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Optimizing Customer Experience in E-Commerce Last-Mile Delivery

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Abstract

Purpose: The last-mile delivery experience plays a pivotal role in enhancing customer satisfaction and loyalty within the e-commerce sector. This study introduces the Customer Delivery Experience in Last-Mile Delivery (CDX-LMD) scale and investigates how key dimensions of this experience influence customer satisfaction. **Research Design, Data and Methodology:** A quantitative research design was employed to explore the relationships between last-mile delivery factors and customer satisfaction. Data were collected from 950 e-commerce customers. The study used Exploratory and Confirmatory Factor Analyses to validate the CDX-LMD scale, followed by multiple regression analysis to examine the influence of seven identified dimensions. **Results:** The validated CDX-LMD scale consists of seven dimensions: Joyful anticipation, Parcel tracking, Visual appeal, Delivery efficiency, Convenience, Smooth delivery, E-payment. These dimensions collectively explained 75.9% of the variance in customer experience ($R^2 = 0.759$). Among them, Joyful anticipation ($\beta = 0.213$) and Parcel tracking ($\beta = 0.198$) had the strongest impact on customer satisfaction. **Conclusions**: This study highlights the multidimensional nature of last-mile delivery experience and its significant role in shaping customer satisfaction. By enhancing transparency, operational efficiency, and digital payment security, e-commerce firms can optimize customer experience and build long-term loyalty.

Keywords : Last-mile delivery, E-commerce logistics, Customer experience, Delivery optimization, E-payment.

JEL Classification Code: L81, L87, R41, M31.

1. Introduction

The growth of e-commerce has fundamentally transformed the retail landscape, with last-mile delivery emerging as a critical component in shaping customer experience and satisfaction (Hübner et al., 2016). As the final leg of the delivery process, last-mile delivery represents the most direct interaction between the consumer and the retailer, playing a decisive role in determining customer satisfaction, loyalty, and future purchase intentions (Lim et al., 2018). A rapidly growing e-commerce market, the importance of optimizing last-mile delivery has become even more pronounced, particularly as customer expectations around speed, convenience, and reliability continue to evolve (Savelsbergh & Van Woensel, 2016).

Recent studies have underscored the multifaceted nature of customer experience in last-mile delivery, highlighting various dimensions such as delivery speed, tracking capabilities, communication, and the professionalism of delivery personnel (Choi et al., 2019; Vasić et al., 2021). However, while these studies provide valuable insights into key factors influencing last-mile delivery satisfaction, there remains a need for a more comprehensive measurement tool that captures the full spectrum of customer experience, including emerging factors like electronic payment options, which have grown increasingly significant in markets (Rabayah et al., 2022).

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This research focuses on assessing the impact of key factors influencing customer experience in last-mile delivery by developing and validating the Customer Delivery Experience in Last-Mile Delivery (CDX-LMD) scale. This comprehensive tool measures seven critical dimensions: Delivery efficiency, Parcel tracking, Smooth delivery, Visual appeal, Joyful anticipation, Convenience, and E-payment. The inclusion of E-payment as a key dimension highlights its growing importance in e-commerce landscape, where customers increasingly demand secure and efficient digital payment options (Pantano et al., 2017).

Through a rigorous methodological approach, including both Exploratory Factor Analysis (EFA) and Confirmatory Factor Analysis (CFA), this study validates the CDX-LMD scale and evaluates the relative impact of these dimensions on customer experience. Understanding these impacts is crucial for businesses aiming to optimize their delivery strategies, enhance customer satisfaction, and build stronger customer loyalty in a highly competitive and rapidly evolving market (Savelsbergh & Van Woensel, 2016; Lim et al., 2018).

2. Literature Review and Research Model

2.1. Literature Review Overview

Recent research has proposed various frameworks to conceptualize customer experience in e-commerce and last-mile delivery. For instance, Olsson et al. (2022) identified six experiential dimensions (cognitive, emotional, behavioral, sensorial, physical and social) in unattended delivery, providing a multi-sensory perspective on customer experience. Lim et al. (2018), from a logistics operations standpoint, developed a design framework for last-mile delivery based on contingency variables such as urban density and delivery urgency.

Vrhovac et al. (2023) introduced the CMX-LMD scale and extracted six distinct factors including delivery efficiency, parcel tracking, smooth delivery, visual appeal, joyful anticipation, and convenience—which strongly informed the present study. These factors were further expanded by incorporating E-payment, reflecting recent emphasis on digital transaction convenience. Synthesizing across these frameworks, the current study adopts a three-dimensional classification of customer experience drivers in last-mile delivery:

- Logistical dimensions: delivery efficiency, parcel tracking, smooth delivery
- Technological dimensions: e-payment
- Emotional and experiential dimensions: joyful anticipation, visual appeal, and convenience

This integrative structure aligns with the call for a holistic approach in recent literature (Vakulenko et al., 2019; Lemon & Verhoef, 2016), allowing for a comprehensive assessment of the functional, digital, and psychological elements shaping e-commerce delivery satisfaction.

Recent studies challenge some commonly accepted factors of customer experience in last-mile delivery. While delivery efficiency, smooth delivery, and convenience remain important (Vrhovac et al., 2023), visual appeal unexpectedly negatively predicts customer satisfaction (Vrhovac et al., 2024). Contrary to expectations, delivery speed does not significantly impact customers' adoption of express delivery services, while delivery reliability does (Zhong et al., 2021). Driver behavior plays a crucial role, with inappropriate behavior and inflexibility negatively affecting customer outcomes through emotions like anger and sadness (Masorgo et al., 2023). Trust in courier service, delivery price, and pre-delivery communication positively influence satisfaction (Vrhovac et al., 2024). Interestingly, effort expectancy shows no effect on behavioral intention to adopt express delivery services, while facilitating conditions have a negative influence (Zhong et al., 2021). These findings suggest that some traditional assumptions about customer experience in last-mile delivery may need reevaluation.

