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Optimizing Fashion E-Commerce: The Impact of Quick Delivery, Sustainable Practices and Competitive Pricing on Customer Satisfaction and Delivery Efficiency

Optimizacija modnega e-trgovanja: vpliv hitre dostave, trajnostnih praks in konkurenčnih cen na zadovoljstvo strank in učinkovitost dostave

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Abstract

This study investigates the interplay between customer satisfaction, delivery efficiency, pricing strategies, ESG (environmental, social and governance) sustainability practices and quick third-party delivery systems within the fashion e-commerce sector. The findings reveal that quick third-party delivery services significantly enhance customer satisfaction ($\beta = 0.135, p < 0.001$) and improve delivery efficiency through strategic partnerships with providers such as Blinkit and Rapido ($\beta = 0.651, p < 0.001$). The adoption of ESG sustainability practices, such as e-bikes and e-rickshaws as a mode of transportation, has a significant impact on quality assurance for sustainable deliveries ($\beta = 0.684, p < 0.001$), which can be linked to customer satisfaction and brand recognition. This research emphasizes that customer satisfaction plays a mediating role in the linkage of delivery efficiency to pricing strategies ($\beta = 0.789, p < 0.001$), bridging operational performance to cost-effectiveness. Moreover, technology adoption moderates the relationship between eco-friendly delivery assurance and customer satisfaction ($\beta = 0.191, p < 0.001$), while with accessible and user-friendly digital platforms, sustainable practices have more impacts. These results underscore the need for expedient, sustainable and customer-centric delivery approaches that address evolving consumer needs. This research can provide insights to achieve long-term customer loyalty and sustainable growth with global sustainability objectives.

Keywords: fashion e-commerce, customer satisfaction, ESG sustainability, quick delivery services, pricing strategy, delivery efficiency, sustainable logistics, third-party delivery

Izveček

Študija raziskuje medsebojno povezanost med zadovoljstvom strank, učinkovitostjo dostave, strategijami določanja cen, trajnostnimi praksami ESG (angl. Environmental, Social and Governance; slo. okoljski, socialni in



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upravljavski vidiki) ter hitrimi dostavnimi sistemi preko tretjih oseb v sektorju modnega e-trgovanja. Rezultati kažejo, da hitre dostave preko tretjih oseb pomembno vplivajo na zadovoljstvo strank ($\beta = 0,135$, $p < 0,001$) in izboljšujejo učinkovitost dostave preko strateških partnerstev s ponudniki, kot so Blinkit in Rapido ($\beta = 0,651$, $p < 0,001$). Uvedba trajnostnih praks ESG, npr. uporaba električnih koles in električnih rikš kot prevoznega sredstva, ima pomemben vpliv na zagotavljanje kakovosti trajnostnih dostav ($\beta = 0,684$, $p < 0,001$), kar se lahko povezuje z zadovoljstvom strank in prepoznavnostjo blagovne znamke. Raziskava poudarja, da je zadovoljstvo strank vmesni člen med učinkovitostjo dostave in strategijami določanja cen ($\beta = 0,789$, $p < 0,001$), pri čemer je operativna učinkovitost povezana s stroškovno učinkovitostjo. Sprejemanje novih tehnologij ravno tako vpliva na odnos med zagotavljanjem okolju prijazne dostave in zadovoljstvom strank ($\beta = 0,191$, $p < 0,001$), pri tem pa imajo trajnostne prakse z dostopnimi in uporabniku prijaznimi digitalnimi platformami še močnejši vpliv. Izsledki raziskave poudarjajo potrebo po hitrih, trajnostnih in na stranke usmerjenih pristopih k dostavi, ki odgovarjajo na spreminjajoče se potrebe potrošnikov. Raziskava nudi predloge za doseganje dolgoročne zvestobe strank in trajnostne rasti v skladu z globalnimi trajnostnimi cilji.

