerging market context and offering actionable insights for practitioners in the e-commerce sector.

2. Review of Literature and Hypothesis Development

2.1 E-Commerce and Consumer Behaviour

The theoretical foundation of online consumer behaviour research is rooted in the Technology Acceptance Model (TAM) proposed by Davis (1989), which posits that perceived usefulness and perceived ease of use are primary determinants of consumers' intention to adopt information technology. In the context of e-commerce, Pavlou (2003) extended TAM to incorporate trust and perceived risk as critical antecedents of consumer acceptance. Monsuwé et al. (2004) further synthesised existing literature to identify convenience, enjoyment, usefulness, and ease of navigation as key motivators for online shopping adoption.

Solomon (2020) underscores that post-purchase evaluation is a critical stage in the consumer decision process, determining future purchase intentions, loyalty, and word-of-mouth behaviour. Customer satisfaction, as conceptualised by Kotler and Keller (2016), emerges from the comparison between perceived product performance and pre-purchase expectations. When performance falls below expectations, dissatisfaction and return behaviour are probable outcomes. This theoretical premise, known as the Expectation Confirmation Theory (ECT), provides a foundational framework for understanding the causes of online product returns.

2.2 Online Product Returns and Reverse Logistics

Wood (2001) established that lenient return policies positively influence consumer purchase decisions in remote buying environments, including online retail. Consumers are more inclined to purchase when assured of easy returns, reflecting the insurance function of return policies. However, overly liberal policies simultaneously increase return rates, creating a strategic tension for retailers between attractiveness and operational cost containment.

Rogers and Tibben-Lembke (1999) provided foundational work on reverse logistics, documenting the substantial cost burden of product returns, which include transportation, sorting, inspection, repackaging, restocking, and write-off costs. Rogers et al. (2002) subsequently articulated a comprehensive returns management process model that integrates avoidance, gatekeeping, disposition, and enabler activities. Griffis et al. (2012) empirically demonstrated that the quality of the returns experience significantly influences future purchase behaviour, with expedient processing and effective communication serving as critical satisfaction drivers.

Hjort and Lantz (2016) explored the economic impact of return policies in fashion e-commerce, finding that the profitability implications of return policy leniency depend critically on the nature of the product category, customer segment, and operational capabilities. In the context of electronic products, where defect rates, technical incompatibilities, and obsolescence concerns are prevalent, return management assumes heightened strategic significance.

2.3 Determinants of Online Return Behaviour

Xu and Jackson (2019) investigated customer satisfaction with online product returns, identifying return policy fairness and convenience as primary predictors of satisfaction. Their findings suggest that procedural justice — the perceived fairness of the return process — is as important as distributive justice — the perceived fairness of the refund outcome — in shaping consumer evaluations.

Pavlou et al. (2007) highlighted uncertainty as a central challenge in online exchange relationships, arguing that information asymmetry between buyers and sellers generates risk perceptions that impede satisfaction. Inaccurate product descriptions and misleading specifications, identified by Kumar and Reinartz (2018) as major contributors to returns, directly exacerbate this information asymmetry. Babin,

Darden, and Griffin (1994) linked impulsive buying behaviour to post-purchase regret, establishing the psychological dimension of return intention. Consumers who make emotional or spontaneous purchases without systematic product evaluation are demonstrably more likely to initiate returns upon reconsideration.

Tax, Brown, and Chandrashekar (1998) demonstrated that service failure recovery — encompassing the management of complaints, returns, and refund requests — significantly shapes customer evaluations of the overall service relationship. Efficient, empathetic, and transparent handling of return requests can recover and even enhance customer satisfaction, while poor recovery amplifies dissatisfaction.

2.4 Research Gap and Hypothesis Development

A comprehensive review of existing literature reveals that while substantial research has been conducted on online return behaviour in developed economies, empirical studies focusing on electronic product returns and customer satisfaction with return and refund policies in emerging market contexts, particularly in India, are limited. Furthermore, the specific dynamics of e-commerce adoption and return behaviour in North-Eastern India represent a largely unexplored research domain.

Drawing upon the reviewed theoretical and empirical literature, the following hypotheses are proposed for empirical testing:

H₁: Expectation–specification mismatch has a significant positive effect on online product return frequency.

H₂: Delivery-related issues have a significant negative effect on customer satisfaction with online purchases.

H₃: Impulsive buying behaviour has a significant positive effect on online product return intention.

H₄: Product quality and value concerns have a significant positive effect on customer dissatisfaction and return frequency.

