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Exploring User Experience Perceptions of Logistics E-Commerce Platforms from the Perspective of E-Commerce Politeness

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Abstract

With the widespread adoption of online shopping, consumers are no longer satisfied with basic product delivery functions; instead, they are seeking more personalized service experiences. Consequently, e-commerce politeness has gradually become increasingly important in the operation of logistics e-commerce platforms. As a crucial support for customers purchasing goods, logistics e-commerce platforms need to interact frequently with customers while ensuring the safe and timely delivery of goods. A platform's strong e-commerce politeness can effectively enhance customer trust and satisfaction. Additionally, e-commerce politeness on logistics e-commerce platforms is also a key factor in shaping brand image, attracting, and retaining customers. By treating customers with respect and a friendly attitude, platforms can stand out in fierce competition. However, existing research rarely provides a systematic evaluation of e-commerce politeness on logistics e-commerce platforms based on user experience perceptions. Therefore, this study takes e-commerce politeness as the entry point and employs the Critical Incident Technique (CIT) to analyze key events related to user satisfaction and dissatisfaction. The goal is to investigate the performance of logistics e-commerce platforms in the dimension of e-commerce politeness and, based on the research findings, propose recommendations to improve service quality. Ultimately, this aims to enhance user experience on logistics e-commerce platforms and promote the sustainable development of the logistics e-commerce industry.

Keywords: logistics e-commerce platforms; e-commerce politeness; service quality; user experience perception; logistics; online shopping.

1. Introduction

With continuous advancements in internet technology and the growing maturity of mobile payment systems, online shopping has become increasingly widespread, driving rapid growth in consumer demand. Logistics e-commerce platforms, serving as the core support component, play a crucial role in this ecosystem. Online shopping has greatly facilitated people's lives, embedding logistics e-commerce platforms deeply into daily routines and making them indispensable. As competition among e-commerce platforms intensifies, e-commerce politeness has become a key factor in building a platform's core competitiveness. In this context, the importance of e-commerce politeness in the operations of logistics e-commerce platforms has become increasingly apparent. However, certain issues remain, such as delays in logistics information, complicated payment processes, and excessive advertisements on web pages. These unfriendly design flaws not only risk customer attrition but may also negatively impact the platform's long-term growth.

In summary, studying e-commerce politeness within logistics e-commerce platforms holds significant practical relevance against the backdrop of the widespread adoption of online shopping. This study focuses on logistics e-commerce platforms to reveal the relationship between e-commerce politeness and user experience. It explores its role in enhancing service quality, boosting customer satisfaction, and fostering sustainable platform development. Furthermore, the findings aim to provide reference points for platform operators, merchants, and logistics service providers to make informed decisions and to support the advancement of logistics e-commerce platforms.

2. Literature Review

2.1. Development and Application of Logistics E-commerce Platforms

The development and application of logistics e-commerce platforms are closely tied to the rise of the digital economy and the upgrade of consumer demand, reflecting that the growth of logistics e-commerce platforms relies not only on the continuous advancement of technology but also on meeting customers' actual needs. This necessitates that logistics e-commerce platforms achieve technological innovation while always considering customers' practical requirements. As e-commerce has evolved, it has built comprehensive logistics networks and extended logistics services to rural areas, forming high-coverage distribution networks. With the rapid development of e-commerce, many scholars have focused on studying how logistics e-commerce platforms can achieve industry transformation and upgrading through technological integration. For example: Kahn et al. (1996) proposed cross-departmental integration in logistics, emphasizing

the use of technology to integrate resources across various departments to enhance logistics efficiency. Winkelhaus and Grosse (2020) suggested utilizing technology such as the Internet of Things and big data to construct new logistics systems supporting the industry. Gunasekaran et al. (2007), through e-commerce logistics case studies, pointed out the impact of e-commerce on logistics, particularly the role of information technology in enhancing third-party logistics services. Speranza (2018) discussed trends in transportation and logistics, highlighting the role of operations research in optimizing transportation systems. Fan et al. (2017) revealed the significant environmental pressure caused by express packaging materials and called for the optimization of packaging and the adoption of eco-friendly materials in the logistics industry to ensure the sustainable development of logistics e-commerce platforms.