Ključne besede: modno e-trgovanje, zadovoljstvo strank, trajnost ESG, hitre dostavne storitve, strategija določanja cen, učinkovitost dostave, trajnostna logistika, dostava preko tretjih oseb

1 Introduction

In the rapidly evolving fashion industry, innovative technologies are significantly transforming customer experiences. One such advancement, virtual reality (VR), is garnering increasing attention as a transformative tool, offering immersive platforms for presenting fashion exhibitions [1, 2]. Traditionally, fashion has been defined by its visual appeal and tactile engagement. Omnichannel marketing is an advanced online selling strategy that provides customers with a seamless experience across multiple channels, including physical storefronts and online platforms [3]. This multi-channel sales strategy unifies the buying experience across physical stores, smartphone apps and social platforms, providing customers with a consistent and integrated experience. Technological advancements have enabled retailers to engage in novel ways with customers, such as using social media networks like Instagram and Facebook to reach a wider audience and showcase products effectively [4]. This increases their likelihood of becoming brand ambassadors for you in addition to increasing the likelihood that they will visit your store again and make another purchase. This may include building a more valued

clientele, which would increase your company's total profitability [5]. Business models that increasingly use current technologies and evolving customer behaviour compel entrepreneurs to enhance their innovative capabilities to remain competitive [6–7]. This assessment reveals the adequacy of the provided service quality [8]. Ultimately, customer satisfaction is a function of service quality, which is evaluated based on the user's experience and perception of the service delivered [8]. However, satisfaction is not solely determined by service quality. Additional influencing factors include brand image, advertising effectiveness and consumer trust, especially in online environments where concerns over cybersecurity and fraud remain prevalent [9]. Enterprises in this domain often compete based on the level of customer satisfaction achieved through their products and services [10–11].

1.1 Background study

1.1.1 Strategies for improving customer satisfaction

Strategies for enhancing customer satisfaction vary depending on a company's products or services, available resources and the characteristics of its

customer base. The transparent communication of shipping policies, estimated delivery times and proactive updates via email or SMS (especially in cases of delays) builds trust and manages expectations. Finally, product and service quality encompass more than just the physical attributes of an item. It extends to production processes, packaging, marketing and after-sales service, all contributing to overall customer satisfaction [12]. Quality is closely tied to the efficiency of supply chain operations, playing a pivotal role across manufacturing, logistics and customer service functions [13].

1.1.2 Enhanced customer satisfaction

Effective and responsive online customer service plays a critical role in enhancing customer satisfaction. This proactive approach not only minimizes customer frustration but also demonstrates that the business values its customers. As a result, customers are more likely to develop positive perceptions of the brand and recommend it to others, contributing to a more satisfying and holistic user experience.

Increased sales and repeat business

Providing excellent customer service has a direct impact on purchasing behaviour and customer retention. Quality service fosters trust and reliability, making customers feel confident in their decisions. This trust can transform one-time buyers into loyal repeat customers, thereby boosting long-term sales and contributing to the development of a dedicated customer base.

Enhanced brand reputation

The quality of customer service significantly influences a brand's reputation. Positive experiences often lead to favourable online reviews and word-of-mouth referrals, which can attract new customers. In contrast, negative service encounters may harm a company's image and deter potential buyers. A strong reputation for delivering exceptional customer service differentiates a business from competitors and supports sustained growth in a competitive online marketplace.

Valuable customer insights

Customer service interactions provide valuable data regarding customer needs, preferences, and pain points. Analysing feedback from complaints, support tickets and suggestions helps identify recurring issues and areas for improvement. These insights can provide information for product development, refine marketing strategies and enhance overall service quality. Businesses that actively use customer feedback to tailor their offerings are more likely to exceed expectations, stay ahead of competitors and foster deeper customer engagement.