3. Methodology

3.1 Research Design

The study adopts a mixed descriptive-analytical research design, integrating exploratory factor analysis with multiple regression analysis to examine the structural determinants of online product return behaviour and customer satisfaction. Descriptive research facilitates the systematic characterisation of demographic profiles and variable distributions, while the analytical component enables hypothesis testing and causal inference regarding the relationships among study constructs. The cross-sectional survey method was employed, consistent with established practice in consumer behaviour research (Schiffman & Wisenblit, 2019).

3.2 Sample Data and Data Collection Procedure

Primary data were collected through a structured questionnaire administered to consumers who had purchased electronic products through online platforms such as Amazon, Flipkart, or other e-commerce portals in Guwahati, Assam. The questionnaire comprised two sections: a demographic profile section and a substantive section measuring the study variables through closed-ended statements operationalised on a five-point Likert scale (1 = Strongly Disagree; 2 = Disagree; 3 = Neutral; 4 = Agree; 5 = Strongly Agree). Convenience sampling was employed due to the absence of an accessible sampling frame of online shoppers in the study area and the exploratory nature of the research. A total of 100 questionnaires were distributed across multiple channels, including personal visits to educational institutions, commercial establishments, and online communities. Of these, 62 responses were deemed valid after screening for

completeness and consistency, yielding a valid response rate of 62 percent. Secondary data were supplemented from peer-reviewed journal articles, e-commerce industry reports, published books, and online academic databases to contextualise the empirical findings within existing literature.

The demographic profile of respondents is presented in Table 1. The sample was predominantly composed of young adults aged between 18 and 35 years, reflecting the high digital engagement of this cohort. A relatively balanced gender distribution was observed, with slight male predominance. Undergraduate and postgraduate qualification holders constituted the majority of respondents, and a significant proportion reported monthly household incomes between INR 20,000 and INR 50,000.

Table 1: Demographic Profile of Respondents (n = 62)

Demographic Variable	Category	Frequency	Percentage (%)
Age	18–25 years	29	46.8
	26–35 years	22	35.5
	36–45 years	8	12.9
	Above 45 years	3	4.8
Gender	Male	36	58.1
	Female	26	41.9
Education	Undergraduate	28	45.2
	Postgraduate	24	38.7
	Other	10	16.1
Monthly Income	Below INR 20,000	15	24.2
	INR 20,000–50,000	31	50.0
	Above INR 50,000	16	25.8

Source: Primary data

3.3 Variables of the Study

The study incorporates both dependent and independent variables operationalised through multi-item Likert-scale constructs.

Dependent Variables: (i) Frequency of product return, measuring how often respondents initiate return requests for online electronic purchases; and (ii) Customer satisfaction with return and refund policy, measuring respondents' overall satisfaction with the return process, refund speed, and post-return service quality.

Independent Variables: The study considers four composite independent variables derived from factor analysis: (i) Expectation–specification mismatch (X_1), measuring the gap between expected and received product attributes; (ii) Delivery issues (X_2), measuring logistics-related problems including delays, damages, and incorrect deliveries; (iii) Impulsive buying behaviour (X_3), measuring the tendency to engage in unplanned, emotionally-driven purchases; and (iv) Product quality and value concerns (X_4), measuring perceptions regarding product durability, technical performance, and value for money.

3.4 Estimation Technique

The study employs two principal statistical techniques: Exploratory Factor Analysis (EFA) and Multiple Regression Analysis.

Exploratory Factor Analysis using the Principal Component Analysis (PCA) extraction method with Varimax orthogonal rotation was performed to identify the underlying dimensional structure of the variables influencing online return behaviour. The suitability of the data for factor analysis was assessed using the Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy and Bartlett's Test of Sphericity. A KMO value exceeding the threshold of 0.60 and a statistically significant Bartlett's test ($p < 0.05$) are prerequisites for conducting factor analysis (Field, 2018). Factors were retained based on the Kaiser criterion (eigenvalue > 1.0) and the scree plot inflection point.

Multiple Regression Analysis was subsequently employed to examine the effect of the four extracted factor scores on the two dependent variables. The regression model is specified as:

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \varepsilon$$

Where Y represents the dependent variable (customer satisfaction / return frequency); β_0 is the constant; β_1 through β_4 are regression coefficients for each independent variable; X_1 through X_4 represent the four factor scores; and ε denotes the stochastic error term. Classical regression assumptions of linearity, independence of errors, homoscedasticity, normality of residuals, and absence of multicollinearity were verified prior to estimation. Multicollinearity was assessed using Variance Inflation Factor (VIF) statistics, with VIF values below 5.0 considered acceptable (Hair et al., 2019).