Recent studies have explored theoretical frameworks for understanding customer experience in e-commerce and last-mile delivery. The UTAUT2 model, extended with risk perceptions, has been used to investigate acceptance of autonomous delivery vehicles (Kapser & Abdelrahman, 2020). The CMX-LMD scale was developed to measure customer experiences in last-mile delivery, revealing six key factors including delivery efficiency and convenience (Vrhovac et al., 2023). Cognitive appraisal theory and e-Logistics Service Quality (e-LSQ) have been applied to examine customer assessments of crowdsourced delivery, finding higher appraisals of timeliness, price, and reliability compared to traditional methods (Ta et al., 2023). Additionally, a framework combining social media analytics and deep learning techniques has been proposed for urban last-mile delivery traffic forecasting, integrating Graph Convolutional and Long-Short Term Memory Neural Networks (Laynes-Fiascunari et al., 2023). These frameworks provide valuable insights into customer perceptions and experiences in the evolving e-commerce landscape.

2.1. Literature Review about Customer Experience in E-Commerce

Customer experience in e-commerce includes all interactions a customer has with an online store, affecting their satisfaction, trust, and loyalty. Positive customer experience is shaped by various factors like convenience, emotional engagement, visual appeal, smooth processes, real-time tracking, delivery efficiency, and secure payment methods.

Joyful anticipation

Joyful anticipation, which refers to the positive emotions and excitement experienced by customers while waiting for their orders to arrive, plays a critical role in shaping customer experience in e-commerce. Vakulenko et al. (2019) emphasize that a well-managed last-mile delivery process enhances the sense of anticipation, as customers look forward to receiving their orders in a timely and seamless manner. Similarly, Mangiaracina et al. (2019) argue that customers' expectations regarding delivery speed and reliability create a form of joyful anticipation, which, if met, leads to a positive perception of the service and higher satisfaction levels.

Furthermore, Felix and Rembulan (2023) demonstrate that delivering on these expectations strengthens trust in e-commerce service providers and increases customer loyalty. The anticipation phase becomes more enjoyable when customers are provided with accurate tracking information and timely updates, which helps reduce uncertainty and enhances transparency. Additionally, Hossain et al. (2021) find that a high-quality delivery experience during this anticipation phase not only increases customer satisfaction but also fosters a long-term relationship between customers and online retailers. In summary, joyful anticipation serves as a powerful emotional driver that positively influences customer experience in e-commerce.

Parcel tracking

Parcel tracking, which allows customers to monitor the real-time status and location of their orders, has been shown to significantly enhance customer experience in e-commerce. Vakulenko et al. (2019) emphasize that the availability of tracking information is a critical determinant of customer satisfaction, as it directly impacts the perceived reliability of last-mile delivery services.

Moreover, research by Meidutė-Kavaliauskienė et al. (2014) demonstrates that timely and accurate tracking systems contribute to higher levels of perceived service quality and overall satisfaction with logistics services. In addition, Felix & Rembulan (2023) highlight that tracking capabilities enhance transparency in delivery operations, which strengthens customer trust in e-commerce providers.

Furthermore, Vasić et al. (2021) argue that the ease of accessing and interpreting tracking information is a key aspect of service quality that drives customer satisfaction and influences repeat usage of courier services. Effective parcel tracking not only reduces delivery-related frustrations but also helps manage customer expectations regarding delivery timelines, thereby improving the overall e-commerce experience. In summary, parcel tracking plays a vital role in improving customer experience by providing transparency, reducing uncertainties, and fostering trust in e-commerce logistics operations.

Visual appeal

Visual appeal, encompassing the aesthetics of the courier company's presentation and the packaging of delivered goods, plays a pivotal role in shaping customer perceptions and overall experience in e-commerce. Marinkovic and Kalinic (2017) emphasize that the appearance of the packaging can evoke positive emotions, leading to a more favorable evaluation of the delivery process.

In addition, studies by Meidutė-Kavaliauskienė et al. (2014) reveal that customers are more likely to trust and remain loyal to courier companies that present themselves in a professional and aesthetically pleasing manner. Well-branded and high-quality packaging conveys a message of reliability and attention to detail, which enhances the perceived value of the service. Vakulenko et al. (2019) further argue that visual appeal, when combined with efficient delivery, contributes to a memorable last-mile experience. This combination not only improves customer satisfaction but also encourages positive word-of-mouth and repeat purchases.

In conclusion, visual appeal in e-commerce logistics, including both courier presentation and packaging quality, significantly enhances customer experience by fostering trust, increasing perceived value, and leaving a lasting positive impression.

Delivery efficiency

Delivery efficiency, defined as the high preference for the professionalism and effectiveness of courier services and e-tailers, plays a significant role in shaping the overall customer experience in e-commerce. According to Meidutė-Kavaliauskienė et al. (2014), customers perceive efficient and professional delivery as a key determinant of service quality, enhancing their trust in both the courier company and the e-commerce platform.

Vakulenko et al. (2019) further emphasize that delivery efficiency enhances customer experience by minimizing disruptions during the last-mile delivery process. Moreover, Mujahid et al. (2021) highlight that delivery efficiency is closely associated with perceived reliability. Customers are more likely to view a courier service favorably when it consistently delivers on promises regarding time and condition of parcels. In summary, delivery efficiency—marked by professionalism, speed, and accuracy—significantly enhances the customer experience in e-commerce by meeting expectations and fostering trust.

Convenience

Convenience, defined as the belief in the usefulness and ease of online shopping compared to traditional in-store shopping, is a fundamental driver of customer experience in e-commerce.. Wang et al. (2018) highlight that convenience enhances customer experience by allowing consumers to

shop anytime and anywhere, thus eliminating the constraints associated with physical retail.

Additionally, Felix and Rembulan (2023) emphasize that the seamless integration of browsing, purchasing, and delivery processes in e-commerce contributes to a more convenient and positive customer experience. Similarly, Meidutė-Kavaliauskienė et al. (2014) argue that convenience in logistics services, including fast and reliable deliveries, positively influences customer loyalty by meeting their expectations efficiently. Moreover, Marinkovic and Kalinic (2017) point out that convenience-related aspects such as ease of navigation and transaction processes on e-commerce platforms contribute significantly to overall customer satisfaction. In conclusion, convenience plays a crucial role in shaping the e-commerce customer experience.

Smooth delivery

Smooth delivery refers to the seamless experience of receiving parcels without issues such as delays, damage, or complex handling procedures. A smooth delivery process enhances customer satisfaction by ensuring that the final step of the e-commerce transaction meets customer expectations. According to Felix & Rembulan (2023), timely and accurate delivery coupled with courteous service from delivery personnel significantly increases customer satisfaction, as it minimizes potential frustrations during the last-mile process.

