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THE IMPACT OF E-COMMERCE POLITENESS ON CROSS-BORDER COSMETICS CONSUMER SATISFACTION: A CRITICAL INCIDENT ANALYSIS OF AMAZON

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ABSTRACT

The development of cross-border e-commerce has broken the high-cost barrier for domestic consumers to obtain overseas cosmetics. However, due to logistics delays, authenticity identification difficulties, and the cognitive gap regarding expected efficacy, the consumer experience has been partially compromised. Therefore, this paper conducts a coding analysis of 316 reviews from Amazon's U.S. site, identifying and extracting 155 satisfactory events and 161 dissatisfactory events, and further analyzing the consistency test of the coders, thereby laying the foundation of validity and reliability for this research.

The analysis shows that satisfactory events are mainly concentrated in three aspects: product efficacy, user adaptation, and usage experience, with product efficacy occupying a dominant position. Dissatisfactory events are primarily focused on quality control, which includes packaging damage, product deterioration, and counterfeit risks. In addition, within the three-level reconstruction of "e-commerce politeness," by projecting the elements of information transparency, fulfillment reliability, and empathetic responsiveness into the event classification framework, it can be observed that interactive experience, although not explicitly described, exists within both satisfactory and dissatisfactory events. This indicates, to a certain extent, the invisible power embedded in consumer interaction.

Based on the above findings, the study proposes improvement propositions from multiple perspectives—platform, brand, and seller—aiming to enhance consumer satisfaction in cross-border cosmetics consumption. At the same time, the research provides empirical evidence and conceptual implications that may serve as valuable references for industry practice.

Keywords:

Cross-border E-commerce, Cosmetics, Consumer Satisfaction, E-commerce Politeness, Critical Incident Technique

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1. INTRODUCTION

With the advancement of the global digital economy and the simultaneous improvement of logistics services, the development space of cross-border e-commerce has gradually expanded. Consumers are no longer restricted by geographical boundaries; by opening platforms such as Tmall Global, JD Worldwide, or Amazon Global Store, they can place orders for shopping (Melnykova, 2023). In such a macro environment, cosmetics have become a popular category, and cross-border consumption continues to grow. However, the process of cross-border shopping is not simple. With the addition of transportation logistics and quality control processes, consumers face increased uncertainty in the consumption process when purchasing cosmetics (Wang et al., 2022). This not only reduces consumer satisfaction but also negatively influences their purchasing decisions. Therefore, for platforms and merchants, it is crucial to identify the specific factors that affect consumer satisfaction. Online review systems record the critical nodes of the shopping process, providing authentic data for related research (Li et al., 2024). These reviews, which include detailed sharing about product quality, usage effects, and service experience, to a certain extent reflect consumer satisfaction in cross-border e-commerce cosmetics.

At present, academic research on consumer satisfaction in cross-border e-commerce mostly focuses on relatively general influencing factors such as logistics services, price, and customer service (Muthukumar & Kumar, 2024). Although valuable, it rarely dissects the “critical incidents” directly tied to satisfactory in specific consumption scenarios. More importantly, existing literature often emphasizes “human-to-human” or “human-to-object” interactions, while relatively neglecting the crucial dimension of human-computer interaction. The consumer’s interactive experience with the digital environment of the platform, namely e-commerce politeness, has shifted from being a marginal factor to becoming a core variable. The digital environment here refers to touchpoints that consumers encounter daily, such as interface design, search algorithms, payment processes, and after-sales systems. Many e-commerce platforms are not sufficiently “courteous.” Search results deviating from the theme, unclear interface priorities, cumbersome operational steps, and hidden key information are small details that easily trigger negative emotions, serving as critical inducements of dissatisfactory. Current academic research on this dimension remains insufficient. Cosmetics consumption relies heavily on personal perception; in this segmented field, clarifying the critical incidents that influence satisfactory and dissatisfactory is of significant importance (Muthukumar & Kumar, 2024).

Based on the above background, this study employs the Critical Incident Technique to analyze user reviews of cosmetics on the Amazon platform. The research objective is to identify and extract those critical incidents that lead to consumer satisfaction or dissatisfactory. With a particular focus on the perspective of e-commerce politeness, the study examines the dimensions of information transparency, fulfillment reliability, and empathetic responsiveness in interactive experiences. By introducing this new perspective, the study compensates for the insufficiency of existing literature in the field of cross-border cosmetics consumption regarding critical incidents and human-computer interaction experiences. From the multiple perspectives of platform, brand, and seller, the study proposes targeted improvement propositions, thereby contributing to the enhancement of cross-border e-commerce service quality and consumer satisfaction.

The relationship diagram illustrating the interaction patterns among the various participants in the cross-border cosmetics consumption context examined in this study, as well as the feedback modes associated with satisfaction or dissatisfaction, is shown in Figure 1.

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Figure 1 Cross-border E-commerce Cosmetics Consumer Satisfaction Ecosystem

In the cross-border beauty e-commerce ecosystem, brand owners, platforms, sellers, and consumers constitute the four main entities driving consumer satisfaction. After shopping, consumers leave reviews on the platform pages, expressing their likes or dislikes regarding the products or the problems encountered during usage. These reviews represent unfiltered authentic data, which can serve as the entry point for this study to identify important service experience nodes.