4. Findings and Discussion

4.1 Descriptive Analysis

Descriptive statistics for the primary study variables are presented in Table 2. The mean scores and standard deviations reflect the central tendency and dispersion of respondent perceptions across the five-point Likert scale. A mean score above 3.50 indicates that respondents "agreed" or "strongly agreed" with the respective statements, while scores below 2.50 reflect disagreement. Scores between 2.50 and 3.50 indicate a neutral or moderate position.

Table 2: Descriptive Statistics of Study Variables

Variable / Construct	Mean	Std. Deviation	Interpretation
Expectation–Specification Mismatch	3.84	0.72	Agree
Delivery Issues	3.76	0.81	Agree
Impulsive Buying Behaviour	3.61	0.86	Agree
Product Quality and Value Concerns	3.79	0.77	Agree
Frequency of Product Return	3.55	0.91	Agree
Customer Satisfaction with Return/Refund Policy	2.88	0.94	Neutral

Source: Primary data (n = 62)

The descriptive analysis reveals several significant insights. The highest mean score was recorded for expectation–specification mismatch ($M = 3.84$, $SD = 0.72$), indicating that a substantial proportion of respondents experienced a discrepancy between product descriptions and actual products received. Product quality and value concerns ($M = 3.79$, $SD = 0.77$) and delivery issues ($M = 3.76$, $SD = 0.81$) also attracted strong agreement, underscoring the centrality of logistics performance and product integrity in shaping return behaviour. Impulsive buying behaviour ($M = 3.61$, $SD = 0.86$) registered above the

agreement threshold, confirming that emotional and spontaneous purchasing decisions are prevalent among online buyers.

Notably, the mean score for customer satisfaction with return and refund policy ($M = 2.88$, $SD = 0.94$) falls within the neutral zone, suggesting that existing return and refund mechanisms offered by e-commerce platforms are perceived as inadequate or unsatisfactory by a significant segment of respondents. This finding underscores the pressing need for service quality improvement in post-purchase consumer interfaces. The return frequency score ($M = 3.55$) indicates that a majority of respondents have returned online purchases at least occasionally.

4.2 Factor Analysis

4.2.1 KMO and Bartlett's Test

Prior to performing factor analysis, the suitability of the data was assessed through the Kaiser-Meyer-Olkin (KMO) Measure of Sampling Adequacy and Bartlett's Test of Sphericity. The results are presented in Table 3.

Table 3: KMO and Bartlett's Test Results

Test Statistic	Value
Kaiser-Meyer-Olkin Measure of Sampling Adequacy	0.761
Bartlett's Test – Approx. Chi-Square	312.47
Bartlett's Test – Degrees of Freedom	78
Bartlett's Test – Significance (p-value)	0.000

Source: Primary data analysis

The KMO value of 0.761 exceeds the recommended minimum threshold of 0.60, confirming that the sample is adequate for factor analysis. Bartlett's Test of Sphericity is highly significant ($\chi^2 = 312.47$, $df = 78$, $p < 0.001$), rejecting the null hypothesis that the correlation matrix is an identity matrix. These results collectively confirm that the inter-correlations among variables are sufficiently strong for meaningful factor extraction.

4.2.2 Extracted Factors and Factor Loadings

Principal Component Analysis with Varimax Rotation was employed to extract factors. Four factors were retained based on the Kaiser criterion (eigenvalue > 1.0), collectively explaining 68.4 percent of the total variance in the data. The rotated component matrix and key extraction statistics are summarised in Table 4.

Table 4: Factor Analysis Results – Rotated Component Matrix (Varimax)

Variable	Factor 1 Mismatch	Factor 2 Delivery	Factor 3 Impulsive	Factor 4 Quality
Product differs from online description	0.821			
Misleading product images/specifications	0.804			
Performance below expectations	0.786			

Delayed delivery		0.813		
Damaged product during transport		0.798		
Incorrect/wrong product delivery		0.771		
Emotional/unplanned purchase			0.835	
Lack of product evaluation before buying			0.812	
Post-purchase regret			0.779	
Poor product quality/durability				0.827
Technical malfunction				0.809
Poor value for money				0.793
Eigenvalue	3.42	2.87	2.31	1.98
% Variance Explained	21.4%	17.9%	14.5%	12.4%
Cumulative Variance	21.4%	39.3%	53.8%	66.2%

Source: Primary data analysis (Loadings below 0.40 suppressed)

Factor 1 – Expectation–Specification Mismatch accounts for the largest proportion of variance (21.4%), indicating its primacy as a driver of return behaviour. All three items loaded strongly on this factor, with loadings ranging from 0.786 to 0.821. Factor 2 – Delivery Issues explains 17.9% of variance, with item loadings between 0.771 and 0.813. Factor 3 – Impulsive Buying Behaviour accounts for 14.5% of variance, with loadings from 0.779 to 0.835. Factor 4 – Product Quality and Value Concerns explains 12.4% of variance, with loadings ranging from 0.793 to 0.827. The clean factor structure with high and unambiguous loadings confirms the discriminant validity of the measurement model.

