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# IMPACT OF REFURBISHED PRODUCT OFFERINGS ON POST-PURCHASE SATISFACTION IN E COMMERCE

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## ABSTRACT

*The proliferation of refurbished product offerings in e-commerce has transformed consumer markets, yet their impact on post-purchase satisfaction remains understudied. This research investigates how refurbished product attributes warranty, pricing, quality, and after-sales support – shape consumer satisfaction, with trust acting as a mediator. By addressing gaps in existing literature, which predominantly emphasizes purchase intentions over post-purchase outcomes, the study adopts a quantitative cross-sectional approach. Data were collected via a structured online questionnaire from 300 respondents with prior experience purchasing refurbished products. The methodology employed a 5-point Likert scale to measure perceptions, trust, and satisfaction, alongside binary logistic regression to identify predictors of purchase experience, multiple linear regression to assess attribute impacts, and mediation analysis (Smart PLS 4) to evaluate trust's role. Statistical power analysis ensured sample adequacy, and bootstrapping validated indirect effects, enhancing the robustness of findings.*

*The study advocates for e-commerce platforms to prioritize trust-building mechanisms, such as transparent refurbishment certifications, verified customer reviews, and performance guarantees, to alleviate skepticism among first-time buyers. Segmented marketing strategies are recommended: cost-effectiveness and warranty assurances should target price-sensitive consumers, while quality assurances and robust after-sales support cater to risk-averse segments. Additionally, aligning refurbished offerings with sustainability narratives can attract environmentally conscious buyers, advancing circular economy objectives. By addressing quality concerns through rigorous refurbishment standards and offering competitive pricing, businesses can enhance post-purchase satisfaction, drive repeat purchases, and capitalize on the growing refurbished market. Ultimately, this research provides actionable insights for platforms to balance profitability with sustainable consumption, fostering long-term consumer trust and market expansion.*

**KEYWORDS:** *Refurbished products, e-commerce, post-purchase satisfaction, consumer perceptions, trust, warranty, pricing attractiveness, after-sales support, quality concerns, sustainable consumption.*

## INTRODUCTION

The rapid evolution of e-commerce has transformed the way consumers purchase goods, with digital platforms offering unprecedented convenience, variety, and accessibility. Among the most notable trends shaping this landscape is the rise of refurbished product offerings. Once confined to niche markets or specialized retailers, refurbished goods have now become a mainstream feature on major e-commerce platforms, including giants like Amazon and Flipkart, as well as a host of specialized online marketplaces. This shift is driven by several converging factors: changing consumer attitudes toward sustainability, increasing price sensitivity, and the growing demand for value-driven shopping experiences.

Refurbished products, typically defined as items returned by customers and then restored to a like-new condition through inspection, repair, and certification processes, offer a compelling alternative to both new and second-hand goods. Unlike second-hand items, refurbished products are subjected to rigorous quality checks and often come with warranties, providing consumers with greater assurance regarding their functionality and reliability. This distinction has helped build trust and foster acceptance among a broader segment of online shoppers, many of whom may have previously been hesitant to consider anything but new merchandise.

The appeal of refurbished products in e-commerce is multifaceted. For consumers, the primary draw is cost savings, refurbished items are typically sold at a significant discount compared to their brand-new counterparts, making high-quality goods more accessible to price-sensitive buyers. This is particularly relevant in markets where rapid technological obsolescence, such as electronics and smartphones, drives frequent upgrades and returns, creating a robust supply of products suitable for refurbishment. Additionally, the environmental benefits associated with purchasing refurbished goods resonate strongly with an increasingly eco-conscious consumer base. By extending the lifecycle of products and reducing waste, refurbished offerings contribute to a more sustainable, circular economy.

For e-commerce businesses, the integration of refurbished products into their inventory presents both opportunities and challenges. On the one hand, it enables market expansion by attracting new customer segments and differentiating retailers in a crowded marketplace. Refurbished goods also provide a

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strategic avenue for managing returns and excess inventory, converting potential losses into revenue streams while optimizing supply chain efficiency. On the other hand, companies must navigate potential risks, such as cannibalization of new product sales and concerns over perceived quality, which can impact brand reputation and customer satisfaction if not managed carefully.