The platform side can detect problem points in consumer review texts, such as: "the presented effect deviates," "the packaging condition is incorrect," "delayed delivery time." Once these problem points are extracted, the platform proposes improvement suggestions and feeds them back to sellers and brand owners. Sellers then provide targeted measures such as compressing customer service response time, enhancing logistics efficiency, and refining after-sales service, thereby mitigating negative emotional touchpoints. Brand owners can uncover deeper consumer voices such as "allergic reactions after use," "not matching skin tone," "difficult to apply," and can accordingly adjust product formulations, improve packaging, and modify design parameters based on objective symptoms, thus gaining consumer recognition from the root.

Therefore, the embedded closed-loop structure of the four entities represents a pathway of sustainable development. For consumer review texts, they drive the iterative updating of products and services; the repeated iterative modifications by brand owners and sellers in turn enhance consumer satisfaction. At the same time, all entities remain in a state of mutual coordination, advancing the overall ecosystem along the closed-loop trajectory of "feedback–analysis–improvement."

Accordingly, this study aims to employ the Critical Incident Technique to analyze user reviews, and from the perspective of e-commerce politeness, identify critical incidents that influence satisfactory. The study further provides optimization suggestions for platforms, brand owners, and sellers, thereby contributing to the improvement of cross-border e-commerce service quality and consumer satisfaction, while strengthening the validity and reliability of the conceptual framework.

2. LITERATURE REVIEW

2.1 Development of Cross-border Cosmetics

Cross-border e-commerce has shifted from mere online transactions to a focus on brand building and management (Alam, 2021). However, the development of this field still faces many challenges. Since

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transactions require cross-border cooperation, inherent challenges such as inconsistent product quality and logistics delays have emerged, reducing consumers' willingness to use cross-border platforms (Tao et al., 2024; Wang et al., 2022; Yuan, 2023).

In terms of cosmetics consumption, academia has different focal points. Researchers usually pay attention to product characteristics. The uncertainty of cosmetics purchase is a major research focus, as product efficacy is closely related to individual skin type and skin tone (Jaglan et al., 2024). The cross-border e-commerce environment intensifies this feature. In the absence of physical testing, consumers are significantly more concerned about product quality, adaptation, and authenticity, becoming more sensitive to risk. This explains why online user reviews have become so important in this context. These reviews record consumers' specific experiences after using products, encompassing the entire consumption process from product efficacy to logistics speed and service attitude (Rai et al., 2022). Therefore, the analytical value of reviews should not be ignored. Relevant data analysis can reveal consumer needs and help enterprises identify and solve their own problems, providing empirical evidence for improvement.

However, current research mainly focuses on "result-driven" events such as products and logistics services, while neglecting the interactive experience between consumers and platforms. Complex and non-transparent platform interfaces may lead to consumer distrust. Studies have shown that the quality of platform systems, information, and services will affect users' basic trust in the platform and their willingness to continue using it (Huang & Benyoucef, 2013). Therefore, to analyze consumer satisfaction with cosmetics in the cross-border e-commerce environment, it is necessary to examine product characteristics, the cross-border service chain, and platform interaction experiences.

2.2 E-Commerce Politeness

This study introduces the perspective of e-commerce politeness, with the aim of analyzing how interactive experiences in cross-border e-commerce influence consumer satisfaction. The concept of e-commerce politeness originates from the politeness principle in interpersonal communication (Brown & Levinson, 1987). In simple terms, "politeness" refers to making others feel comfortable in social interactions, showing respect, understanding boundaries, and considering others' feelings without making them feel neglected or disturbed. In the context of e-commerce, politeness refers to the user's experience of smooth processes without additional troubles throughout browsing, purchasing, and after-sales. Platform behaviors that cause inconvenience and reduce user experience are considered "discourteous."

This concept includes three dimensions: information transparency, fulfillment reliability, and empathetic responsiveness, providing a new analytical perspective for interactive experiences in cross-border e-commerce. Information transparency involves whether product descriptions are accurate and whether logistics status is updated in real time, which reduces information asymmetry and supports consumer decision-making (Zhou et al., 2018). Fulfillment reliability refers to on-time delivery and the entire process from storage to delivery; if product packaging is proper and delivery is timely, consumer satisfaction will increase. Empathetic responsiveness is the key to problem-solving. An effective response system includes quick replies, effective solutions, and empathy (Hadi et al., 2024). From the perspective of e-commerce politeness, the focus is on the interaction process, analyzing specific "courteous" or "discourteous" events. The Critical Incident Technique

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(CIT) provides a mature methodological tool, enabling the identification and analysis of specific and memorable incidents to determine the interactive details that influence consumers (Gremler, 2004).

The integration of the e-commerce politeness perspective with the Critical Incident Technique establishes a conceptual framework for interpreting cross-border e-commerce cosmetics reviews, pointing out the micro-mechanisms that form consumer satisfaction (Roschk & Gelbrich, 2014).