In the field of logistics e-commerce platform research, much of the existing literature has concentrated on the role of technological integration in driving industry transformation and upgrading. However, there has been limited systematic research on the politeness dimension of e-commerce in user experience. As users increasingly demand better service experiences, e-commerce politeness plays an increasingly significant role in logistics e-commerce platforms. Its core lies in the impact of platform interaction design on users' experiential perceptions. Key dimensions of e-commerce politeness experiences include platform interface friendliness, operational smoothness, information transparency, and response efficiency. Current research still lacks systematic investigation into the politeness dimension of user experience in e-commerce. Therefore, exploring user experiential perceptions based on e-commerce politeness could provide practical insights into enhancing the e-commerce politeness of logistics e-commerce platforms.

2.2. The Current State and Application of E-commerce Politeness

E-commerce politeness is one of the core dimensions for evaluating the quality of human-computer interaction. Among the many studies exploring user experience perceptions on logistics e-commerce platforms, Chen and Hu (2017) revealed the concept and practice of e-commerce politeness in human-computer interaction from multiple dimensions. They developed a multidimensional measurement tool for e-commerce politeness perception in virtual business scenarios, emphasizing that user perceptions of interface friendliness, responsiveness, and information transparency are key indicators for evaluating a platform's e-commerce politeness. This provided a methodological foundation for subsequent research. Building on this, Chen and Huang (2025) delved into the e-commerce politeness framework, arguing that the service quality of e-commerce platforms should be enhanced through optimized interaction design and reduced operational friction, thereby improving the user's "sense of respect." Whitworth (2005) proposed the concept of "e-commerce politeness computing" from the perspective of technical system design, emphasizing that systems should enhance user experience by reducing cognitive load and avoiding mandatory interactions, such as by simplifying operational processes or providing clear feedback mechanisms. Such designs effectively prevent user frustration caused by unfriendly system designs, such as redundant steps or invalid prompts. This research suggests that reducing cognitive load and operational resistance can significantly improve users' experiential perceptions.

In e-commerce transactions, logistics services, as a critical component of the user experience, directly impact a platform's performance in e-commerce politeness. Pan et al. (2017) highlighted the contribution of efficient logistics to sustainability, noting that efficient logistics systems can reduce user waiting times, thereby enhancing customer experiential perceptions. Daskin (1985) also emphasized that the responsiveness and reliability of logistics systems are critical factors in improving user experience. From the perspective of logistics management, Gattorna et al. (1991) further stressed that optimizing facility locations, precise inventory control, and simplifying order processing workflows can enhance service consistency and predictability, reducing user uncertainty and thereby improving perceptions of e-commerce politeness.

Rules of human-computer interaction also constitute an important dimension of user e-commerce politeness experiences. Huang and Liu (2025) revealed that customer perceptions of platform impoliteness often stem from ethical violations by the platform, such as infringing on users' right to know or failing to uphold honest responsibilities (e.g., false promises about delivery times). This suggests that a platform's e-commerce politeness should be built on respecting user rights and ensuring interaction fairness. In cross-border cooperation studies, Chen et al. (2022) found that e-commerce platforms must strike a balance between logistics transparency and user privacy protection during customer interactions to avoid experience deterioration caused by excessive exposure of user data. Furthermore, Whitworth and Liu (2008) extended e-commerce politeness theory to the field of social computing, emphasizing that the politeness of systems in online service scenarios is reflected in their ability to dynamically adapt to user needs during interactions. For instance, logistics platforms can enhance trust in service transparency through real-time tracking and personalized notification features. Additionally, from a macro perspective of socio-technical system design, Whitworth and Ahmad (2013) proposed that technology should integrate with community culture. For example, logistics e-commerce platforms can build more inclusive and responsive interaction environments by incorporating localized services or community feedback mechanisms, thereby systematically enhancing users' perceptions of e-commerce politeness.