The impact of refurbished product offerings on post-purchase satisfaction is a critical area of research, as it sits at the intersection of value perception, trust, and customer experience. While lower prices and sustainability may initially attract buyers, their long-term satisfaction hinges on factors such as product performance, transparency about refurbishment processes, warranty support, and after-sales service. Understanding how these variables influence post-purchase satisfaction is essential for e-commerce platforms seeking to foster loyalty, encourage repeat business, and maintain a positive brand image in an increasingly competitive environment.

In summary, the proliferation of refurbished product offerings in e-commerce is reshaping both consumer behavior and business strategies. As the market for refurbished goods continues to expand—projected to reach $262 billion globally by 2026—it becomes imperative to examine how these offerings influence post-purchase satisfaction and what this means for the future of online retail. This research aims to explore these dynamics, providing insights that can inform both academic understanding and practical decision-making within the e-commerce sector.

## LITERATURE REVIEW

Joshi and Nikhade (2024) analyse India's refurbished electronics market using ISM and SF-AHP methods to identify key consumer adoption drivers. Their study reveals 14 factors, with upgradability and customer support as primary motivators, while perceived quality and social status are more dependent variables. The framework suggests trust-building through warranties, competitive pricing, and awareness campaigns can boost sustainable consumption, offering actionable strategies for circular economy advancement in emerging markets.

Daultani et al. (2022) analyse sustainable logistics networks for e-commerce, examining forward and reverse flows of new and refurbished goods. Their review identifies three research strands: forward supply chains, reverse logistics for returns, and integrated models. Studies employ optimization techniques (Serrano et al., 2013), genetic algorithms (Gen et al., 2018), and fuzzy modelling (Govindan et al., 2017) to balance costs, profits, and sustainability in complex supply chains, highlighting the need for unified network solutions.

Chen, Wang, and Jia (2020) review consumer behavior in remanufacturing, distinguishing it from refurbishment within the circular economy. They highlight factors like environmental benefits, quality, brand, and price sensitivity, citing key studies. Consumers prefer remanufactured functional products over hedonic ones, with eco-features increasing willingness to pay. The study offers policy insights to promote remanufacturing in emerging markets (Chen et al., 2020; Guide & Van Wassenhove, 2003; Atasu et al., 2008).

Ho et al. (2023) studied Dutch youth's views on refurbished electronic devices (REDs), revealing that while they understand e-waste's impact, many still hoard old electronics. Key adoption factors included price, seller trust, and warranties, with environmental concerns playing a lesser role. Participants favoured social media marketing and easy online access. The study stresses the need for transparent communication and broader research to boost RED acceptance and improve e-waste recycling effort.

Wang, Anitsal, and Anitsal (2016) emphasize that post-purchase factors—such as product availability, delivery, returns, and payment security—significantly impact perceived risk and customer loyalty in e-commerce. While loyal customers generally perceive lower risk, issues like delays or poor return processes can erode trust. These factors influence repurchase intentions and highlight a need for improved post-purchase experiences. The authors call for more empirical research, suggesting cultural and generational considerations, and stress that businesses must enhance post-purchase reliability to retain loyal customers.

Hamza (2014) studied how post-purchase experiences affect customer loyalty in Kerala's mid-range car market, highlighting customer satisfaction as a key mediator. Using structural equation modelling, the study found that experiences with the car, service station, and dealer all significantly influenced satisfaction, which in turn drove loyalty. With full mediation confirmed, the research emphasizes improving after-sales service and dealer transparency to boost retention, offering valuable insights for high-involvement purchase strategies.

Cao, Ajjan, and Hong (2018) examined how post-purchase logistics and customer service affect satisfaction and repurchase intentions in China and Taiwan. Their study found customer service had greater impact in China, while return policies mattered more in Taiwan. Satisfaction influenced future purchases more strongly in Taiwan. The research highlights regional differences in post-purchase expectations, suggesting online retailers tailor logistics and service strategies to enhance satisfaction and customer retention in different markets.