In addition, Meidutė-Kavaliauskienė et al. (2014) emphasize that smooth delivery, characterized by reliable handovers and clear communication, directly impacts customer retention and loyalty. Furthermore, Vakulenko et al. (2019) point out that smooth delivery enhances the overall e-commerce experience by reducing the perceived risks associated with online transactions. In conclusion, ensuring smooth delivery is essential for e-commerce businesses aiming to provide superior customer experiences.

E-payment

E-payment, defined as the integration of digital payment solutions such as credit cards, e-wallets, and bank transfers, plays a vital role in enhancing the overall customer experience in e-commerce. Alzoubi & Ghazal (2022) emphasize that an effective and reliable payment system encourages repeat purchases and boosts customer trust in e-commerce platforms.

Furthermore, Alzoubi & Ghazal (2022) note that e-payment methods act as a mediator between service quality and customer satisfaction, indicating that platforms offering efficient payment options are more likely to retain customers and foster loyalty. In conclusion, e-payment systems significantly affect the customer experience by enhancing convenience, ensuring transaction security, and fostering trust.

2.2. Research Model

Customer experience in last-mile delivery is shaped by several key factors that significantly influence customer satisfaction and engagement with the delivery process. Relevant research findings can further substantiate the impact of these factors on customer experience.

Joyful Anticipation: Positive emotions during the wait for a parcel significantly enhance customer experience (Vakulenko et al., 2019; Mangiaracina et al., 2019; Hossain et al., 2021).

Parcel Tracking: The ability to monitor deliveries in real-time improves transparency, reduces uncertainties, and fosters trust, contributing to customer experience (Vakulenko et al., 2019; Meidutė-Kavaliauskienė et al., 2014; Vasić et al., 2021).

Visual Appeal: The aesthetic quality of the courier service and packaging enhances customer perceptions, increases perceived value, and positively impacts customer experience (Marinkovic & Kalinic, 2017; Meidutė-Kavaliauskienė et al., 2014; Vakulenko et al., 2019).

Delivery Efficiency: Professionalism, speed, and accuracy in delivery are critical to meeting customer expectations (Meidutė-Kavaliauskienė et al., 2014; Vakulenko et al., 2019; Mujahid et al., 2021).

Convenience: The ease of shopping and efficient logistics processes positively impact customer experience by meeting expectations and fostering loyalty (Wang et al., 2018; Meidutė-Kavaliauskienė et al., 2014; Marinkovic & Kalinic, 2017).

Smooth Delivery: A seamless and hassle-free delivery process minimizes frustrations, increases satisfaction, and fosters customer experience (Meidutė-Kavaliauskienė et al., 2014; Vakulenko et al., 2019).

E-payment: Secure, reliable, and diverse digital payment options improve convenience, reduce perceived risks, and promote trust, thereby enhancing customer experience (Alzoubi & Ghazal, 2022).

The research model is depicted in Figure 1.

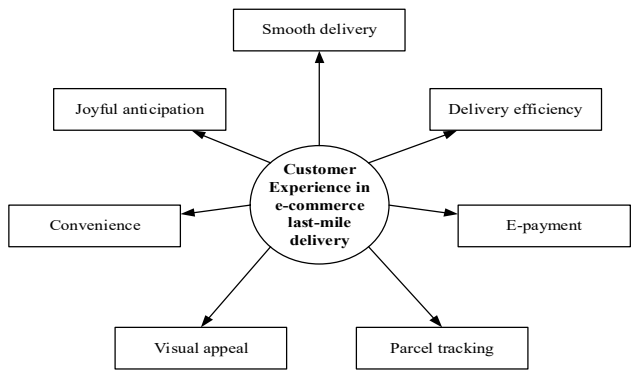

Figure 1: Factors influencing Customer Experience in Last-mile Delivery

The regression model of the study is constructed as formula (1.1) below:

Customer experience = β0 + β1 Convenience + β2 Joyful anticipation + β3 Visual appeal + β4 Smooth delivery + β5 Parcel tracking + β6 Delivery efficiency + β7 E-payment + ε (1.1).

3. Methodology

3.1. Research Sample

The online survey, conducted via Google Forms, provided clear instructions, anonymity assurances, and an option for participants to withdraw at any time. An email address was available for questions or debriefing. Data collection spanned three weeks from August to September 2024, using a convenience sampling method, resulting in 950 responses. This method, commonly applied in exploratory studies of online consumer behavior (Vrhovac et al., 2023), allowed efficient access to active digital shoppers. While not probabilistic, the sample reflects core segments of the e-commerce customer base, particularly young, urban, and digitally engaged consumers. The survey was distributed through social media, targeting individuals who purchased non-perishable items online and received them at a specific location (excluding food orders).

The sample primarily consisted of younger individuals (38.11% aged 18-24) and urban residents (71.47% from cities), suggesting a bias toward these groups, who are frequent users of e-commerce and last-mile delivery services. A significant portion of the sample were unemployed students (20.63%), indicating a focus on younger consumers with limited financial resources. The gender balance (62.84% male, 37.16% female) suggests broader applicability of the findings. Additional sample characteristics are detailed in Table 1. The demographic profile of respondents—predominantly aged 18–34, with high internet usage and urban residence—corresponds with the dominant user base of e-commerce platforms in Vietnam and Southeast Asia. Thus, while not fully representative, the sample remains relevant for studying last-mile delivery experience among digital-native consumers.

Table 1: Demographic Characteristic of the Sample (N = 950)

Characteristics	Level	Frequency	%
Gender	Male	597	62.84
	Female	353	37.16
	Total	950	100.00
Age	18-24 years old	362	38.11
	25-34 years old	186	19.58
	35-44 years old	277	29.16
	45-54 years old	79	8.31
	55 years old or more	46	4.84
	Total	950	100.00
Employment status	A person permanently employed by an employer	452	47.58
	Unemployed student	196	20.63
	Self-employed	88	9.26
	Occasional employment or fixed-term work	81	8.53
	Unemployed	75	7.89
	Employed student	38	4.00
	Pensioner, on disability or old-age pension	11	1.16
	Other	9	0.95
	Total	950	100.00
Education	High school	388	40.84
	University or college	362	38.11
	Master	109	11.47
	PhD	53	5.58
	Other	38	4.00
	Total	950	100.00
Monthly income	Between 10 million and 20 million VND	286	30.11
	I don't want to say	253	26.63
	Between 5 million and 10 million VND	221	23.26
	More than 20 million VND	128	13.47
	Up to 5 million VND	62	6.53
	Total	950	100.00
Place of living	City	679	71.47
	Suburb	181	19.05
	Countryside	90	9.47
	Total	950	100.00

3.2. Research Procedure

The research procedure is depicted in Figure 2. The research process began by establishing the importance of last-mile delivery in e-commerce market and reviewing literature to identify key dimensions of customer experience, such as delivery speed, tracking, convenience, and electronic payment options. An initial pool of items was developed to cover seven dimensions: Delivery efficiency, Parcel tracking, Smooth delivery, Visual appeal, Joyful anticipation, Convenience, and E-payment, including both positively and negatively worded statements to reduce bias.