In summary, existing research has explored the practical pathways of e-commerce politeness from perspectives such as logistics services and interaction design but has not provided a comprehensive evaluation or set of requirements for e-commerce politeness in logistics e-commerce platforms. There is a lack of systematic integration of the multidimensional elements of e-commerce politeness in these platforms. Therefore, this study aims to explore user experiences on logistics e-commerce platforms through the lens of e-commerce politeness, conducting a comprehensive analysis of issues in this area to improve user experiential perceptions on these platforms.

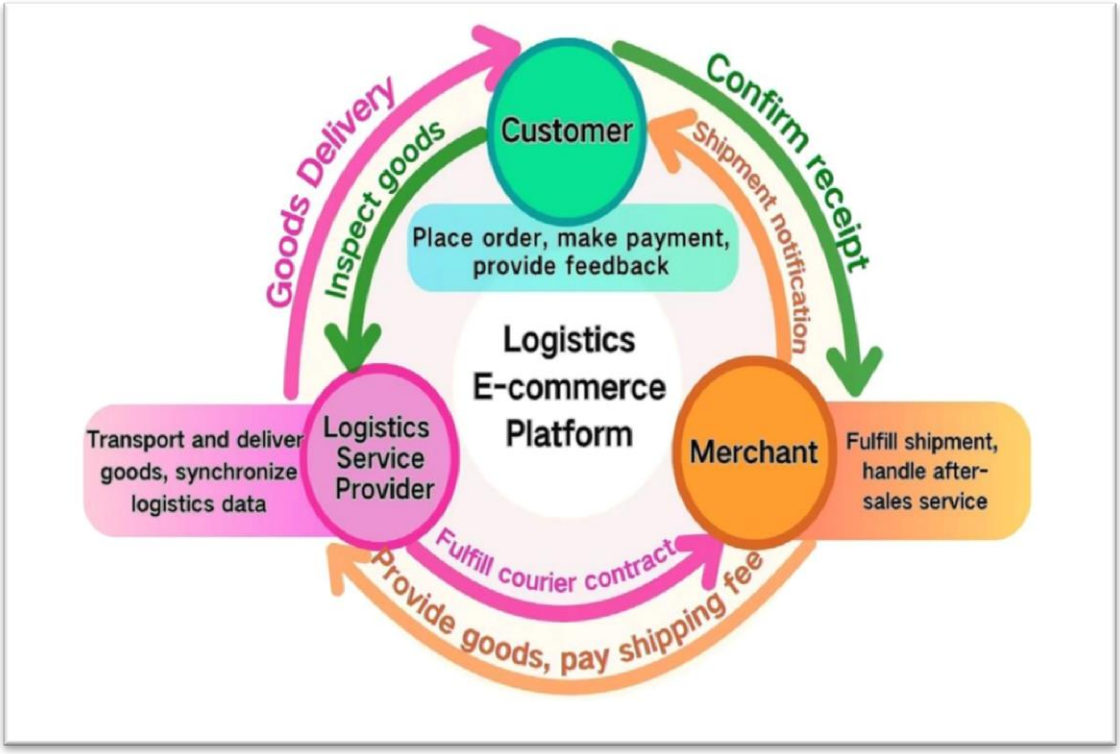

Fig.1. Relationship Ecosystem Diagram of Logistics E-commerce Platform.

3. Research Methodology

3.1. Critical Incident Technique (CIT)

The Critical Incident Technique (CIT), introduced by Flanagan in 1954, is a qualitative research method designed to reveal the core behaviors or factors influencing outcomes by collecting and analyzing significant success or failure events within specific contexts. CIT has been widely applied across various fields. For instance: Bitner et al. (1990) applied CIT in the domains of consumer behavior and marketing to analyze service encounters described as "particularly satisfying or dissatisfying," uncovering key behaviors influencing customer loyalty in the hospitality industry. Butterfield et al. (2005) utilized CIT in organizational and human resource management to analyze crisis decision-making behaviors among middle managers and extract core competencies of effective leaders. Gremler (2004) systematically analyzed customer experiences in service encounters through CIT, showing how descriptions of service failures or successes can effectively identify core dimensions of perceived service quality. The enduring application and widespread use of CIT across decades demonstrate its maturity and suitability for event-based research. Therefore, this study adopts CIT to explore how e-commerce politeness impacts user perceptions on logistics e-commerce platforms.