Kumar and Anjaly (2017) developed a six-dimensional scale to measure online post-purchase customer experience (OPPCE), highlighting its role in customer retention and repurchase intentions. Based on theoretical and empirical methods, the scale covers delivery, product condition, returns, support, benefits, and brand perception. Validated through factor analysis, it offers actionable insights for e-retailers. Though focused on Indian consumers, it provides a strong foundation for enhancing post-purchase strategies in digital retail.

Social commerce blends e-commerce with social networking, shaping online consumer behavior while introducing risks like product uncertainty, seller credibility, and transaction concerns. Zhou et al. (2022) use signalling theory to show that

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mechanisms such as platform credibility, user reviews, and seller transparency reduce these risks by enhancing trust. Their study highlights that trust mediates risk and purchase intention, with signal effectiveness varying by user experience, offering guidance for improving s-commerce trust and engagement.

Glover and Benbasat (2010-11) proposed a multidimensional model of perceived risk in e-commerce, addressing prior research gaps. Grounded in Cox's theory, they identified three key risks: information misuse, lack of product benefit, and functionality inefficiency. Using PLS-SEM on survey data (n=411), they found trust reduced risks and positively influenced purchase attitudes. The study offers actionable insights, showing how targeted interventions can enhance trust and consumer adoption in B2C e-commerce.

Kim, Ferrin, and Rao (2008) developed a trust-based model to examine how trust, perceived risk, and their antecedents influence online purchase behavior. Using data from 468 participants, they found trust reduces perceived risk and boosts purchase intentions. Key trust drivers included privacy, security, and reputation. Surprisingly, third-party seals lowered risk but didn't boost trust. The study unified fragmented research and offered practical insights for e-retailers, though limited by sample demographics.

Ghosh et al. (2023) use machine learning to analyze 1,986 customer reviews on refurbished laptops, identifying six key attributes—performance, brand, design, price, service, and utility—shaping purchase intentions. SHAP analysis reveals price, design, and brand have stronger positive effects than performance. Their RPPI model (57% accuracy) shows how these factors interact to influence consumer choices. The study supports circular economy goals by guiding refurbishers to optimize offerings and extend product lifecycles.

Feng (2024) examines the second-hand electronics e-commerce market through a circular economy lens, emphasizing the 3Rs—Reduce, Reuse, Recycle. Despite market growth, challenges like quality inconsistencies and information gaps hinder consumer trust. Feng recommends standardizing quality checks, improving return policies, and using AI for better transparency. These strategies aim to enhance sustainability by boosting product lifecycle extension, refining logistics, and integrating circular principles for more resilient and eco-friendly market development.

Zhou and Gupta (2018) explore pricing strategies for high-tech products with short life cycles, focusing on both new and remanufactured items. Using Apple iPhone data from eBay, they model how perceived value and technological obsolescence influence pricing. Their analysis reveals dynamic pricing gaps based on seller reputation, warranty, and product features. The study proposes coordinated strategies to address quality and innovation depreciation, offering practical insights for managing prices in fast-evolving tech markets.

Fernando, Sivakumaran, and Suganthi (2018) explore how online shoppers perceive the value of new versus second-hand goods, highlighting greater uncertainty and lower acquisition value for second-hand purchases due to information asymmetry and "contamination effects." Contrary to expectations, second-hand shoppers were less frugal than new product buyers. The study also finds product type influences channel preference, and acquisition value strongly predicts e-loyalty, offering key insights for online retail strategy and consumer behavior.

Mugge, Jockin, and Bocken (2017) assess consumer attitudes toward refurbished smartphones in the circular economy. Their survey of 250 participants identified six consumer segments and found that nearly half supported refurbished options. Purchase intent was boosted by environmental awareness and refurbishing transparency but hindered by performance concerns and desire for innovation. Product-focused incentives like battery upgrades and software guarantees were most effective, offering manufacturers guidance to improve acceptance and promote sustainable smartphone use.

Gaur et al. (2018) explored how cultural context influences consumer intentions to purchase reconstructed products, using interviews in India and the USA. They found U.S. consumers were more eco-centric, while Indian consumers prioritized practicality and brand. Expatriates adapted behaviors based on local norms and policies, highlighting cultural and environmental influences. The study supports cultural divergence and crossvergence theories, offering guidance for promoting sustainable consumption through tailored policies and marketing strategies across regions.