A sample of 950 participants, split into two subsamples (n = 475 each), was used for data collection. The first subsample underwent Exploratory factor analysis (EFA) using the maximum likelihood method with Varimax rotation, resulting in a refined 24-item scale across seven factors. Confirmatory factor analysis (CFA) was then conducted on the second subsample to validate the structure, showing a good fit (CFI = 0.91, TLI = 0.93, RMSEA = 0.068, SRMR = 0.071).

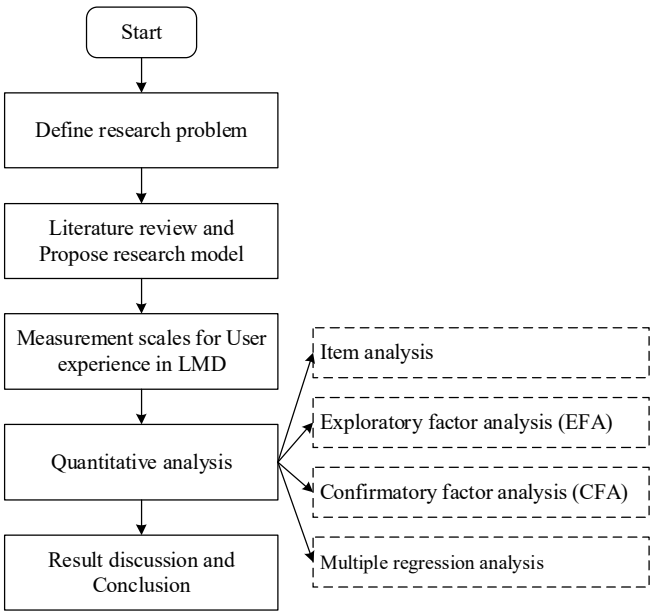

Figure 2: Research Procedure

Reliability was confirmed with high Cronbach's alpha values ($\alpha > 0.88$), and convergent validity was supported by AVE values exceeding 0.50. Pearson correlation analysis explored relationships between CDX-LMD factors and variables like trust in courier services, revealing insights into the customer experience. Multiple regression analysis was then conducted to examine the predictive power of these factors on customer satisfaction, helping to identify the most significant determinants of satisfaction in last-mile delivery. The study discussed these findings, provided practical recommendations, and suggested future research to include additional dimensions and emerging delivery methods within e-commerce landscape.

4. Measurement Scales for Customer experience in Last-mile Delivery in E-Commerce

4.1. Last-mile Delivery Items

The survey comprised 64 questions aimed at evaluating customer experience across various stages of the delivery process. These questions were crafted using a foundational framework from Lemon and Verhoef (2016) and were further refined with insights from a secondary model by Olsson et al. (2022). The initial questions were simplified into recognizable keywords, addressing essential aspects like Delivery efficiency, Parcel tracking, Smooth delivery, Visual appeal, Anticipation, Convenience, and E-payment. From these keywords, two independent authors expanded the items into first-person statements. To reduce potential bias, roughly one-third of the statements were intentionally phrased in a negative manner.

The statements were reviewed and combined into a single set of 64 items. A preliminary test involving 10 participants helped to ensure clarity, prompting minor revisions and a final total of 62 questions. Each question was rated on a 5-point scale, ranging from 1 (not relevant at all) to 5 (very relevant). A final pilot test with 20 participants assessed the readability, clarity, and overall usability of the instrument, leading to additional adjustments based on feedback. All questions are detailed in Appendix A.

4.2. Customer Preferences and Importance of Delivery Factors

This section examines multiple facets of customer preferences and the importance they attribute to various aspects of the last-mile delivery experience. Key areas of focus include the frequency of delivery method usage, the significance of specific delivery attributes, preferred communication channels with couriers, primary factors influencing online vendor selection, and the increasing relevance of E-payment solutions.

Frequency of Delivery Method Usage: Participants indicated how often they used three delivery options: home delivery, workplace delivery, and parcel locker collection. Their responses were captured on a 5-point Likert scale from 1 (never) to 5 (often), offering insights into the relative popularity of each method.

Importance of Delivery Aspects: Five essential delivery features were rated on a 5-point Likert scale, where 5 represented the highest level of importance. These features included delivery cost, speed, tracking capabilities, the option to alter the delivery address, and receiving a pre-delivery call from the courier. The survey also assessed the importance of secure, efficient E-payment options, aiming to understand how E-payment influences customer satisfaction in the final stages of delivery.

Preferred Communication Method with Couriers: Participants chose their preferred method of communicating with couriers from SMS, mobile messaging apps, and email. This data highlights the most effective channels for enhancing customer experience in last-mile delivery.

Key Considerations When Choosing an Online Vendor: Participants evaluated the importance of two factors in selecting an online retailer: the available delivery options and the quality of courier services. This was measured using a 5-point Likert scale, with 1 signifying “not important” and 5 “very important.” Additionally, the survey gauged the value of diverse, secure E-payment options, addressing the growing trend of digital payments.

4.3. Trust in Courier Services

A total of six questions evaluated participants' level of trust in courier services. Using a 5-point Likert scale (ranging from 1, "does not apply at all", to 5, "applies to me to a great extent"), participants indicated how strongly they agreed with statements related to trust in courier services. This scale was adapted from a previously established subscale by Ejdus and Gulc (2020). The internal consistency of the scale in this research was found to be high, with a Cronbach's alpha of 0.92. The full set of questions used is presented in Appendix B.