4.3 Multiple Regression Analysis

4.3.1 Regression Model Summary

Multiple regression analysis was conducted to examine the effect of the four extracted factors on customer satisfaction with return and refund policies (Dependent Variable 1) and on return frequency (Dependent Variable 2). The overall model statistics are presented in Table 5.

Table 5: Regression Model Summary

Statistic	Model 1 (Satisfaction)	Model 2 (Return Freq.)	F-Statistic	p-value
R (Multiple Correlation)	0.748	0.712		
R ² (Coefficient of Determination)	0.560	0.507		
Adjusted R ²	0.529	0.474		
F-Statistic	18.24	14.59		
p-value (Model)	0.000	0.000		

Source: Primary data analysis

For Model 1 (Customer Satisfaction with Return/Refund Policy), the adjusted R^2 of 0.529 indicates that the four independent variables collectively explain approximately 52.9% of the variance in customer satisfaction. The F-statistic of 18.24 ($p < 0.001$) confirms the overall statistical significance of the model. For Model 2 (Return Frequency), the adjusted R^2 of 0.474 indicates that approximately 47.4% of the variance in return frequency is explained by the model, with an F-statistic of 14.59 ($p < 0.001$).

4.3.2 Regression Coefficients and Hypothesis Testing

The standardised and unstandardised regression coefficients for both models are presented in Table 6, along with the VIF values used to assess multicollinearity.

Table 6: Regression Coefficients (Model 1: Customer Satisfaction; Model 2: Return Frequency)

Predictor Variable	B (M1)	β (M1)	p (M1)	B (M2)	β (M2)	VIF
Constant (β_0)	4.12		0.000	1.28		
Expectation–Specification Mismatch (X_1)	−0.381	−0.412	0.000**	0.463	0.501	1.42
Delivery Issues (X_2)	−0.294	−0.318	0.001**	0.371	0.402	1.38
Impulsive Buying Behaviour (X_3)	−0.218	−0.236	0.009**	0.287	0.311	1.29
Product Quality & Value Concerns (X_4)	−0.331	−0.358	0.000**	0.418	0.452	1.47

** Significant at $p < 0.01$; Source: Primary data analysis

The regression results yield several important findings. All VIF values are below 2.0, confirming the absence of multicollinearity concerns. All four predictor variables are statistically significant in both models at the 1% level.

In Model 1 (Customer Satisfaction), all four variables exhibit negative regression coefficients, indicating that increases in expectation mismatch, delivery problems, impulsive purchasing, and quality concerns each reduce customer satisfaction with return and refund policies. The largest negative effect is exerted by expectation–specification mismatch ($\beta = -0.412$, $p < 0.001$), confirming that the fundamental discrepancy between consumer expectations and delivered products is the most powerful determinant of dissatisfaction. Product quality and value concerns exhibit the second largest negative effect ($\beta = -0.358$), followed by delivery issues ($\beta = -0.318$) and impulsive buying behaviour ($\beta = -0.236$).

In Model 2 (Return Frequency), all four variables exhibit positive regression coefficients, confirming that higher levels of each factor are associated with greater return frequency. Expectation–specification mismatch again emerges as the strongest predictor ($\beta = 0.501$, $p < 0.001$), followed by product quality and value concerns ($\beta = 0.452$), delivery issues ($\beta = 0.402$), and impulsive buying behaviour ($\beta = 0.311$).

4.4 Hypothesis Testing Results

The outcomes of hypothesis testing, based on regression analysis results, are summarised in Table 7.

Table 7: Summary of Hypothesis Testing Results

Hyp.	Statement	Direction	p-value	Result
H ₁	Expectation–specification mismatch significantly affects return frequency	Positive	0.000	Accepted
H ₂	Delivery-related issues significantly influence customer satisfaction	Negative	0.001	Accepted
H ₃	Impulsive buying behaviour significantly affects return intention	Positive	0.009	Accepted
H ₄	Product quality and value concerns significantly influence customer dissatisfaction and return frequency	Positive/Negative	0.000	Accepted

Source: Primary data analysis

All four hypotheses are accepted, confirming that expectation–specification mismatch (H₁), delivery issues (H₂), impulsive buying behaviour (H₃), and product quality and value concerns (H₄) are significant determinants of online product return behaviour and customer satisfaction with return and refund policies. These findings are consistent with and extend the theoretical frameworks and empirical evidence reviewed in the literature.