1.2 Research objectives

- a) To analyse the impact of quick delivery systems and third-party partnerships on customer satisfaction within the online fashion retail sector.
- b) To evaluate the role of logistics tie-ups, such as with Blinkit and Rapido, in enhancing delivery efficiency and ensuring secure site deliveries for fashion retailers.
- c) To examine the influence of environment, Social, and governance (ESG) sustainability practices, including the use of e-bikes and e-rickshaws, on quality assurance in eco-friendly delivery options.
- d) To investigate the mediating role of customer satisfaction in the relationship between pricing strategies (e.g., discounts and budget-friendly offers) and safe site delivery efficiency.

This shift in consumer behaviour and technology has led to a more efficient and innovative business model [14]. Additionally, this research aims to assist customers in calculating and identifying their clothing size during shopping, while examining the impact of fast fashion on traditional retail, considering five fashion entities, three of which are fast fashion and two retail industries [15]. This research also provides a comprehensive understanding of the fast fashion industry's implications on the retail industry [16].

1.3 Research Hypothesis

| | |
|-----|---|
| H1: | Quick third-party delivery systems significantly influence customer satisfaction |
| H2: | Logistics tie-ups significantly enhance safe site delivery efficiency for fashion retailers. |
| H3: | ESG sustainability practices significantly influence quality assurance for eco-friendly delivery. |
| H4: | Customer satisfaction mediates the relationship between pricing strategies (discounts and budget-friendly offers) and safe site delivery efficiency. |
| H5: | Technology adoption (ease of use and accessibility) moderates the relationship between customer satisfaction and quality assurance for eco-friendly delivery. |

Hypothesis 1: Quick third-party delivery systems significantly influence customer satisfaction, presented an index system for assessing customer satisfaction with third-party logistics service quality [17]. It uses original data to create a questionnaire based on the evaluation index. This study reveals that logistics service speed is the most significant factor affecting customer satisfaction, while risk perception is the least important. This paper aims to improve logistics service satisfaction for online shopping, while examining the impact of short delivery times on product returns in online retailing. It uses a large dataset from a global fashion retailer's US online selling platform. Results show that fast deliveries increase the likelihood of returns, especially among new customers. Using the Unified Theory of Acceptance and Use of Technology (UTAUT) model, it found a significant correlation between omnichannel shopping and satisfaction [18-19]. With 85 respondents, the data was analysed using SPSS tools and statistical tools such as frequency and regression analysis.

Hypothesis 2: Logistics tie-ups significantly enhance safe site delivery efficiency for fashion retailers explored the impact of delivery efficiency on online shoppers' relationships with e-retailers [20-21]. This review, based on 70 studies, highlights challenges such as order volume, inventory tracking and timely shipping. To overcome these, companies can invest in infrastructure, inventory management, transportation systems and emerging technologies such as drones and robots.

Hypothesis 3: ESG sustainability practices significantly influence quality assurance for eco-friendly delivery explored the role of innovation and online selling models in sustainable development, particularly in Dubai [22]. It discusses strategies such as green sourcing, efficient production, smart inventory management, sustainable warehousing, green transportation, eco-friendly packaging and reverse logistics [23]. This paper also reviews existing literature on intelligent logistics management, sustainability in attended home delivery and public views on online selling.

Hypothesis 4: Customer satisfaction mediates the relationship between pricing strategies (discounts and budget-friendly offers) and safe site delivery efficiency investigated online selling managers' pricing strategies to understand their motivations and challenges [24]. This study finds that personal perspectives and judgments are more complex and difficult to measure than economic factors. Online selling owners often struggle with determining a suitable pricing strategy due to intangible product value. By creating a high usability website for phone cases and related products, 42 individuals were tested with regard to their purchasing behaviour. Results showed no correlation between the effectiveness of selling strategies and perceived usability

Hypothesis 5: Technology adoption (ease of use and accessibility) moderates the relationship between customer satisfaction and quality assurance for eco-friendly delivery. Product development is crucial for business operations, especially in the fashion

industry. With advancements in technology and environmental awareness, sustainable product development processes (PDPs) are essential identified supply chain structures that identify essential steps in fashion PDPs, classify them into traditional, new and sustainable processes, and analyse key factors for sustainable fashion using the triple bottom line framework [26–27].