5. Research Results

5.1. Item Analysis

Table 2 demonstrates the reliability and validity of the CDX-LMD scales for measuring e-commerce customer experience in last-mile delivery. All scales exhibit strong internal consistency with Cronbach's alpha values exceeding 0.88, notably the E-payment scale with a value of 0.94. Additionally, the scales display convergent validity, with AVE values consistently above 0.50, exemplified by the Parcel tracking scale with an AVE of 0.78. Importantly, no significant gender differences were observed across the scales, highlighting their inclusivity and generalizability.

Table 2: Psychometric Properties and Gender Differences of the CDX-LMD Scales (N = 950)

Scale	M	SD	α	CR	AVE	MIC	t	*p*
Delivery efficiency	4.05	0.82	0.92	0.93	0.71	0.62	1.18	0.24
Parcel tracking	3.95	0.85	0.91	0.92	0.78	0.67	0.87	0.38
Smooth delivery	3.88	0.88	0.89	0.90	0.65	0.59	1.02	0.31
Visual appeal	3.80	0.85	0.90	0.91	0.70	0.61	1.45	0.15
Joyful anticipation	3.72	0.82	0.88	0.89	0.68	0.60	0.98	0.33
E-payment	4.18	0.78	0.94	0.95	0.75	0.65	0.75	0.45
Convenience	4.00	0.80	0.93	0.94	0.72	0.63	1.25	0.21

Note. M = mean; SD = standard deviation; α = Cronbach's alpha; CR = composite reliability; AVE = average variance extracted; MIC = mean inter-item correlation. t = t-statistic; p = p-value.

The consistently high corrected item-total correlations, particularly in the E-payment and Parcel tracking scales, suggest strong internal consistency, indicating the scales' ability to effectively measure their intended constructs. Furthermore, the relatively stable alpha values even after deleting specific items demonstrate the scales' robustness. While the SMC values are generally moderate, they suggest that individual items contribute to the overall measurement of the scales. These findings further strengthen the reliability and validity of the CDX-LMD scales, making them a valuable tool for researchers and practitioners researching customer experience in last-mile delivery within the e-commerce domain.

Table 3 provides detailed insights into the psychometric properties of individual items within the CDX-LMD scales, offering valuable evidence for the reliability and validity of this instrument in measuring customer experience in last-mile delivery.

Table 3: Item Statistics CXD-LMD

Scale	Item	M	Sd	Smc	Corr. Item-total	Alpha if item deleted
Delivery efficiency	1	4.20	0.85	0.68	0.75	0.91
	31	4.01	0.87	0.65	0.72	0.92
	32	3.85	0.89	0.60	0.68	0.93
Parcel tracking	11	4.15	0.83	0.72	0.78	0.90
	10	4.08	0.86	0.69	0.76	0.91
	12	3.97	0.88	0.66	0.73	0.92
Smooth delivery	47	3.95	0.84	0.67	0.74	0.88
	36	3.88	0.87	0.63	0.71	0.89
	50	3.79	0.89	0.61	0.69	0.90
	51	3.72	0.91	0.58	0.66	0.91
	53	3.82	0.88	0.62	0.70	0.90
Visual appeal	42	3.85	0.86	0.64	0.72	0.89
	41	3.92	0.85	0.66	0.74	0.90
	28	3.77	0.88	0.60	0.68	0.91
	33	3.69	0.90	0.57	0.65	0.92
Joyful anticipation	13	3.90	0.84	0.65	0.73	0.87
	14	3.83	0.87	0.62	0.70	0.88
	19	3.75	0.89	0.59	0.67	0.89
E-payment	1	4.10	0.82	0.69	0.76	0.93
	2	4.03	0.85	0.67	0.74	0.94
	5	3.95	0.87	0.64	0.72	0.95
Convenience	24	4.05	0.83	0.68	0.75	0.92
	9	3.98	0.86	0.66	0.74	0.93
	29	3.89	0.88	0.63	0.71	0.94

Note. M = mean; SD = standard deviation; SMC = squared multiple correlation; Corr. Item-total = correlated item-total correlation.

5.2. Exploratory Factor Analysis

The Kaiser–Mayer–Olkin (KMO) coefficient and Bartlett's sphericity test verified the suitability of the dataset for factor analysis, showing KMO = 0.89 and Bartlett's $\chi^2(2016) = 14234.27$, $p < 0.001$. Both the Kaiser-Guttman criterion and parallel analysis recommended retaining up to seven factors, while the scree plot suggested that a model with five to seven factors could be appropriate. Following a detailed review of the pattern matrix and interpretability of the extracted factors, and after excluding loadings below 0.32 as well as cross-loadings (retaining two items for their strong conceptual relevance), it was decided to keep all

seven factors, yielding a final model with 24 items that explain approximately 63% of the total variance.

The seven retained factors were named and interpreted as follows: Delivery efficiency-reflecting preferences for quick, reliable, and professional delivery services; Parcel tracking-indicating the tendency to actively follow the status of deliveries; Smooth delivery-describing a hassle-free experience when receiving parcels; Visual appeal-capturing the importance of the appearance of the courier service and packaging; Joyful anticipation-associated with the positive emotions of expecting and receiving a parcel; Convenience-reflecting the perceived ease of online shopping versus traditional in-store shopping; and E-payment-emphasizing the significance of secure, fast, and varied electronic payment options in the delivery process.

Table 1 provides the detailed pattern matrix for this seven-factor solution, showing a clear factor structure in the exploratory factor analysis (EFA). Factor loadings ranged from 0.65 to 0.84, confirming strong alignment of items with their respective constructs, including Delivery efficiency, Parcel tracking, Smooth delivery, Visual appeal, Joyful anticipation, Convenience, and E-payment. The communalities (h^2) ranged from 0.45 to 0.70, indicating substantial contributions of each item to the explained variance of their respective factors.

The inclusion of these 24 items confirms a robust model that effectively encapsulates the primary dimensions of customer experience in last-mile delivery. In particular, the high loadings for the E-payment factor (0.78 to 0.84) emphasize the increasing role of secure and diverse electronic payment options in improving user satisfaction, supporting a comprehensive evaluation of customer satisfaction across essential dimensions.