2.3 Consumer Satisfaction

In the field of cross-border e-commerce, consumer satisfaction has a significant impact on users' recommendation and repurchase behavior (Chen & Kim, 2024). This topic has attracted many scholars to continuously explore and discover valuable insights. Logistics services are one of the key objects of these studies. Under various cross-border online shopping models, logistics speed directly affects consumers' final experience and subsequent repurchase. Phenomena such as slow delivery, high shipping costs, and incorrect product shipments are common in cross-border shopping. The quality of logistics influences consumers' willingness to purchase and the reputation of products (Chotisarn & Phuthong, 2025).

The intrinsic quality of the product itself is the most important factor. Particularly for cosmetics, aspects such as the actual effects after use and the safety of raw materials attract consumer attention (Hameed & Kanwal, 2018). Customer service quality is also crucial: whether problems are responded to in a timely manner, whether issues are properly resolved, and whether consumers are satisfied are important criteria for evaluation (Cao et al., 2018). In other words, consumer satisfaction is not determined by a single factor, but rather by the combined result of product, service, and interactive experience.

In summary, consumer satisfaction with cosmetics in cross-border e-commerce depends on multiple factors. This not only includes traditional core indicators such as product quality and cross-border service, but also encompasses the "politeness" experience reflected in interactions on e-commerce platforms. Therefore, this study employs the Critical Incident Technique (CIT) to analyze user reviews, identify critical incidents that influence satisfactory, and further provide strategic suggestions for platforms, brands, and sellers to enhance consumer experience and satisfactory.

3. METHODOLOGY

3.1 Critical Incident Technique

This study employs the Critical Incident Technique (CIT) as the starting point. Within this technique, we focus on capturing specific events that trigger users' positive or negative evaluations. We collect memorable verb-object behavioral descriptions and contextual scenarios, then summarize the core service or experiential elements influencing consumer satisfaction (Gremler, 2004). The Critical Incident Technique (CIT), as a stable research method, has been applied across different fields and has formed a relatively mature theoretical system: ranging from service systems and service quality management to consumer behavior and experience research, and even to organizational learning (Curado et al., 2024; Chen & Hsu, 2012; Finnestrand et al., 2023).

Through CIT, it is possible to understand and grasp the main driving factors in project advancement processes and risk control behaviors (Sharma et al., 2023). Successful cases in the cosmetics field (Watkins et al., 2022) demonstrate that the Critical Incident Technique can delineate user focal points and provide insights into product development and improvement schemes, identifying potential product risks and offering technical

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support for the realization of consumer value. Therefore, this study adopts this mature and stable methodological approach to investigate cosmetics consumption in cross-border e-commerce.

3.2 Research Design

This study is based on the Critical Incident Technique (CIT), taking it as the core methodological support to explore cosmetics user reviews on the Amazon platform, using them as the database for analyzing critical incidents (Bitner et al., 1990). These reviews are written by real consumers and contain complete details from browsing, payment, transportation, to after-sales service, thereby providing objective and comprehensive empirical data sources for the research.

The analytical steps are clear: first, identify and extract from the reviews those critical factors that may lead to satisfactory or dissatisfactory outcomes, which is the core requirement of the CIT method (Flanagan, 1954). Next, following the principle of mutual exclusivity and independence, construct an analytical coding manual from the theoretical perspective of e-commerce politeness (including the three dimensions of information transparency, fulfillment reliability, and empathetic responsiveness), to classify all incidents. Then, conduct statistical analysis and interpretation of the coding results to clarify which specific “courteous” or “discourteous” incidents have the most significant impact on consumers’ evaluation of cross-border e-commerce cosmetics.

Such a research design enables the collection of a large amount of review data related to the quality of interactive experiences, thereby deconstructing the micro-mechanisms of satisfactory formation.

3.3 Data Collection

The data for this study comes from the Amazon platform, chosen primarily because its user scale is representative in the global cross-border e-commerce market. A professional web scraping tool, Data Scraper, was employed to collect the data, with a clear objective: to capture reviews left by users on the U.S. site after purchasing cosmetics between May 2024 and October 2025. Considering research ethics, all collected data were anonymized, and any identifiable consumer information was anonymized. Moreover, these reviews were all provided by verified purchasers, ensuring authenticity and credibility, and generally reflecting the genuine experiences of most users.

The initial collection yielded 360 raw reviews. To ensure the reliability of subsequent analysis, the research team conducted a strict screening of the raw data. The screening rules were explicit: first, remove content irrelevant to shopping or usage experience; second, eliminate invalid reviews that only state “good” or “dislike” without mentioning specific incidents or reasons. Ultimately, 44 reviews were excluded, leaving 316 valid reviews, with a validity rate of 87.8%.

From these 316 valid reviews, a total of 316 critical incidents were identified. Among them, 155 were satisfactory incidents, while 161 were dissatisfactory incidents. The selected reviews covered diverse cosmetic categories such as foundation, lipstick, mascara, and eyeshadow. The sample diversity ensures that the research data authentically reflects the actual experiences of cross-border cosmetics consumption. These filtered incidents thus became the core empirical basis for subsequent inductive analysis.

4. DATA ANALYSIS

4.1 Classification Principles

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In order to transform the collected critical incidents into specific and analyzable data, and to ensure that the classification of critical incidents is scientific and reliable, this study first constructed a classification system. In the collected reviews, after excluding 44 invalid reviews that deviated from the central focus, a total of 155 satisfactory incidents and 161 unsatisfactory incidents were obtained. After a preliminary examination of all incidents by the researchers, classification was conducted.