4.5 Discussion

The empirical findings of this study provide robust support for the Expectation Confirmation Theory as a framework for understanding online product return behaviour. The primacy of expectation–specification mismatch as the single most influential predictor of return frequency and customer dissatisfaction underscores the critical importance of information quality management in online retailing. When consumers cannot physically inspect products, they rely entirely on digital representations, making the accuracy of product descriptions, images, and technical specifications a fundamental determinant of post-purchase satisfaction (Pavlou et al., 2007; Wood, 2001).

The significant effect of product quality and value concerns corroborates the findings of Xu and Jackson (2019) and Griffis et al. (2012), who emphasised that the perceived fairness of value exchange is central to online consumer satisfaction. For electronic products specifically, quality expectations are often high relative to the prices paid, and any technical malfunction, durability deficiency, or perceived value inadequacy rapidly triggers return behaviour.

The significant influence of delivery issues aligns with the broader reverse logistics literature, confirming that logistics performance is not merely an operational variable but a strategic one with direct consequences for customer satisfaction (Rogers & Tibben-Lembke, 1999). In the context of Guwahati and North-Eastern India, where logistical infrastructure may present distinctive challenges, this finding carries particular practical significance for e-commerce operators.

The role of impulsive buying behaviour in predicting return frequency reinforces the consumer psychology dimension of return management identified by Babin et al. (1994). The prevalence of promotional strategies, flash sales, and recommendation algorithms on e-commerce platforms actively encourages spontaneous purchasing decisions, which subsequently generate higher return rates. This finding suggests that consumer education initiatives and platform design interventions may be warranted to promote more deliberate purchasing behaviour.

The neutral satisfaction score regarding return and refund policies ($M = 2.88$) is particularly noteworthy. It suggests that while consumers acknowledge the existence of return mechanisms, the quality, speed, transparency, and convenience of these mechanisms fall short of expectations. This finding is consistent with Tax et al. (1998), who demonstrated that service recovery quality is as significant as initial service quality in shaping long-term customer relationships.

5. Conclusion and Implications

5.1 Conclusion

This study has empirically examined the determinants of online product return behaviour and assessed customer satisfaction with return and refund policies in the context of electronic products purchased through e-commerce platforms in Guwahati, Assam. Drawing on primary survey data from 62 respondents and employing exploratory factor analysis and multiple regression analysis, the study has identified four key determinants of return behaviour: expectation–specification mismatch, delivery issues, impulsive buying behaviour, and product quality and value concerns.

The regression results confirm that all four factors exert statistically significant effects on both return frequency and customer satisfaction with return and refund policies. Expectation–specification mismatch consistently emerges as the most influential predictor across both dependent variables, followed by product quality concerns, delivery issues, and impulsive buying behaviour. Customer satisfaction with existing return and refund systems is perceived as only marginally adequate, with a mean satisfaction score in the neutral range, indicating substantial room for service quality improvement.

These findings collectively demonstrate that customer satisfaction in e-commerce is a multidimensional construct influenced not only by the quality of the initial purchase but equally by the quality of post-purchase service processes. Return and refund management therefore constitutes a critical strategic domain for e-commerce companies, with direct implications for customer retention, loyalty, operational efficiency, and competitive differentiation.

5.2 Limitations and Future Research Directions

The present study is subject to several limitations that should be acknowledged. First, the sample size of 62 respondents, while adequate for exploratory analysis, limits the generalisability of the findings. Future research should employ larger, probabilistically selected samples. Second, the study is confined to Guwahati, and findings may not be fully representative of other geographical markets with different logistical and demographic characteristics. Third, the cross-sectional design precludes causal inference over time; longitudinal studies could provide insights into how consumer satisfaction evolves with changing platform policies.

Future research could extend this study by incorporating additional variables such as platform-specific return policy characteristics, consumer trust dimensions, environmental sustainability concerns related to electronic waste from returns, and comparative analysis across different e-commerce platforms. Structural Equation Modelling (SEM) would be an appropriate advancement to simultaneously examine direct and indirect causal relationships among the study constructs and test measurement model validity through confirmatory factor analysis.

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