2 Material and Methods

2.1 Research design

The research design serves as the foundational framework for this scientific study. It outlines a strategic plan that guides the researcher in answering research questions and testing the proposed hypotheses. A comprehensive research design ensures all components of the study are logically and cohesively

integrated to effectively address the research problem. A well-structured design is vital for ensuring the accuracy, reliability and validity of the research, while each stage must be meticulously executed to achieve meaningful outcomes.

2.2 Conceptual framework

The conceptual framework in this study illustrates the interrelated elements that influence customer satisfaction and delivery efficiency in the fashion online selling sector. The integration of advanced technologies further enhances service quality by enabling real-time tracking, automation and data-driven decision-making. Together, these elements create a synergistic model aimed at meeting evolving customer expectations, boosting satisfaction and improving delivery performance in the competitive fashion e-commerce landscape.



Figure 1: Conceptual framework

2.3 Data collection tools and techniques

A questionnaire using Likert-scale questions was used to assess respondents' impressions of delivery dependability, environmental and social responsibility, price equity and technology adoption. It also collected demographic data, such as age, gender and purchasing frequency, to provide deeper insights into customer preferences and behavioural patterns. The study participants consisted of 390 respondents, all of whom were active online consumers with previous experience in acquiring fashion goods via online selling platforms. Individuals who had

not engaged in online fashion purchases over the preceding six months were omitted from the sample to ensure relevance.

2.4 Measures

Data was gathered with the help of a structured questionnaire. The questionnaire was prepared using a Likert-type scale where respondents were asked to share their opinions regarding various research questions under study. The questionnaire included a set of both open-ended and closed-ended questions. Questions were carefully crafted to gather meaningful

information with respect to identified research variables. There were five categories of respondents in the survey, while a separate questionnaire was designed for each category of respondents.

2.4.1 Quick third-party delivery systems

Quick third-party delivery systems are crucial for enhancing product delivery speed and efficiency in online selling. These systems use third-party logistics providers to ensure goods reach customers quickly, impacting customer satisfaction and sales performance. Implementing quick delivery systems in fashion online selling is essential for staying competitive in the fast-paced market. This study assessed the effectiveness and timeliness of these systems using a 5-point Likert scale, assessing reliability, efficiency, timeliness, customer satisfaction and overall performance in the online selling environment.

2.4.2 Logistics tie-ups

Logistics tie-ups are strategic collaborations between fashion online selling companies and third-party logistics providers to improve supply chain efficiency, delivery timelines and operational costs. This study focuses on the impact of logistics tie-ups on customer satisfaction and operational performance. A 5-point Likert scale was used to assess the effectiveness of these partnerships in streamlining delivery processes, ensuring timely shipments and contributing to customer satisfaction. The scale gauged stakeholders' perceptions of the efficiency and reliability of logistics tie-ups in the fashion online selling sector.

2.4.3 ESG sustainability practices

In this study, ESG sustainability practices include strategies, policies and actions to reduce environmental impact, promote social equity and ensure ethical governance. A scale was used to evaluate a company's commitment to these practices, measuring environmental impact, social responsibility and governance practices. The scale used a 5-point Likert scale, with responses corresponding to each of the three ESG pillars, ranging from strongly disagree to strongly agree.

2.4.4 Customer satisfaction

Customer satisfaction is the satisfaction customers feel when their expectations and needs are met by a company's products or services. Factors influencing customer satisfaction include product quality, delivery efficiency, pricing strategies and overall purchasing experience. A 5-point Likert scale was used to measure satisfaction levels, with respondents indicating their level of agreement or disagreement. The scale gauged satisfaction with aspects such as product quality, delivery timeliness, ease of purchase and value for money.