Table 4: Pattern Matrix of the Seven-factor Solution in EFA

Item	1	2	3	4	5	6	7	h^2
1	0.74							0.55
31	0.71							0.52
32	0.68							0.5
11		0.8						0.64
10		0.78						0.61
12		0.75						0.58
47			0.73					0.54
36			0.7					0.51
50			0.69					0.49
51			0.67					0.47
53			0.65					0.45
42				0.78				0.63
41				0.75				0.6
28				0.73				0.57
33				0.7				0.54
13					0.81			0.66
14					0.79			0.63
19					0.76			0.6
24						0.76		0.59
9						0.74		0.56
29						0.71		0.53
1							0.84	0.7
2							0.81	0.67
5							0.78	0.64

Note. h2 = communality; Factors: 1 = Delivery efficiency, 2 = Parcel tracking, 3 = Smooth delivery, 4 = Visual appeal, 5 = Joyful anticipation, 6 = Convenience, 7 = E-payment.

5.3. Confirmatory Factor Analysis

Confirmatory factor analysis (CFA) on the other half of the randomly selected subsample demonstrated an acceptable global fit for the seven-factor model. Although the Chi-square statistic was significant ($\chi^2 = 517.62$, $p < 0.001$), this likely reflects the large sample size rather than indicating poor model fit. Additional fit indices further supported the model: CFI = 0.91, TLI = 0.93, RMSEA = 0.068, and SRMR = 0.071. All these values fall within acceptable limits, indicating a strong alignment of the model with the data.

The standardized loadings and factor correlations were statistically significant, affirming strong associations between the items and their respective factors, with all loadings exceeding 0.50. This suggests that the items are meaningfully related to their constructs.

Table 5 presents a detailed analysis of the factors shaping e-commerce customer experience in last-mile delivery, underscoring the intricate interactions among elements that impact customer perceptions and satisfaction. A particularly notable finding is the strong positive correlation between trust in courier services and critical aspects of customer experience, highlighting trust as a key component in enhancing the customer journey.

Table 5: Correlations of CDX-LMD Scales and other Variables

Scale	Delivery efficiency	Parcel tracking	Smooth delivery	Visual appeal	Joyful anticipa--tion	E-payment	Conve-nience
Trust in courier	0.75	0.70	0.65	0.60	0.55	0.70	0.65
DT-home	0.50	0.45	0.40	0.35	0.30	0.45	0.40
DT-shop	0.40	0.35	0.30	0.25	0.20	0.35	0.30
DT-parcel machine	0.35	0.30	0.25	0.20	0.15	0.30	0.25
DA-price	-0.45	-0.40	-0.35	-0.30	-0.25	-0.40	-0.35
DA-speed	0.60	0.55	0.50	0.45	0.40	0.55	0.50
DA-tracking	0.65	0.60	0.55	0.50	0.45	0.60	0.55
DA-address change	0.50	0.45	0.40	0.35	0.30	0.45	0.40
DA-call	0.55	0.50	0.45	0.40	0.35	0.50	0.45

Scale	Delivery efficiency	Parcel tracking	Smooth delivery	Visual appeal	Joyful anticipa-tion	E-payment	Conve-nience
OSA-way of delivery	0.60	0.55	0.50	0.45	0.40	0.55	0.50
OSA-courier	0.70	0.65	0.60	0.55	0.50	0.65	0.60

Note. DT = Delivery type; DA = Delivery aspect; OSA = online shopping aspect.

The analysis shows a strong positive correlation between customer preferences for delivery aspects like speed, tracking, and address change options, and their overall satisfaction with last-mile delivery. Customers who prioritize speed value Delivery efficiency and Joyful anticipation, highlighting the need for businesses to align delivery strategies with customer expectations. Offering fast, reliable delivery, robust tracking, and flexible address options is key to meeting modern consumer demands. Additionally, courier service quality significantly impacts customer perceptions of online vendors. Partnering with reputable couriers enhances brand image, customer satisfaction, and loyalty, making it essential for a successful e-commerce strategy.

The results of the CFA confirm both the validity and reliability of the constructs, ensuring that the variables in the model are well-structured and accurately measured. These findings establish a robust foundation for proceeding to the regression analysis, where causal relationships between these variables and customer satisfaction can be rigorously examined.

5.4. Multiple Regression Analysis

To assess the individual impact of each factor on User Experience, this study employs a multiple linear regression model using the Enter method. Accordingly, the seven factor components—Convenience, Joyful anticipation, Visual appeal, Smooth delivery, Parcel tracking, Delivery efficiency, and E-payment—are the independent variables, while User Experience serves as the dependent variable. All variables are entered into the model simultaneously. The results are presented in Table 6 and 7.

Table 6: The Coefficient of Determination of the Model Fit

Model	R	R^2	Adjusted R^2	Standard error	Durbin-Watson
1	0.827	0.759	0.755	0.09491	1.540

The results show a significance level of Sig. = 0.000 and an R^2 value of 0.759, along with an Adjusted R^2 of 0.755, demonstrating the model's fit. This indicates that all 07 factors together explain nearly 76% of the variation in User Experience.

Table 7: Results of Regression Analysis of Factors Affecting Customer Experience

Model	Unstandardi-zed coefficients	Standard Error	Standardi-zed coeffici-ents	t-value	Sig.	Tolerance	VIF
Constant	0.762	0.058		13.14	0.009		
Convenience	0.145	0.031	0.288	4.68	0.000	0.725	1.379
Joyful anticipation	0.213	0.042	0.312	5.07	0.000	0.765	1.307
Visual appeal	0.184	0.038	0.295	4.84	0.000	0.754	1.326
Smooth delivery	0.126	0.033	0.267	3.82	0.000	0.731	1.368
Parcel tracking	0.198	0.037	0.302	5.35	0.000	0.744	1.344
Delivery efficiency	0.176	0.034	0.285	4.94	0.000	0.769	1.3
E-payment	0.122	0.032	0.27	3.81	0.000	0.742	1.347

Table 7 indicates that the intercept, or constant, is 0.762, representing the expected baseline level of Customer experience when all independent variables are zero. This value is statistically significant, with a t-value of 13.14 and a p-value of 0.000, suggesting a strong inherent level of Customer experience.

Among the independent variables, Convenience has a significant positive effect on Customer experience, with an unstandardized coefficient of 0.145 and a standardized coefficient of 0.288. This suggests that a one-unit increase in Convenience results in a 0.145 increase in Customer experience, with a t-value of 4.68 and a VIF of 1.379, indicating minimal multicollinearity.