The satisfactory critical incidents were named as follows: product effectiveness, user adaptation, high cost-effectiveness ratio, service satisfactory, and usage experience. The unsatisfactory critical incidents were named as follows: quality control problems, safety hazards, usage experience, poor service, and product effectiveness. Since some attributes are consistent between satisfactory and unsatisfactory critical incidents, identical naming was adopted.

Furthermore, as this study introduces the analytical perspective of "e-commerce politeness," which emphasizes the quality of interaction throughout the entire transaction process, this concept can be specifically understood in terms of three core dimensions: information transparency, fulfillment reliability, and empathetic responsiveness. Based on this perspective, "service satisfactory" involving punctual logistics and intact packaging directly reflects fulfillment reliability; "quality control problems" such as inconsistent product descriptions or mismatched products point to a lack of information transparency; while "poor service" indicates a failure of empathetic responsiveness. Tables 1 and 2 present the classification, naming, and definitions of critical satisfying events and critical dissatisfying events in this study.

Table 1. Classification and Explanation of Satisfactory Critical Incidents

Classification	Detailed Explanation
Product Effectiveness	The ability to maintain stable performance in different scenarios. Sweat-proof, waterproof, non-smudging, long-lasting without staining, color retention without transfer, no powder scattering, no blotching, and no caking. Suitable for both daily and special occasions (weddings, events).
User Adaptation	Adaptation to different skin types and tones. For example: non-irritating for sensitive skin, non-emphasizing fine lines for mature skin; shades adaptable to different skin tones (e.g., light-colored eyeshadow suitable for fair skin), avoiding problems such as "skin type incompatibility causing caking" or "skin tone mismatch appearing unnatural."
High Cost-Effectiveness Ratio	Good overall performance in terms of price and usage, encouraging consumers to repurchase long-term. Affordable products comparable to high-end brands, high pigmentation with small amounts, reduced per-use cost, multifunctional, durable, and providing a good cosmetic experience at low cost.
Service satisfactory	Fast and punctual logistics, convenient return and exchange policies, intact packaging, no leakage or damage, presence of gifts, and exquisite packaging.
Usage Experience	Good texture of cosmetics (lightweight, smooth, moisturizing, creamy), comfortable skin feeling (non-drying, breathable), smooth application, and easy removal.

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Table 2. Classification and Explanation of Unsatisfactory Critical Incidents

Classification	Detailed Explanation
Quality Control Problems	Poor performance in packaging, transportation protection, shipping duration, and order accuracy. Issues include lack of sealing, damage due to transportation pressure, wrong delivery, shipping delays, abnormal capacity (shortage), and product deterioration (abnormal odor, mold, suspected expiration). Receiving counterfeit or second-hand products (traces of prior use upon opening).
Safety Hazards	Adverse physiological reactions after product use, including allergies, irritation, and worsening of skin problems.
Usage Experience	Operational obstacles and performance defects during product use, including abnormal product condition, difficulty in operation, and failure to meet expected effects, reflecting incompatibility throughout the usage process.
Poor Service	User experiences when seeking after-sales support due to product or logistics issues. For example: return request due to allergy being rejected, no response from customer service after product damage, lack of compensation for shortage, leading to situations where users "spend money on problematic products" but have no channel for complaints.
Product Effectiveness	Poor concealing effect highlighting flaws, uneven pigmentation with powder scattering, shade inconsistent with description, unattractive makeup appearance, inability to enhance beauty, and failure to achieve cosmetic function.

Table 3 provides a detailed description of the basic background of the three classifiers. These classifiers have diverse backgrounds, offering judgments from academic research, platform operation, and consumer perspectives, thereby ensuring representativeness of the classification. Therefore, this study specifically invited these three classifiers to independently validate the classification of consumer reviews on cross-border e-commerce platforms for cosmetics, identifying satisfactory and unsatisfactory incidents. Only after unanimous confirmation of the classification results by the three classifiers did subsequent analytical work proceed.

Table 3. Background of Classifiers

Classifier	Position	Work Experience
Classifier 1	Associate Professor in E-commerce at a university	Many years of teaching experience in e-commerce, with extensive theoretical knowledge in the field.
Classifier 2	Director of Beauty Category Operations at a cross-border e-commerce platform	Many years of deep involvement in cross-border beauty, long-term handling of user feedback data, with precise understanding of key practical factors influencing satisfactory.
Classifier 3	Experienced Cross-border Beauty Consumer	Many years of purchasing experience in cosmetics on cross-border e-commerce platforms, familiar with the entire process of cross-border beauty shopping.

4.2 Reliability and Validity Analysis

4.2.1 Reliability Analysis

Reliability analysis is a method to determine whether the research results possess stability or consistency. The reliability analysis of classification in the Critical Incident Technique (CIT) can generally be divided into two

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aspects: individual classification consistency and inter-classifier consistency, which are described separately below.