3.2. Research Design

This study investigates user experiences when interacting with logistics e-commerce platforms, focusing on identifying the most satisfying and dissatisfying key incidents users encounter. By designing open-ended questions to probe both positive and negative experiences, the research systematically evaluates users' overall perceptions and attitudes toward e-commerce politeness on these platforms. Random sampling was employed to collect questionnaires both online and offline, covering users from different age groups and regions between December 29, 2024, and March 11, 2025.

This study aims to uncover strengths and weaknesses in e-commerce politeness as experienced by users, ultimately providing insights for optimizing logistics e-commerce platforms and enhancing user satisfaction.

4. Data Analysis

4.1. Respondent Profile

This study collected feedback from 158 users, including 74 males (approximately 47%) and 84 females (approximately 53%). The age structure is predominantly composed of youth, with users aged 19–25 accounting for 80.38% (127 participants), followed by those aged 26–35 (12.66%, 20 participants). Respondents under 18 and over 36 years old together account for less than 5%. Regarding education levels, users with a bachelor's degree represent the largest proportion at 75.95% (120 participants), followed by postgraduate degree holders (12.66%, 20 participants). Respondents with associate degrees or high school education or below account for less than 5%. Professionally, full-time students make up the majority of the respondents at 79.75% (126 participants), followed by employed workers (18.99%, 30 participants). Other occupations (e.g., unemployed individuals, retirees) collectively account for less than 2%. In terms of monthly consumption expenditure, "1,501–3,000 RMB" is the most common category (46.2%, 73 participants), followed by "1,500 RMB or below" (36.08%, 57 participants). Users who spend more than 3,000 RMB per month collectively account for less than 18%.

The study received 316 pieces of data, of which 74 invalid responses unrelated to the research topic were excluded. A total of 242 valid responses were retained, comprising 124 positive incidents (approximately 51%) and 118 negative incidents (approximately 49%). These data provide a solid foundation for the subsequent analysis of user experience on logistics e-commerce platforms from the perspective of e-commerce politeness.

4.2. Categorization Principles

Upon further analysis and sorting, the researchers classified the valid data reflecting positive incidents (124 entries) and negative incidents (118 entries) into seven categories. The category names and descriptions are detailed in Tables 1 and 2.

Table 1: Categorization of Positive Incidents

Category Name	Description
User Interface	The operational environment for user-platform interactions
Platform Functions	Features provided by the platform, such as querying logistics information
Customer Service	Services like inquiries, problem-solving, and handling complaints
Compensation Mechanism	Rules and processes for compensating issues like damaged, lost, or delayed goods
Packaging Protection	Design and measures for protecting goods during transit
Flexible Services	Personalized and flexible services based on user needs
Transportation Management	Quality of transportation services provided by the platform

Table 2: Categorization of Negative Incidents

Category Name	Description
User Interface	The operational environment for user-platform interactions
Platform Functions	Features provided by the platform, such as querying logistics information
Customer Service	Services like inquiries, problem-solving, and handling complaints
Compensation Mechanism	Rules and processes for compensating issues like damaged, lost, or delayed goods
Packaging Protection	Design and measures for protecting goods during transit
Pricing Rules	Standards and calculation methods for product pricing, shipping fees, and service charges
Transportation Management	Quality of transportation services provided by the platform

4.3. Reliability and Validity Testing

The reliability analysis of incident categorization typically includes two major aspects: individual categorization consistency and inter-categorizer consistency (Flanagan, 1954). Reliability is a crucial indicator for assessing whether tools or methods yield consistent, stable, and reliable results across different contexts or timeframes, ensuring the accuracy and reliability of research findings.