2.4.5 Safe site delivery efficiency

Safe site delivery efficiency is the efficient and safe delivery of goods or services to a designated site, ensuring timely completion and minimizing risks. This study used a 5-point Likert scale to assess this efficiency, focusing on delivery timeliness, safety adherence, resource management, risk mitigation and overall satisfaction with the delivery process. The goal is to ensure secure and efficient delivery without compromising safety.

2.4.6 Quality assurance

Quality assurance is a systematic process to ensure products, services or outcomes meet defined standards and objectives. It involves identifying, addressing and preventing defects or performance variations. Measures include monitoring, evaluating and improving processes. This study used a 5-point Likert scale to assess satisfaction, reliability and effectiveness, ensuring participants' perceptions are accurate. The scale ranges from strongly agree to strongly disagree.

2.4.7 Pricing strategies

Fashion online selling businesses use pricing strategies to determine product value and maximize sales and profitability, while considering customer preferences and market conditions. These strategies include dynamic pricing, discounting, bundling and value-based pricing. A pricing strategy scale assesses

perceived value, pricing fairness, price sensitivity and competitive pricing using a 5-point Likert scale with five questions. Participants indicate their level of agreement with pricing strategies.

2.4.8 Technology adoption

Technology adoption is the process of accepting and implementing new technological innovations, which is crucial for organizational growth and operational efficiency. This study used a technology adoption scale to assess these factors, focusing on perceived ease of use, usefulness, compatibility with existing systems and attitude towards technology. A 5-point Likert scale with five questions was used to analyse how technology adoption affects organizational performance and individual engagement with new technologies.

3 Results and discussion

This study investigates how pricing strategies, ESG sustainability practices and quick third-party delivery systems contribute to customer satisfaction and safe site delivery efficiency in the fashion online selling sector. This research also explores the impact of partnerships with logistics companies such as Blinkit and Rapido on delivery performance, alongside the role of eco-friendly delivery options, such as e-bikes and e-rickshaws, in improving quality assurance for sustainable delivery. Additionally, it examines how technology adoption moderates the relationship between eco-friendly delivery and customer satisfaction, and how customer satisfaction mediates the link between pricing strategies and safe site delivery efficiency. Data were collected via structured questionnaires from stakeholders in the online fashion selling sector, offering valuable insights into balancing cost, sustainability and customer satisfaction in delivery procedures.

The constructs demonstrate excellent reliability and validity, with Cronbach's alpha values ranging from 0.820 to 0.896, confirming strong internal consistency. Convergent validity is established, as all

Table 1: Internal consistency and convergent validity

| Variables | Cronbach's Alpha | CR | AVE |
|---|------------------|-------|-------|
| Quick third-party delivery systems | 0.892 | 0.865 | 0.785 |
| Customer satisfaction | 0.820 | 0.794 | 0.608 |
| Logistics tie-ups | 0.841 | 0.876 | 0.822 |
| Safe site delivery efficiency | 0.850 | 0.871 | 0.805 |
| ESG sustainability practices | 0.896 | 0.866 | 0.788 |
| Quality assurance for eco-friendly delivery | 0.840 | 0.827 | 0.676 |
| Pricing strategies | 0.846 | 0.870 | 0.802 |
| Technology adoption | 0.842 | 0.875 | 0.819 |

AVE values exceed 0.5. Composite reliability (CR) values are also above the 0.7 benchmark, thereby reinforcing the constructs' dependability. ESG sustainability practices and logistics tie-ups exhibit exceptionally high reliability and validity, laying a robust foundation for further analysis of inter-variable relationships.