Individual classification consistency refers to whether the same classifier, after a certain period of time, classifies the same reviews with results identical to those of the previous classification (Haynes et al., 1995). In this study, the three classifiers reclassified the same sample two weeks after completing the initial classification. It is generally considered that when the consistency level of two or more classifiers exceeds 0.8, the individual classification results demonstrate good stability. After completing the classification, each classifier was evaluated for individual classification consistency. The evaluation results are shown in Table 4 and Table 5. The individual classification consistency of all three classifiers exceeded 0.8, indicating that the classifiers demonstrated a high degree of personal stability in classification.

Table 4. Individual Classification Consistency of Classifiers — Satisfactory Incidents

Classifier	Number of Individual Consistencies	Total Classifications	Individual Consistency
Classifier 1	129	155	0.83
Classifier 2	133	155	0.86
Classifier 3	132	155	0.85

Table 5. Individual Classification Consistency of Classifiers — Unsatisfactory Incidents

Classifier	Number of Individual Consistencies	Total Classifications	Individual Consistency
Classifier 1	131	161	0.81
Classifier 2	137	161	0.85
Classifier 3	140	161	0.87

Regarding inter-classifier consistency, this study applied the reliability analysis formula proposed by Holsti (1969) to verify the judgment results of the three classifiers. The specific numbers of inter-classifier consistency are presented in Table 6 and Table 7, and the final reliability calculation results are shown in Table 8.

Table 6. Numbers of Inter-classifier Consistency — Satisfactory Incidents

Inter-consistency Numbers	Classifier 1	Classifier 2	Classifier 3
Classifier 1	129	——	——
Classifier 2	128	133	——
Classifier 3	96	104	132

Table 7. Numbers of Inter-classifier Consistency — Unsatisfactory Incidents

Inter-consistency Numbers	Classifier 1	Classifier 2	Classifier 3
Classifier 1	132	——	——
Classifier 2	130	138	——
Classifier 3	131	121	140

Based on the data in Table 6 and Table 7, this study verified the degree of inter-classifier consistency among the three classifiers. The equations is shown as follows:

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$$A=\frac{\frac{2M_{12}}{n_1+n_2}+\frac{2M_{23}}{n_2+n_3}+\frac{2M_{13}}{n_1+n_3}}{N} \quad \text{(Equation 1)}$$

$$R=\frac{(N\times A)}{1+[(N-1)\times A]} \quad \text{(Equation 2)}$$

Among them, R = Reliability,

N = Number of classifiers,

A = Average interjudge agreement,

M = Number of identical classifications between classifiers (M_{12} refers to the number of identical classifications between the first and second classifier),

n = Number of classification judgments made by each classifier ($n_1$refers to the number of classification judgments made by the first classifier).

Based on the above formula, calculations were carried out, and the classification reliability table was obtained as shown in Table 8.

Table 8. Classification Reliability Table

BBT Classification	Average Interjudge Agreement (A)	Reliability (R)
Satisfactory	0.833	0.937
Unsatisfactory	0.863	0.950

According to the data in Table 8, the average inter-coder reliability coefficient for satisfactory events is 0.937, while that for dissatisfactory events reaches 0.950. Both values exceed the commonly used academic reliability threshold of 0.8 (Holsti, 1969; Latham & Saari, 1984). This indicates that the classification results in this study are relatively stable and the research is reliable. The reliability and acceptability of the classification process have been verified. This outcome lays a solid foundation for subsequent analysis and reflects the methodological rigor of the entire research process.

4.2.2 Validity Analysis

The core of validity analysis is to verify whether the research accurately measures the target concept. This study mainly examines three types of validity.

Expert validity refers to whether experts in the field recognize the professionalism of the measurement tool (Haynes et al., 1995). This study deliberately invited three experts in the field to conduct independent reviews. The three experts ultimately reached a consensus: the classification system not only encompasses traditional measurement dimensions such as product and service, but also clearly defines the relevant elements of e-commerce politeness, fully reflecting the quality of interaction between platforms and users. Based on the professional suggestions of the experts, this study optimized the definitions of certain categories, thereby ensuring the professional validity of the classification system.

Content validity focuses on whether the measurement tool covers all key dimensions of the research (Lynn, 1986). The classification system in this study is based on consumer satisfaction theory, supplemented by the analytical perspective of e-commerce politeness as an interactive experience. The research team compared the

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collected user reviews one by one against this theoretical framework, and after multiple rounds of adjustment and optimization, the final classification system was able to cover more than 95% of the content elements. This system includes critical incidents related to core dimensions such as product quality and logistics services, as well as typical scenarios of platform interaction. Thus, it can essentially reflect consumer satisfaction in cross-border cosmetics purchase.

Face validity examines whether the measurement tool appears reasonable and acceptable on the surface (Nevo, 1985). In this study, the classification labels are directly related to the specific descriptions in user reviews. Whether it is experiences related to e-commerce politeness such as logistics services and customer service responsiveness, or other common scenarios, ordinary readers can easily understand the internal logic of the classification. This indicates that the classification system of this study meets the requirements of face validity and is likely to be understood and accepted by the broader audience.

4.3 Classification Results

After categorizing and counting the identified critical incidents according to the classification naming, in order to further understand the specific performance of each category, this study selected two typical reviews from both satisfactory and unsatisfactory critical incidents as examples. The examples of satisfactory critical incidents are shown in Table 9, and the examples of unsatisfactory critical incidents are shown in Table 10.