Singhal, Tripathy, and Jena (2019) examine factors affecting the acceptance of remanufactured products in India using the theory of planned behavior. Surveying 1,534 students, they find that attitude, personal benefits, product knowledge, social norms, and marketing strategies significantly drive purchase intention, while risk perception negatively influences it. Attitude is the strongest predictor. The study suggests promoting awareness and targeted marketing to improve perceptions and support sustainable consumption within a circular economy.

Nasiri and Shokouhyar (2021) analyzed online reviews of refurbished iPhones to understand consumer reactions within the circular economy context. Using NLP and sentiment analysis, they identified eight key satisfaction dimensions, including appearance, warranty, and battery health. While many reviews praised refurbished phones for looking new and being affordable, concerns about accessories and battery life affected perceived value. The study offers insights for improving refurbishment practices and enhancing post-purchase customer satisfaction.

Hazen, Mollenkopf, and Wang (2016) explore how consumer switching behavior impacts remanufactured product adoption, key to supporting a circular economy. Using the push-pull-mooring (PPM) framework, they find that high prices for new goods, government incentives, and environmental benefits encourage switching, but consumer attitudes heavily influence these effects. Positive perceptions significantly boost switching intentions, highlighting the need for awareness strategies to improve acceptance and grow remanufactured product markets.

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Zhang and Hou (2021) explore how perceived value influences Chinese consumers' intentions to buy remanufactured products, often wrongly seen as inferior or second-hand. They identify perceived profit (quality, green benefits) and loss (price, risk) as key value components. High price sensitivity and risk aversion reduce purchase intent. The study suggests improving perceptions through better warranties, quality assurance, and eco-marketing to boost acceptance and support remanufacturing in China's circular economy.

## RESEARCH GAP

Despite growing interest in sustainable consumption and circular economy practices, several significant research gaps exist in understanding the relationship between refurbished product offerings and post-purchase satisfaction in e-commerce contexts. While existing literature has extensively examined consumer attitudes toward refurbished products, there remains a notable gap in comprehensive models that specifically address post-purchase satisfaction rather than merely purchase intention. Most studies terminate at the point of purchase decision without following through to post-consumption experiences, limiting our understanding of the entire customer journey. Current research lacks granular analysis of how specific refurbished product attributes (warranty length, certification standards, price differentials from new products) independently and collectively influence satisfaction outcomes. This gap prevents the development of optimized refurbishment strategies tailored to maximize consumer satisfaction. Though trust is acknowledged as important in refurbished product contexts, there is insufficient research exploring its complex mediating role between various perception dimensions and satisfaction outcomes. The mechanisms through which transparency in refurbishment processes and brand credibility translate to satisfaction through trust remain inadequately conceptualized and empirically tested.

## OBJECTIVES

1. To Investigate Consumer Perceptions and Attitudes Towards Refurbished Products in E-commerce Platforms.
2. To evaluate the impact of refurbished product attributes on post-purchase satisfaction.
3. To examine the mediating role of trust in bridging refurbished product perceptions and post-purchase satisfaction outcomes.

## RESEARCH METHODOLOGY

### Research Design

The study employed a quantitative, cross-sectional research design to investigate the impact of refurbished product attributes on post-purchase satisfaction in e-commerce. A structured online questionnaire, divided into three thematic sections (consumer perceptions, product attributes, and trust), was administered to collect data at a single point in time. This design was chosen for its efficiency in capturing relationships between variables such as warranty, pricing, quality concerns, and after-sales support and their influence on satisfaction, while minimizing costs and logistical challenges. Closed-ended questions using a 5-point Likert scale facilitated the quantification of subjective constructs like trust and satisfaction, ensuring standardized responses.

### Sample Size

A simple random sampling technique was adopted to ensure unbiased representation. The target population included individuals aged 18+ with prior experience purchasing refurbished products or expressing interest in doing so. The sample size of 300 respondents was determined based on statistical power requirements for regression and mediation analyses, ensuring reliability in generalizing findings. Data was collected through Google forms to reach a diverse audience across socio-economic and geographic backgrounds. The survey was distributed online, leveraging convenience sampling to efficiently gather responses while maintaining randomness. Participation was voluntary, and the questionnaire design prioritized clarity and concise to minimize dropout rates.