Table 2: Descriptive statistics of variables

| Variables | Mean | Std. deviation |
|---|--------|----------------|
| Quick third-party delivery systems | 3.7446 | 0.76559 |
| Customer satisfaction | 3.7328 | 0.69600 |
| Logistics tie-ups | 3.6544 | 0.69202 |
| Safe site delivery efficiency | 3.6926 | 0.72707 |
| ESG sustainability practices | 3.7015 | 0.79222 |
| Quality assurance for eco-friendly delivery | 3.7072 | 0.77060 |
| Pricing strategies | 3.6215 | 0.72796 |
| Technology adoption | 3.6600 | 0.69014 |

Respondents displayed generally favourable perceptions of all variables, with means ranging from 3.6215 to 3.7446. Pricing strategies had the lowest mean, suggesting moderate satisfaction with discounts and competitive pricing. Quick third-party delivery systems received the highest mean, underscoring the need for efficient delivery in the fashion

online selling space. ESG sustainability practices showed the highest standard deviation (0.7922), indicating diverse opinions regarding the necessity for environmentally friendly logistics. Conversely,

technology adoption had the lowest standard deviation (0.6901), suggesting a consensus on the utility and accessibility of tech solutions.

Table 3: Discriminant validity

| Variables | Quick third-party delivery systems | Customer satisfaction | Logistics tie-ups | Safe site delivery efficiency | ESG sustainability practices | Quality assurance for eco-friendly delivery | Pricing strategies | Technology adoption |
|---|------------------------------------|-----------------------|-------------------|-------------------------------|------------------------------|---|--------------------|---------------------|
| Quick third-party delivery systems | 0.886002 | | | | | | | |
| Customer satisfaction | 0.23 | 0.779744 | | | | | | |
| Logistics tie-ups | 0.185 | 0.757 | 0.906642 | | | | | |
| Safe site delivery efficiency | 0.183 | 0.751 | 0.805 | 0.897218 | | | | |
| ESG sustainability practices | 0.142 | 0.649 | 0.545 | 0.601 | 0.887694 | | | |
| Quality assurance for eco-friendly delivery | 0.165 | 0.686 | 0.617 | 0.665 | 0.677 | 0.822192 | | |
| Pricing strategies | 0.178 | 0.789 | 0.685 | 0.709 | 0.68 | 0.67 | 0.895545 | |
| Technology adoption | 0.178 | 0.746 | 0.996 | 0.8 | 0.544 | 0.615 | 0.692 | 0.904986 |

Significant correlations ($p < 0.01$) indicate meaningful relationships among the constructs. Logistics tie-ups strongly correlate with technology adoption ($r = 0.996$) and safe site delivery efficiency ($r = 0.805$), suggesting these partnerships are essential for reliable deliveries. Pricing strategies strongly correlate with both customer satisfaction ($r = 0.789$) and delivery efficiency ($r = 0.709$), emphasizing the importance of strategic pricing. The square roots of AVE (diagonal values) confirm discriminant validity across constructs.

The results highlight key dynamics in fashion online selling. Quick third-party delivery systems significantly enhance customer satisfaction (H1), while logistics tie-ups critically improve delivery ef-

iciency (H2). ESG sustainability practices positively impact quality assurance in eco-friendly delivery (H3), validating their role in sustainable logistics. Furthermore, customer satisfaction acts as a strong mediator between pricing strategies and delivery efficiency, supported by high estimates.

Technology adoption moderates the link between eco-friendly delivery quality and customer satisfaction (H4), emphasizing how digital accessibility can amplify sustainable efforts. The consistent statistical significance ($p < 0.001$) strengthens the reliability of these findings.

The findings also reaffirm that service quality dimensions, such as reliability, responsiveness, empathy and tangibility, along with strong brand