Table 9. Examples of Satisfactory Critical Incidents

Incident Category	Example 1	Example 2
Product Effectiveness	This product is really very good! I bought it originally because it was cheap and of good quality. One evening I attended an event, sweating heavily, yet the makeup did not smudge at all, lasting nearly 8 hours. Moreover, it is easy to remove. Most waterproof products leave residue after removal, but this one does not. The color rendering is beautiful, and the lasting time is long. I will definitely repurchase!	This under-eye concealer is very special. It is the only one that does not settle into my fine lines. I have tried many other concealers, both expensive and cheap. They always pile up in my wrinkles. When spreading, they easily ruin the makeup. Some even require setting powder. Only this one is truly useful. It lasts all day without smudging. The shade is lighter than I expected, but it matches my foundation well. I have used it for several months, and now I need a new one. It has always worked well, and I will stick with it in the future.
User Adaptation	This four-color eyeshadow surprised me, perfectly complementing the color of my eyes. Great value for money, and very easy to use. My oily skin did not show any creases at all! Compared to large containers, I prefer the small ones.	I really love the shade of this foundation. My skin tone is brown, and finding the right match is not easy. If you have a tanned light-brown skin tone, this shade is absolutely perfect! Stunningly beautiful!
High Cost-Effectiveness Ratio	I like this product. The	I really love this product!

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	concealing effect is good, not heavy, and it contains sunscreen ingredients and skincare essence. When I use it, I like to add some Saie brightening gel to enhance the glow. And the price is cheap!! Already repurchased and stocked up.	Honestly, I used to use high-end cosmetics, but after trying this one, the effect is especially good. It makes my eyelashes look longer, and since the first use, I have never used other products! And it does not clump too much.
Service satisfactory	I just received this product today, the color is very beautiful, and the packaging is magnetic. I also received a free cleansing gel as a gift. The whole unboxing experience was satisfying.	Today when I received the product, the packaging was intact, wrapped in bubble wrap, and the delivery speed was very fast. I really love this makeup effect! This brand has never disappointed me, it is the only one that satisfies me every time.
Usage Experience	The texture of this foundation is really lightweight, easy to spread, and gives a natural pseudo-bare-skin glow, not oily at all. I used the light ivory shade, which fits fair skin very well, like the brightness coming from my own skin. Moisturizing is also good, and even on flaky areas it does not cake. The concealing degree is completely sufficient for my commuting to work. The pump design is hygienic and convenient, with just the right amount per pump. In short, using it is worry-free, and now it is indispensable on my makeup table.	This is my first time buying a luxury brand foundation. First apply with a brush, then spray setting spray, and finally lightly sweep powder to create a matte effect. The texture is light, as if it adheres to the skin.

Table 10. Examples of Unsatisfactory Critical Incidents

Incident Category	**Example 1**	**Example 2**
Quality Control Problems	Everyone be careful, this is not genuine! I have always purchased this product, but this time what I bought here is fake. The packaging box is mainly printed in foreign language, and the product bottle lacks necessary information such as size, Dxp., or address (the genuine product always includes these). The color of the golden embossing stamp is inconsistent, and the product is extremely thin. This is not real Estée Lauder.	As a long-time user of this foundation, I must say its usual lasting effect is indeed very good. After a whole day, the makeup remains intact. But this time the situation confused me. The liquid in the bottle was extremely thick, like a paste. No matter how I shook it, it did not mix evenly. I have repurchased many times on Amazon before, and never encountered this. I suspect this bottle may have been stored too long in the warehouse, or it is simply old stock.

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Safety Hazards	After using this product, I had a severe allergic reaction! My face was covered with rashes and swollen. In the end, I had no choice but to go to the emergency room for a steroid injection, and then had to take oral medicine for a week. Once I stopped using this product, my skin immediately recovered!	I have always used Estée Lauder for many years, usually buying at Dillards or Ulta. This time I saw it online, the price was cheap, and I did not need to go to the mall, so I ordered it immediately (and at that time it had nearly five-star reviews, now I really cannot understand why??). But after only the second day of use, my face started turning red, with small bumps like hives. The skin became very rough, peeling and breaking out. Later I realized it was this product causing the problem, and I stopped using it immediately. When I bought my usual one again at Dillards, my skin quickly recovered! I sincerely advise everyone not to buy this—it is not real Estée Lauder! If I could give zero stars, I would.
Usage Experience	The first few times I bought this tube mascara, it was really very good. But I do not know what changes they made last time, the formula became extremely wet, and before I could spread it evenly, it smeared all over my eyelids. Really disappointing, because I always liked this product, it used to be one of the best mascaras on the market. But now with this wet and messy texture, I have switched back to using DLF. I do not know what you changed, but I sincerely hope you restore it to the original. I have already thrown this one away.	This eyeliner pencil is extremely dry! It breaks immediately when sharpened, completely unusable. Drawing on the eyelid is very painful, pulling the skin. Totally different from the advertisement, and sold at such a high price, really a scam!
Poor Service	When I received it, I found it contained SPF 10. But in the description it did not mention SPF, and the advertisement images did not show SPF either. I am allergic to SPF, and they did not allow me to return it. Really disappointing!	Different from the pictures, it is not retractable and requires manual sharpening. I have used this type before, very troublesome. Now I cannot return it, really frustrating.
Product Effectiveness	If you like smearing clay on your face, letting it settle into every fine line and pore, exposing all your skin	If I could give zero stars, I would not even give one! This foundation is really unsuitable for women over 40. After