### Data Analysis Tool Used

The study leveraged SPSS and Smart PLS 4 for advanced statistical analyses. Binary logistic regression in SPSS identified predictors of prior purchase experience (e.g., perceived reliability, cost-effectiveness), using stepwise variable selection to isolate significant factors. Multiple linear regression assessed the impact of refurbished product attributes (warranty, pricing, quality) on satisfaction, with adjusted $R^2$ values quantifying explained variance (71.4%). For mediation analysis, Smart PLS 4 evaluated trust's role as a mediator, employing bootstrapping (5,000 resamples) to validate indirect effects and ensure robustness.

### Hypotheses

**H1:** Prior Experience of Refurbished products have significant relationship with consumer perceptions.
**H2:** Refurbished product attributes have a significant impact on post-purchase satisfaction.
**H3:** Consumers perceptions of refurbished products directly influence their satisfaction after purchase.
**H4:** Trust mediates the relationship between Refurbished Product Perceptions and post-purchase satisfaction.

## ANALYSIS AND INTERPRETATION

1. **Binary Logistic Regression is performed against Prior purchase experience of Refurbished Products and Consumer Perceptions about Refurbished Products.**

The binary logistic regression results reveal significant relationships between consumer perceptions and prior experience with refurbished products. The analysis demonstrates how various factors influence consumer behavior in the e-commerce refurbished products market.

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**Classification**

| Observed | | Predicted | | |
|---|---|---|---|---|
| | | Prior Experience | | |
| | | 0 | 1 | Percentage Correct |
| Prior Experience | 0 | 81 | 50 | 61.8 |
| | 1 | 19 | 154 | 89.0 |
| Overall Percentage | | | | 77.3 |

**Variables in the Equation**

| | B | S.E. | Wald | df | Sig. | Exp(B) |
|---|---|---|---|---|---|---|
| S1Percieved reliability | .372 | .153 | 5.919 | 1 | .015 | 1.450 |
| S1Quality Concerns | -.491 | .156 | 9.877 | 1 | .002 | .612 |
| S1Costeffectviness | .347 | .130 | 7.149 | 1 | .007 | 1.414 |
| S1Purchase confidence | .218 | .130 | 2.807 | 1 | .094 | 1.243 |
| S1PerformanceExpectations | -1.081 | .175 | 38.007 | 1 | .000 | .339 |
| Constant | 1.948 | .880 | 4.903 | 1 | .027 | 7.012 |

**Hypotheses**

**H1: Prior Experience of Refurbished products have significant relationship with consumer perceptions.**

**Interpretation:** The logistic regression analysis reveals several significant predictors of prior experience with refurbished products. Perceived reliability (B=.372, p=.015) and cost-effectiveness (B=.347, p=.007) positively influence prior experience, with odds ratios of 1.450 and 1.414 respectively, indicating consumers valuing these aspects are more likely to have purchased refurbished items. Conversely, quality concerns (B=-.491, p=.002) and performance expectations (B=-1.081, p<.001) negatively impact prior experience, with odds ratios of .612 and .339, suggesting these concerns significantly deter purchases. Purchase confidence (B=.218) shows a positive relationship but is marginally significant (p=.094). The model correctly classifies 77.3% of cases, performing better at identifying those with prior experience (89.0%) than those without (61.8%). These findings highlight that addressing performance expectations and quality concerns while emphasizing reliability and cost benefits could effectively influence consumer behavior toward refurbished products.

**2. Multiple regression is used to analyze the relationship between a Post Purchase-Satisfaction and Refurbished Product attributes**

**Model Summary**

| Model | R | R Square | Adjusted R Square | Std. Error of the Estimate |
|---|---|---|---|---|
| 1 | 0.847 | .718 | .714 | .417 |