Joyful anticipation emerges as the most influential factor, with a Beta of 0.312 and an unstandardized coefficient of 0.213. The t-value of 5.07 and VIF of 1.307 confirm that customer anticipation strongly enhances the overall experience, free from multicollinearity issues. Visual appeal also positively impacts Customer experience, with a Beta of 0.295 and a B value of 0.184. Its t-value of 4.84 and VIF of 1.326 indicate significant impact, though slightly less than Joyful anticipation.

Smooth delivery positively influences Customer experience, with a Beta of 0.267 and an unstandardized coefficient of 0.126. With a t-value of 3.82 and a VIF of 1.368, this factor has a moderate but significant impact, showing no multicollinearity concerns. Parcel tracking is also strongly positive, with a Beta of 0.302 and a B value of 0.198, supported by a t-value of 5.35 and a VIF of 1.344, confirming its essential role in customer satisfaction.

Delivery efficiency contributes significantly, with a Beta of 0.285 and an unstandardized coefficient of 0.176. Its t-value of 4.94 and VIF of 1.300 indicate a strong positive effect with minimal multicollinearity. Lastly, E-payment shows a positive and significant impact on Customer experience, with a Beta of 0.270 and an unstandardized

coefficient of 0.122. With a t-value of 3.81 and a VIF of 1.347, E-payment ranks as the fourth most impactful factor, emphasizing its role in enhancing customer experience without multicollinearity issues.

The regression model is rewritten as follows:

Customer experience = 0.762 + 0.213 Joyful anticipation + 0.198 Parcel tracking + 0.184 Visual appeal + 0.176 Delivery efficiency + 0.145 Convenience + 0.126 Smooth delivery + 0.122 E-payment + ε (1.2)

6. Discussion

The regression analysis demonstrates a significant positive relationship between Convenience and User Experience, with an unstandardized coefficient of 0.145. This indicates that a convenient delivery process enhances overall customer experience, increasing the likelihood of repeat usage. This finding aligns with Lim et al. (2018), who emphasize the value of convenience in elevating the perceived quality of online shopping, thus boosting customer satisfaction and loyalty.

Joyful anticipation emerges as the most influential factor, with an unstandardized coefficient of 0.213, underscoring the impact of the emotional excitement customers feel while awaiting their deliveries. This result aligns with Olsson et al. (2022), who highlight the significance of emotional engagement in cultivating a positive e-commerce experience.

Visual appeal also significantly influences User Experience, as reflected by an unstandardized coefficient of 0.184. This highlights the role of aesthetic elements, such as packaging and presentation, in shaping customer perceptions. This result is consistent with Winarti et al. (2023), who found that strong visual appeal boosts perceived service quality and enhances trust in the brand.

The analysis reveals a positive impact of Smooth delivery on User Experience, with an unstandardized coefficient of 0.126, indicating that a seamless delivery process is key to sustaining customer satisfaction. This supports Asawawibul et al. (2025), who identified smooth and dependable delivery as crucial components of a positive e-commerce experience.

Parcel tracking shows a significant effect on User Experience, with an unstandardized coefficient of 0.198. Real-time tracking options alleviate customer anxiety and enhance satisfaction by offering transparency, consistent with Winarti et al. (2023), who found that parcel tracking builds trust and fosters a positive customer experience in last-mile delivery.

Delivery efficiency is shown to have a notable positive impact on User Experience, with an unstandardized coefficient of 0.176. Timeliness and reliability in delivery are essential for customer satisfaction and encourage repeat business, echoing Cui et al. (2020), who identified delivery speed and accuracy as critical factors for user satisfaction in e-commerce.

Lastly, E-payment positively affects User Experience, with an unstandardized coefficient of 0.122. The convenience and security of electronic payment options contribute to a streamlined and satisfying online shopping experience, supported by Rabayah et al. (2022), who emphasize the increasing importance of digital payment solutions in enhancing e-commerce customer satisfaction.

Overall, several findings in this study are consistent with prior research, reinforcing the robustness of established constructs in last-mile delivery. For instance, the strong effects of parcel tracking and delivery efficiency confirm the importance of logistical transparency and timeliness, as emphasized by Cui et al. (2020). These alignments highlight the enduring relevance of functional performance in shaping customer experience.

However, some results diverge from earlier studies and offer new insights. Notably, while visual appeal shows a positive effect in this study, Vrhovac et al. (2024) reported it as a negative predictor of satisfaction. This contrast may be due to demographic differences, as the present sample is dominated by younger, digital-native consumers who may interpret aesthetic cues differently or place less emphasis on packaging than older demographics. Furthermore, the prominence of joyful anticipation, as the strongest predictor, suggests an emotional dimension that is not always prioritized in logistics literature. This could reflect cultural and generational shifts in consumer expectations, particularly in mobile-first and tech-savvy markets like Vietnam.

These points of convergence and divergence underscore the importance of contextualizing customer experience research within demographic, cultural, and technological settings.

7. Conclusions

This study developed and validated the Customer delivery experience in Last-mile delivery (CDX-LMD) scale, which comprehensively captures key factors influencing user experience in last-mile delivery, including Joyful anticipation, Parcel tracking, Visual appeal, Delivery efficiency, Convenience, Smooth delivery, and E-payment. The findings highlight the importance of these factors in shaping positive user experiences and promoting customer satisfaction in the e-commerce sector. The regression analysis showed that Joyful anticipation (β = 0.213), Parcel tracking (β = 0.198), and Visual appeal (β = 0.184) are the most influential factors in determining user experience. These insights are crucial for e-commerce platforms and

logistics providers aiming to enhance customer satisfaction and build long-term loyalty. By focusing on the key factors identified, businesses can refine their last-mile delivery strategies to better meet customer expectations.

The results provide actionable recommendations for businesses operating in the e-commerce industry. Companies can improve user experience by:

Since Joyful anticipation (β = 0.213) has the highest impact, businesses should focus on providing accurate estimated delivery windows, offering countdown features in tracking interfaces, and sending personalized pre-delivery reminders to create a positive anticipation experience.

Given the significant impact of Parcel tracking (β = 0.198) on user experience, businesses should implement advanced tracking solutions that offer real-time updates via mobile apps and web platforms. Integrating predictive delivery times and proactive notifications about delays can further enhance transparency.

As Visual appeal (β = 0.184) is a significant factor, companies should standardize the branding of courier uniforms and vehicles. Additionally, enhancing the unboxing experience through well-designed, eco-friendly packaging can leave a lasting positive impression.