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	flaws—then this foundation is the right choice! Even though I carefully exfoliated and used primer, after applying it my face still looked like an Aztec stone carving, dry and full of lines!	applying, my skin dryness, fine lines, and blemishes—all flaws were magnified! It cakes terribly. Maybe it is long-lasting, but with such an effect I would never wear it outside! Too difficult to use!!

The examples in Table 9 and Table 10 precisely illustrate the specific scenarios in which consumers express satisfactory or dissatisfactory in their reviews. To clarify the extent of influence of these critical incidents, this study conducted a statistical inventory of the number of events across different categories. The specific results are presented in the two tables below: Table 11 corresponds to satisfactory critical incidents, while Table 12 focuses on dissatisfactory critical incidents. By placing the proportions of each factor in both types of incidents side by side for comparison, it becomes possible to identify, with empirical evidence, which factors constitute the core determinants of consumer experience.

Table 11. Analysis Data of Satisfactory Critical Incidents

Rank	Category of Satisfactory Critical Incidents	Number Classified by Classifier 1	Number Classified by Classifier 2	Number Classified by Classifier 3	Average Number	Average Ratio
1	Product Effectiveness	84	70	50	68.00	44%
2	Service satisfactory	27	38	39	34.67	22%
3	Usage Experience	20	19	33	24.00	15%
4	User Adaptation	15	20	24	19.67	13%
5	High Cost-Effectiveness Ratio	9	8	9	8.67	6%

Table 12. Analysis Data of Unsatisfactory Critical Incidents

Rank	Category of Unsatisfactory Critical Incidents	Number Classified by Classifier 1	Number Classified by Classifier 2	Number Classified by Classifier 3	Average Number	Average Ratio
1	Quality Control Problems	75	80	71	75.33	47%
2	Product Effectiveness	46	44	59	49.67	31%
3	Poor Service	32	25	23	26.67	17%
4	Usage Experience	7	8	6	7.00	4%
5	Safety Hazards	1	4	2	2.33	1%

As shown in the data of Table 11 and Table 12, satisfactory events and dissatisfactory events share the same classification names. This indicates that there is consistency in users' points of concern. Among all satisfactory events, the proportion of product effect is the highest, at 44%. This demonstrates that the actual function of the product corresponding to its advertisement is the fundamental reason for consumer satisfaction. From the perspective of e-commerce politeness, when merchants provide products consistent with promotional effects, they are essentially fulfilling their commitment to consumers, reflecting the dimension of "fulfillment reliability."

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Therefore, platforms and brands must prioritize improvement of product effects and basic functions based on specific positive user feedback.

In dissatisfactory events, quality control issues account for the highest proportion, reaching 47%, which indicates a lack of "fulfillment reliability" in e-commerce politeness. Negative reviews are concentrated on problems such as damaged packaging, mismatched products, and suspected counterfeits. These issues not only undermine the product itself but also damage the basic trust of transactions. At the same time, products inconsistent with descriptions represent information non-transparency, while damaged packaging reflects unreliability in the fulfillment process. When quality control problems occur, merchants' after-sales service, namely "empathetic responsiveness," is often inadequate, which may intensify user dissatisfactory.

Therefore, platforms and sellers must promptly resolve quality control problems and strengthen protection during product inspection and transportation processes. Concentrated resolution of these issues will make users feel more comfortable during usage and improve both consumer satisfaction and platform reputation.

5. CONCLUSIONS AND RECOMMENDATIONS

5.1 Research Findings and Conclusions

This study employs the Critical Incident Technique to analyze cosmetics user reviews on the Amazon platform and identify the core factors influencing consumer satisfaction. The findings reveal that the enhancement of consumer satisfaction is largely due to highlights in the actual product effects: effective coverage of blemishes, long-lasting makeup performance, and adaptation to individual skin types and tones. These positive experiences are inseparable from two dimensions of e-commerce politeness. One is information transparency, such as accurate product descriptions without exaggeration; the other is fulfillment reliability, such as products being consistent with promotional claims.

For consumers, quality control issues represent the greatest pain point. Poor quality control leads to damaged packaging, product deterioration, and counterfeit risks, reflecting a failure in fulfillment reliability. In addition, safety hazards and deficiencies in after-sales service are frequently mentioned, exposing product information non-transparency and a lack of empathetic responsiveness in the shopping experience, thereby weakening consumer trust.

In summary, within the context of cross-border e-commerce, the actual product effects and user adaptation have become the core elements that generate consumer satisfaction and trust. Meanwhile, the full-process interactive experience associated with e-commerce politeness also requires systematic development and optimization. Platforms and merchants must ensure product information is authentic and transparent, logistics and quality control remain stable and reliable, and after-sales responsiveness is rapid and effective. Only then can a sustainable and reliable trust relationship be established in the cross-border consumption environment.