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| Model | Unstandardized Coefficients | | Standardized Coefficients | t | Sig. |
|---|---|---|---|---|---|
| | B | Std. Error | Beta | | |
| (Constant) | .096 | .143 | | .672 | .502 |
| S2-warranty Influence | .351 | .045 | .374 | 7.758 | .000 |
| S2-Quality concerns | .202 | .052 | .181 | 3.907 | .000 |
| S2-Pricing attractiveness | .242 | .047 | .246 | 5.175 | .000 |
| S2- Comparison with products | .194 | .040 | .193 | 4.814 | .000 |

a. Dependent Variable: S2-Post purchase satisfaction

**Hypothesis**

**H2: Refurbished product attributes have a significant impact on post-purchase satisfaction**.

**Interpretation:** The multiple regression analysis reveals a strong relationship between refurbished product attributes and post-purchase satisfaction. The model, with an adjusted R-squared of .714, indicates that 71.4% of the variance in post-purchase satisfaction is explained by the independent variables: warranty influence, quality concerns, pricing attractiveness, and after-sales service support. The coefficient table further specifies the individual impact of each attribute. Warranty influence has the strongest positive effect (Beta = .374, $p < .001$), followed by pricing attractiveness (Beta = .246, $p < .001$), after-sales service support (Beta = .193, $p < .001$), and quality concerns (Beta = .181, $p < .001$), all positively influencing post-purchase satisfaction. These findings suggest that consumers' satisfaction after purchasing refurbished products is significantly affected by the perceived warranty, quality, price, and after-sales support.

**3. Mediation analysis of Trust as a Mediator Between Refurbished Product Perceptions and Post-Purchase Satisfaction.**

**Reliability and Validity Metrics**

| | Cronbach's alpha | Composite reliability (rho_a) | Composite reliability (rho_c) | Average variance extracted (AVE) |
|---|---|---|---|---|
| Post-purchase satisfaction | 0.903 | 0.905 | 0.928 | 0.722 |
| Refurbished Product Perceptions | 0.612 | 0.634 | 0.746 | 0.647 |
| Trust | 0.879 | 0.884 | 0.911 | 0.672 |

**Model Fit Statistics**

| | R-square | R-square adjusted |
|---|---|---|
| Post-Purchase Satisfaction | 0.472 | 0.468 |
| Trust | 0.347 | 0.345 |
| Refurbished Product Perceptions | 0.227 | 0.218 |

The measurement model demonstrates strong psychometric properties. Post-purchase satisfaction (α=0.903, rho_a=0.905, rho_c=0.928, AVE=0.722) and Trust (α=0.879, rho_a=0.884, rho_c=0.911, AVE=0.672) exhibit excellent reliability and convergent validity. Refurbished Product Perceptions show acceptable reliability (α=0.612, rho_a=0.634, rho_c=0.746) with adequate AVE (0.647), though lower than others. All constructs surpass recommended thresholds, ensuring robust measurement quality, with refurbished perceptions maintaining sufficient validity despite marginally weaker reliability metrics.

The R-square values indicate moderate explanatory power. Post-Purchase Satisfaction ($R^2$=0.472, adjusted=0.468) shows ~47% variance explained by refurbished product perceptions' combined effects. Trust ($R^2$=0.347, adjusted=0.345) reflects ~35% variance explained. Refurbished Product Perceptions ($R^2$=0.227, adjusted=0.218) suggests ~23% variance, implying significant unmodeled factors influence perceptions. While the model moderately explains satisfaction and trust, refurbished product perceptions remain partially driven by external variables beyond the current framework.

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**Hypothesis Testing Results: Direct and Indirect Effects with Mediation Analysis**

| Hypothesis | Path | Original sample (O) | P values (P<0.05) | (Confidence Interval) 95% | | Variance Accounted For (VAF) | Conclusion |
|---|---|---|---|---|---|---|---|
| **H3(Direct Effect)** | **Refurbished Product Perceptions -> post-purchase satisfaction** | 0.29 | 0.001 | 0.187 | 0.39 | - | Significant |
| **H4(Indirect effect)** | **Refurbished Product Perceptions -> Trust -> post-purchase satisfaction** | 0.279 | 0.000 | 0.211 | 0.348 | 49.03% | Partial Mediation |
| **Total effect** | - | 0.569 | 0.000 | 0.472 | 0.658 | - | - |

**Hypothesis**

**H3: Consumers perceptions of refurbished products directly influence their satisfaction after purchase.**

**H4: Trust mediates the relationship between Refurbished Product Perceptions and post-purchase satisfaction.**

**Interpretation:** The results confirm Refurbished Product Perceptions directly affect post-purchase satisfaction (β=0.29, p=0.001, 95% CI [0.187, 0.39]), supporting H3. Trust partially mediates this relationship, with a significant indirect effect (β=0.279, p<0.001, 95% CI [0.211, 0.348]) and a Variance Accounted For (VAF) of 49.03%, validating H4.