4.3.1. Individual Categorization Consistency

Individual categorization consistency measures the stability and uniformity exhibited by an individual during categorization tasks. It is commonly accepted that when the personal categorization consistency of two or more categorizers exceeds 0.8, the results demonstrate good stability and consistency. Three categorizers participated in this study: The first categorizer is a university professor specializing in e-commerce. The second categorizer is a logistics service practitioner. The third categorizer is an e-commerce seller. Personal categorization consistency was evaluated based on their results, as shown in Tables 3 and 4. It is evident that the consistency values of all three categorizers exceeded 0.8, indicating stable and consistent categorization results.

Categorizer Name	Number of Consistent Entries	Consistency Value
Categorizer 1	103	0.8306
Categorizer 2	108	0.8710
Categorizer 3	102	0.8226

Table 4: Personal Categorization Consistency - Negative Incidents

Categorizer Name	Number of Consistent Entries	Consistency Value
Categorizer 1	100	0.8403
Categorizer 2	117	0.9832
Categorizer 3	107	0.8992

4.3.2. Inter-Categorizer Consistency

Inter-categorizer consistency measures the degree of agreement among different categorizers when assessing the same dataset, serving as an important indicator for evaluating categorization reliability. To ensure rigor and correctness, two rounds of categorization were conducted, with a 14-day interval between rounds. The inter-categorizer consistency results for both rounds are shown in Tables 5 and 6.

Table 5: Inter-Categorizer Consistency - Positive Incidents

Number of Consistent Entries	Classifier 1	Classifier 2	Classifier 3
Classifier 1 1	103	____	____
Classifier 2	83	108	____
Classifier 3	86	82	102

Table 6: Inter-Categorizer Consistency - Negative Incidents

Number of Consistent Entries	Classifier 1	Classifier 2	Classifier 3
Classifier 1	100	____	____
Classifier 2	87	117	____
Classifier 3	84	93	107

The reliability was calculated using Formula 1 and Formula 2:

$$R=\frac{(N\times A)}{1+[(N-1)\times A]}$$ Formula 1

$$\mathbf{A}=\frac{\frac{2M_{12}}{n_1+n_2}+\frac{2M_{23}}{n_2+n_3}+\frac{2M_{13}}{n_1+n_3}}{N}$$ Formula 2

Where: R: Reliability

N: Number of categorizers

A: Average inter-consistency degree
M: Number of consistent classifications among categorizers
n: Number of samples assessed by categorizers
Based on the calculations, the following results were derived:

Table 7: Reliability Table

Category	Average Consistency Degree (A)	Reliability (R)
Positive	0.803	0.906
Negative	0.815	0.930

It can be observed that the average inter-consistency degree and reliability values for both positive and negative incidents exceed 0.8, demonstrating good stability and reliability (Flanagan, 1954). This provides a solid foundation for analyzing user experience perceptions on logistics e-commerce platforms from the perspective of e-commerce politeness.

4.3.3 Validity Analysis

Validity analysis is a core process for assessing whether research tools or methods accurately measure the target concept. This study conducts validity testing from three dimensions: expert validity, content validity, and face validity, ensuring the scientific rigor and reliability of the research results.

4.3.3.1 Expert Validity

Expert validity refers to whether the content, structure, design, and classification logic of research tools are endorsed by experts in the field (Flanagan, 1954). This study invited three experts from different backgrounds—a professor specializing in e-commerce, a logistics practitioner, and an e-commerce seller—to jointly classify critical incidents. Two rounds of classification were conducted with a 14-day interval, as shown in Tables 3 through 6. The personal classification consistency of all three experts exceeded 0.8, and the reliability values for positive and negative incidents were 0.906 and 0.930, respectively, indicating high levels of reliability. These findings demonstrate that the classification logic of critical incidents in this study is endorsed by experts from diverse domains, supporting strong expert validity.