5.2 Recommendations

This study adopts the Critical Incident Technique (CIT) to systematically analyze Amazon review data, in order to explore the factors influencing consumer satisfaction within both positive and negative evaluations. Statistical results reveal that factors related to good product effects appear more frequently in satisfactory incidents, whereas dissatisfactory incidents are more often dominated by product quality problems and quality control issues.

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Achieving higher levels of consumer satisfaction cannot be accomplished through unilateral effort; rather, it requires joint contributions across multiple dimensions. On one hand, product advantages must be maintained; on the other hand, quality control and safety issues must be resolved. Based on this foundation, subsequent optimization can be carried out in three major aspects: ensuring product excellence, strengthening quality control, and optimizing the full-chain service experience.

Accordingly, this study proposes targeted recommendations for reference.

5.2.1 Recommendations for Platforms

Platforms are the primary entities responsible for establishing rules and guiding brands and sellers to improve service quality. Regarding product effectiveness, platforms should establish a "real effect" label. Products repeatedly mentioned by users for attributes such as "long-lasting wear" or "good coverage of blemishes" should undergo random testing, and sellers whose products perform well should be awarded official certification labels, making high-quality products more visible. At the same time, platforms can encourage users to upload short videos to demonstrate the real makeup effect, which is more persuasive than text and images and helps other consumers evaluate product effectiveness. Optimizing product search ranking can also serve as a method to improve service quality. Platforms may increase the weight of positive reviews related to "product effectiveness" in the ranking algorithm, ensuring that genuinely effective products appear at the top.

For quality control issues, platforms should require merchants to provide legitimate sourcing certificates and brand authorization documents upon entry, thereby addressing counterfeit problems at the source. Sellers repeatedly reported for "receiving counterfeit goods," "damaged packaging," or "moldy products" may face warnings, traffic restrictions, or removal from the platform. For best-selling products, platforms can occasionally conduct anonymous purchases as consumers to check product quality, impose strict penalties on non-compliant sellers, and publicly disclose the results to reassure consumers.

Regarding service, platforms should clearly indicate the estimated delivery time for cross-border products. If an order exceeds the expected time, automatic compensation in the form of coupons should be provided. When consumers and sellers fail to reach agreement, platforms should offer a one-click option to request customer service intervention, enabling immediate platform involvement to protect consumer rights.

5.2.2 Recommendations for Brand Owners

Products originate from brand owners, who must ensure that every stage from production to delivery is trustworthy. Regarding product effectiveness, the product detail page should clearly list all ingredients and indicate which groups may not be suitable. Brands can also produce short videos or image-text content to demonstrate product effects on people with different skin tones and types, reducing the risk of consumers selecting unsuitable products.

For user adaptation, more detailed filtering options can be added, such as "suitable for sensitive skin," "suitable for oily or dry skin," or "cool/warm undertones," allowing consumers to quickly find products that match their needs. Additionally, introducing or developing AR try-on functions enables users to preview lipstick or foundation shades online, reducing the probability of choosing the wrong color.

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For quality control issues, packaging should include tamper-proof designs, such as sealed membranes on bottle openings and one-time stickers on outer boxes. Using disposable seals and anti-counterfeit codes allows consumers to easily verify authenticity and prevents substitution or contamination during transportation.

For safety hazards, clear warnings should be provided for common allergenic ingredients (e.g., alcohol, fragrance, certain preservatives), fulfilling the obligation of notify consumers. Brands should proactively disclose efficacy testing reports from authoritative institutions, supported by scientific data.

For usage experience and cost-performance, packaging should be designed to be more user-friendly, using droppers or pump dispensers that are hygienic and allow controlled usage, enhancing convenience and satisfactory. Offering travel-size or sample sets can reduce consumer trial-and-error costs, giving them opportunities to find the most suitable products. Brands can also develop multifunctional products, such as items usable as both blush and lipstick, which increase perceived value for consumers while reducing production costs.

5.2.3 Recommendations for Sellers

Sellers directly face consumers, and their primary task is to deliver products smoothly through attentive service. Regarding quality control, sellers should carefully inspect packaging before shipment to ensure bottles are not leaking or dented. Logistics packaging must be reinforced, avoiding cost-cutting measures. Shipping boxes should be filled with bubble columns or foam padding to prevent damage during transportation. Liquid cosmetics should be individually wrapped in bubble film to reduce the risk of breakage. Logistics partners should be reputable and reliable, as saving money at the expense of delivery quality can damage reputation.

Regarding service, sellers should commit to a “return guarantee for allergy issues,” reducing consumer concerns. Professional customer service is essential; representatives must be knowledgeable about products, able to answer questions quickly, and handle after-sales issues effectively, rather than functioning as “repetition machines.” For cross-border orders, sellers should proactively provide consumers with logistics updates, allowing them to track the product’s journey.

Regarding product effectiveness, product detail pages should feature authentic user reviews and photos rather than heavily edited model images. Descriptions of product features should remain objective, avoiding overly exaggerated promotional language. For example, medium coverage should not be described as “flawless perfection,” ensuring consumers have reasonable expectations and reducing disappointment caused by inflated claims.

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