The findings reveal that trust serves as a significant partial mediator in the relationship between consumers' perceptions of refurbished products and their post-purchase satisfaction. With a VAF of 49.03%, approximately half of the effect of Refurbished Product Perceptions on post-purchase satisfaction occurs through the trust pathway, while the remainder manifests directly. This partial mediation indicates that while consumers' perceptions of refurbished products directly influence their satisfaction levels, a substantial portion of this effect operates by first establishing trust. Positive perceptions of refurbished products enhance consumer trust, which subsequently leads to higher post-purchase satisfaction.

## RESULTS

The study investigates how refurbished product offerings influence post-purchase satisfaction in e-commerce. Binary logistic regression indicates that consumers with prior experience purchasing refurbished products are more likely to perceive them as reliable and cost-effective. However, concerns about quality and performance can deter such purchases. Multiple regression analysis reveals that warranty, pricing attractiveness, after-sales service, and quality perceptions significantly impact post-purchase satisfaction, explaining 71.4% of its variance. Notably, warranty influence has the strongest positive effect. Mediation analysis shows that trust partially mediates the relationship between product perceptions and satisfaction, accounting for approximately 49% of the effect. This suggests that while positive perceptions directly enhance satisfaction, building trust is crucial in amplifying this effect. The findings underscore the importance for e-commerce platforms to address quality concerns, offer competitive pricing, provide robust warranties, and ensure reliable after-sales support to foster trust and enhance customer satisfaction with refurbished products.

## DISCUSSION

E-commerce platforms should prioritize enhancing warranty programs as the strongest predictor of post-purchase satisfaction, offering comprehensive coverage to alleviate quality concerns. Transparent product condition disclosures, including standardized grading systems and detailed refurbishment processes, are critical to mitigating negative perceptions. Trust-building initiatives, such as verified customer reviews and third-party certifications, should be emphasized to leverage trust's mediating role, while value-centric pricing strategies must balance affordability with quality assurances to amplify cost-effectiveness benefits. Dedicated after-sales support channels for refurbished products could further bolster satisfaction, complemented by educational campaigns addressing performance expectations through comparative testing data and performance guarantees. Platforms should segment marketing approaches by prior experience levels, tailoring messaging to inexperienced consumers' specific barriers, while expanding risk-reduction tools like extended return windows to reinforce reliability perceptions. Finally, integrating trust metrics into customer journey analytics could optimize the partial mediation pathway, ensuring perceptions translate effectively into satisfaction. Collectively, these strategies require cross-functional coordination between product management, marketing, and customer service teams to align refurbished offerings with consumer priorities.

## CONCLUSION

The rise of refurbished products in e-commerce, fueled by sustainability trends and cost-conscious consumers, underscores the need to evaluate their impact on post-purchase satisfaction. This study reveals that warranty coverage, competitive pricing, after-sales support, and perceived quality are pivotal attributes, collectively explaining 71.4% of satisfaction variance. Prior purchasers associate refurbished products with reliability and affordability, yet non-buyers

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remain deterred by quality and performance concerns. Trust emerges as a critical mediator, bridging 49% of the relationship between consumer perceptions and satisfaction, highlighting its role in transforming positive evaluations into loyalty. E-commerce platforms must prioritize transparent refurbishment disclosures, comprehensive warranties, and value-centric pricing to alleviate skepticism. Strategic measures like dedicated after-sales channels, performance guarantees, and trust-building through certifications or verified reviews can enhance consumer confidence. Additionally, targeted educational campaigns addressing product durability and segmented marketing for inexperienced buyers are essential to broaden adoption. By integrating these insights, businesses can align refurbished offerings with evolving consumer expectations, fostering sustainable consumption while capitalizing on market growth. This research advances the understanding of post-purchase dynamics in the circular economy, offering actionable frameworks to optimize refurbished product strategies and strengthen competitive positioning in digital retail.

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