4.3.3.2 Content Validity

Content validity evaluates whether the research comprehensively covers all key dimensions of the target concept and whether the cited examples are representative. This study applied the Critical Incident Technique (CIT) to categorize positive and negative user incidents into

seven categories, which include critical aspects like interaction design and logistics management on logistics e-commerce platforms (as shown in Tables 8 through 11). The classification results comprehensively illustrate e-commerce politeness, such as user interface friendliness, logistics information update efficiency, and transportation management—all aligned with existing measurement dimensions in the literature (Chen & Huang, 2025; Whitworth, 2005). Additionally, as indicated in Tables 10 and 11, incidents related to transportation management, customer service, and flexible services are prominently represented. These findings affirm the representativeness of the categorized events and indicate that the research content demonstrates strong content validity.

4.3.3.3 Face Validity

Face validity assesses whether research tools visually and intuitively measure the core concept, ensuring their relevance to the research theme (Bitner et al., 1990). This study collected real user experience data through open-ended questionnaires and adopted straightforward classification naming and examples for clarity (as illustrated in Tables 8 and 9). The data encompass all common usage scenarios of logistics e-commerce platforms, such as placing orders on interactive interfaces, logistics information updates, parcel packaging integrity, transportation management, and return/exchange processes. The findings—highlighting user emphasis on transportation management and customer service (Tables 10 and 11)—indicate that the classification logic aligns closely with users' actual experiences, confirming that the research exhibits high face validity.

4.4. Classification Results

After categorizing valid data reflecting positive and negative incidents into seven categories, key events for each category were exemplified (as shown in Tables 8 and 9). Preliminary statistical analysis was conducted to understand user feedback for different classification categories (Tables 10 and 11):

Table 8: Examples of Positive Key Events

Category Name	Key Event
User Interface	Clear and intuitive interface, easy to operate.
Platform Functions	Real-time tracking of package status, with accurate updates.
Customer Service	Efficient resolution of purchasing and logistics issues by customer support.
Compensation Mechanism	Timely and polite compensation for damaged items.
Packaging Protection	High integrity of packaging for important items; secure and reliable.
Flexible Services	Very considerate; prioritized shipment upon explaining it’ s urgent to the platform.
Transportation Management	Door-to-door delivery with prior confirmation of recipient’s presence.

Table 9: Examples of Unsatisfactory Key Events

Category Name	Key Event
User Interface	Operations are too complicated, making usage extremely inconvenient.
Platform Functions	The logistics information is not being updated in a timely manner
Customer Service	Customer service adopts a dismissive attitude, is unresponsive, and evades responsibility when items are damaged.
Compensation Mechanism	The claims process for damaged goods is cumbersome, delayed, and offers low compensation—or even none at all—resulting in poor experiences.
Packaging Protection	Negligent packaging for fragile items without professional wrapping, leading to damaged

	deliveries.
Flexible Services	Shipping fees often exceed expectations, offering low cost-effectiveness.
Transportation Management	Violent handling during transportation leads to damaged goods.

Table 10: Summary of Satisfactory Event Categories

Category	Classifier 1	Classifier 2	Classifier 3	Average Value	Rank
User Interface	8	8	8	8	6
Platform Features	11	7	13	10.33	4
Customer Service	33	31	32	32	3
Claim Mechanism	8	12	12	10.33	4
Packaging Protection	10	7	7	8	6
Flexible Services	20	28	17	21.67	2
Transport Management	34	31	36	33.67	1

Table 11: Summary of Unsatisfactory Event Categories

Category	Classifier 1	Classifier 2	Classifier 3	Average Value	Rank
User Interface	4	4	4	4	7
Platform Features	10	5	9	8	3
Customer Service	37	35	36	36	2
Claim Mechanism	5	5	7	5.67	6
Packaging Protection	3	8	11	7.34	4
Flexible Services	6	7	9	7.34	4
Transport Management	54	55	43	50.67	1

Note: Arithmetic means of results from three classifiers are taken to balance individual differences.