Table 4: Hypothesis implementation

| Hypothesis | Relationship | Estimate | C.R. | Sig. p | Results |
|------------|--|----------|--------|--------|----------|
| H1 | Quick third-party delivery systems → Customer satisfaction | 0.135 | 2.459 | *** | Accepted |
| H2 | Logistics tie-ups → Safe site delivery efficiency | 0.651 | 12.326 | *** | Accepted |
| H3 | ESG sustainability practices → Quality assurance for eco-friendly delivery | 0.684 | 13.090 | *** | Accepted |
| H3 | Mediating | 0.789 | 25.302 | *** | Accepted |
| | Customer satisfaction → Pricing strategies | | | | |
| | Safe site delivery efficiency → Pricing strategies | 0.308 | 5.912 | *** | |
| | Safe site delivery efficiency → Customer satisfaction | 0.508 | 9.749 | *** | |
| H4 | Moderating | | | | Accepted |
| | ZQuality assurance for eco-friendly delivery → ZCustomer satisfaction | 0.191 | 5.028 | *** | |
| | ZQuality assurance for eco-friendly delivery → ZTechnology adoption | 0.597 | 15.308 | *** | |
| | ZQuality assurance for eco-friendly delivery → INTERACTION | 0.120 | 3.080 | 0.002 | |
| | Correlation is significant at the 0.01 level (2-tailed). | | | | |

trust, are critical to sustained customer satisfaction. Quick and eco-friendly deliveries, aligned pricing strategies and responsible governance frameworks are no longer optional; they are essential for long-term growth and loyalty in the online selling space.

4 Conclusion

This study investigates the key factors influencing customer satisfaction and safe site delivery efficiency within the fashion online selling industry, focusing on pricing strategies, logistical partnerships, ESG sustainability practices and rapid delivery methods. The findings offer valuable insights into how these elements interact and affect operational performance and customer satisfaction.

A key outcome reveals that swift third-party delivery systems significantly enhance customer satisfaction ($\beta = 0.135$, $p < 0.001$). The study emphasizes the importance of integrating quick delivery mechanisms to meet consumer expectations and ensure a positive online shopping experience. Stra-

tegic collaborations with platforms such as Blinkit and Rapido were also found to significantly improve delivery efficiency at safe sites ($\beta = 0.651$, $p < 0.001$), minimizing logistical challenges for fashion retailers.

ESG sustainability practices emerged as a crucial factor in ensuring quality and environmentally responsible deliveries ($\beta = 0.684$, $p < 0.001$). Utilizing eco-friendly transportation methods such as e-bikes and e-rickshaws not only aligns with customer preferences but also bolsters brand image, highlighting the growing relevance of sustainability in e-commerce operations.

This research highlights the mediating role of customer satisfaction in the relationship between safe site delivery efficiency and pricing strategies. The strong mediation effect ($\beta = 0.789$, $p < 0.001$) indicates that customer satisfaction bridges the gap between operational effectiveness and cost-efficient pricing, influencing both purchase decisions and delivery performance.

The moderating impact of technology adoption on the relationship between eco-friendly delivery

assurance and consumer satisfaction is also significant. Accessibility and ease of use in digital platforms enhance the effectiveness of sustainable delivery methods, with notable moderating ($\beta = 0.191$, $p < 0.001$) and interaction effects ($\beta = 0.120$, $p = 0.002$). This underscores the importance of incorporating advanced technological solutions to foster loyalty and enrich customer experience.

The study demonstrates that quick third-party delivery systems, strategic logistics partnerships and ESG-aligned practices are critical drivers of customer satisfaction and delivery efficiency in the fashion e-commerce sector.

Future scope and limitations

Future research in the fashion online selling sector should delve into the role of emerging technologies, such as AI-driven logistics optimization, drone-based deliveries and blockchain, to enhance supply chain transparency. Additionally, there is significant scope for examining specific sustainability initiatives, including carbon-neutral shipping, eco-friendly packaging and the circular fashion economy, to better understand their impact on consumer perception and environmental outcomes. The participant demographics in this study may limit the generalizability of the findings across broader or diverse consumer segments, particularly in different geographical or socio-economic contexts. Furthermore, the study's focus on specific third-party logistics partnerships, such as recent collaborations between Reliance and platforms like Blinkit and Rapido, may not be universally applicable, especially in regions where such services are either unavailable or underdeveloped. These constraints suggest the need for future studies to incorporate a wider range of demographics and logistic models to ensure broader applicability and relevance.

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