From Table 10, it is evident that customers are relatively satisfied with the transportation management and customer service of e-commerce logistics platforms. Among 124 satisfactory events, these aspects account for an average of 33.67 and 32 cases respectively. This indicates that the logistical speed, door-to-door delivery, and efficiency in problem handling contribute to a positive impression of platform politeness. It is worth noting that the average proportion of flexible services in satisfactory events is 21.67, reflecting customers' need for flexible and personalized services, which enhances satisfaction with platform politeness in this regard. However, as shown in Table 11, among 119 unsatisfactory events, transportation management and customer service account for an average of 50.67 and 36 cases respectively. This demonstrates that slow logistics and inefficiency in problem handling severely impact user experience. Consequently, the quality of politeness offered by e-commerce logistics platforms varies greatly. Some platforms excel in transportation management and customer service, while others fail to meet customer expectations. To sum up, while e-commerce logistics platforms meet customer needs to some extent, there is still substantial room for improvement.

5. Conclusion

The widespread adoption and convenience of online shopping have made e-commerce logistics platforms an integral part of people's lives. Platform politeness directly influences customers' experience and impression. However, these platforms still face issues such as slow logistics, inefficient problem handling, delayed logistics updates, violent transportation practices, and non-transparent pricing rules. This study proposes suggestions from five aspects: government regulation, platform optimization, logistics control, merchant response, and customer participation. The aim is to systematically enhance the customer experience in the logistics aspect and serve as a reference for various participants in the e-commerce logistics system. The five aspects are detailed as follows:

5.1. Government Regulation: Establish Detailed Standards and Monitoring Mechanisms

Regulatory agencies can establish detailed standards and penalties, specifying the frequency of daily logistics information updates, maximum height for throwing parcels, and definitions/compensation standards for violent transportation. A logistics service hotline should be set up for customer feedback. Agencies can randomly inspect platforms for high-frequency issues such as violent sorting and delayed information updates. Platforms should respond efficiently within specified time limits. Additionally, public rankings of platform complaints and resolution rates can serve as a form of national supervision over e-commerce logistics platforms.

5.2. Logistics Platforms: Optimize Functional Interfaces and Make Pricing Transparent

Platforms can further optimize system functionality and user-friendly interfaces to assist customers in tracking the speed of logistics updates. They could add a shipping fee estimation tool, allowing customers to input delivery addresses and product weights to simulate base shipping fees, discount amounts, and platform comparison lists. Platforms should clearly label additional return fees and provide a detailed confirmation pop-up before order placement, avoiding negative impressions due to hidden fees.

5.3. Logistics Providers: Monitor Transport Processes and Progress

High-resolution cameras can automatically identify and monitor violations like throwing parcels or violent sorting, and send real-time warnings. Monthly bonuses for employees violating rules can be deducted to effectively reduce such behaviors. GPS should be used to monitor transportation progress, and fragile items must be labeled and packed with bubble wrap and double-layer hard cardboard to avoid damage due to mixed transport.

5.4. Merchants: Improve After-Sales Responsiveness and Immediate Handling

Mechanisms Platforms could assist merchants by adding proactive abnormal warning notifications on the merchant interface, and offer coupons as compensation. If merchants need to simplify return processes, a "scan-to-return" function can quickly generate electronic return labels. Transparent fee details should be provided to strengthen after-sales logistics and immediate handling processes.

5.5. Customers: Participate in Service Optimization Through Supervision and Suggestions

Customers can provide star ratings upon signing parcels, with additional pages to describe specific issues such as package damage and item conditions. This will help platforms collect detailed customer complaint data. Platforms could also set up a logistics optimization suggestion zone to encourage feedback. High-value coupons can be offered as rewards for adopted suggestions, motivating users to actively participate in service improvement.

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Data Availability

The primary qualitative data for the present study consists of semi-structured interview transcripts and thematic analysis outputs based on the original interview transcripts. Therefore, to ensure the anonymity and confidentiality promised to our participants, the full dataset is stored securely by the research team but not publicly available. However, summarized findings and anonymized quotes are presented within the article.

Conflicts of Interest

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