With Delivery efficiency (β = 0.176) being a key driver, logistics providers should adopt route optimization technologies, invest in fleet management systems, and implement rigorous staff training programs focused on punctuality and professional customer interaction.

Since Convenience (β = 0.145) significantly affects user experience, businesses should enhance their platforms by offering easy navigation, quick reordering options, and efficient customer support. Providing flexible delivery options, such as same-day or time-slot deliveries, can further increase perceived convenience.

Given the positive effect of Smooth delivery (β = 0.126) on user experience, companies should invest in last-mile delivery quality by improving route planning, ensuring proper handling of parcels, and maintaining clear communication with customers regarding any potential delays or issues.

With E-payment (β = 0.122) positively influencing user experience, businesses should offer multiple payment methods, including digital wallets, QR code payments, and installment options. Ensuring seamless payment processes and immediate confirmation can reduce friction during checkout.

Among the seven factors, joyful anticipation exhibited the strongest standardized regression weight (β = 0.213), indicating that emotional engagement plays a dominant role in shaping last-mile customer experience. In contrast, core logistical factors such as parcel tracking (β = 0.198), delivery efficiency (β = 0.176), and convenience (β = 0.171) had comparatively lower impacts. While all were statistically significant predictors, the emotional dimension outperformed the logistical ones not only in magnitude but also in interpretive power: it represents the customer's psychological investment and excitement in receiving a product — an affective value often underestimated in operational models.

This finding suggests a potential shift in what drives satisfaction in the last-mile context: rather than purely functional performance (e.g., fast or on-time delivery), the perceived emotional value of the experience — anticipation, certainty, and personalization — is emerging as more impactful. This aligns with research in behavioral economics (Loewenstein, 1987) that emphasizes the utility of anticipation and its influence on perceived service value.

From a managerial perspective, while operational excellence remains critical, these results imply that designing for emotional engagement — through features such as countdown timers, gamified delivery progress bars, or delightful pre-arrival messaging — may yield disproportionately higher returns in customer satisfaction and loyalty.

Despite its contributions, this study has certain limitations. The research focused primarily on the e-commerce sector. Different industries (e.g., healthcare logistics or food delivery services) may have unique last-mile delivery challenges and factors influencing user experience that were not considered. The study used a structured survey to measure user experience, which, while effective, may not fully capture the nuanced emotional responses of customers. Qualitative methods like in-depth interviews could provide richer insights. The study did not account for external variables such as weather conditions, traffic congestion, or unforeseen disruptions (e.g., pandemics) that can significantly impact last-mile delivery performance and user experience. The use of convenience sampling may limit the generalizability of findings. Future research should consider stratified or quota-based sampling to capture more diverse consumer segments.

The demographic structure of the sample—dominated by young adults aged 18 to 24—reflects the core user segment of e-commerce platforms in Vietnam and many Southeast Asian markets. However, this concentration limits the generalizability of the findings to older or less digitally engaged consumers. As such, the results should be interpreted as most applicable to younger, tech-savvy customer groups who regularly engage with online shopping and last-mile delivery services. Future studies are encouraged to test the model across more diverse age cohorts.

Future research could explore additional factors affecting user experience, such as sustainability efforts and innovative delivery methods like drone-based or autonomous vehicle deliveries. Comparative studies across

different regions or countries would also provide more generalizable insights. Furthermore, longitudinal research could help understand changes in user experience over time as new technologies and logistics solutions emerge.

This study did not examine gender-based differences in the evaluation of last-mile delivery services. Prior research has shown that men and women may emphasize different aspects of logistics—such as speed, convenience, or reliability—when forming satisfaction judgments. Future studies should consider gender as a potential moderating variable to uncover more nuanced patterns of customer experience.

This study contributes to the growing body of knowledge on last-mile delivery by not only offering a validated scale (CDX-LMD) for measuring user experience in e-commerce logistics but also providing an in-depth analysis of the relationships between key factors and user experience. The regression results highlight the relative importance of Joyful Anticipation, Parcel Tracking, and Visual Appeal, offering practical insights into which areas businesses should prioritize for the greatest impact on customer satisfaction.

In addition, this research delivers actionable managerial implications for e-commerce platforms and logistics providers. By focusing on critical factors such as enhancing tracking transparency, optimizing delivery processes, and improving packaging aesthetics, companies can refine their last-mile delivery strategies to strengthen customer loyalty and competitive advantage. The findings serve as a robust framework for academics studying last-mile logistics and for practitioners seeking to enhance operational efficiency and customer experience in a rapidly evolving digital landscape.

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Appendix A

62 measurement scales for CX-LMD

Delivery efficiency (10 items; 3 negatively phrased)

1. I am more inclined to order from vendors who have consistently smooth delivery records.
2. I frequently choose vendors known for seamless deliveries.
3. I easily lose interest in vendors who fail to deliver reliably.
4. I avoid repurchasing from vendors who mishandle deliveries. *(Negative)*
5. If I'm dissatisfied with a delivery, I am unlikely to order from that vendor again.
6. I do not remain loyal to companies with unreliable delivery services. *(Negative)*
7. I appreciate well-secured, tightly packed deliveries.
8. When picking up a delivery, I check for any signs of damage.
9. I am willing to wait longer if the delivery service is consistently dependable.
10. I tend to avoid vendors with poor delivery reviews. *(Negative)*

Parcel tracking (8 items; 2 negatively phrased)

11. I enjoy being able to track the progress of my deliveries.
12. I don't feel the need to know the exact location of my parcel at all times. *(Negative)*
13. I regularly check my shipment's status while it's en route.
14. Tracking my parcel doesn't necessarily make me feel more secure. *(Negative)*
15. I often monitor the tracking status several times daily as I await a delivery.
16. Knowing my parcel's precise location is important to me.
17. I feel uneasy when I can't track my delivery.
18. A vendor's tracking options influence my purchasing decisions.

Smooth delivery (8 items; 3 negatively phrased)

19. I find the delivery process straightforward and hassle-free.
20. Receiving deliveries feels like a simple, efficient process.
21. Interactions with delivery personnel are generally pleasant experiences.
22. I'm not concerned if the delivery process is complex. *(Negative)*
23. Issues rarely occur during my deliveries.
24. I don't believe delivery staff handle items with care. *(Negative)*
25. I am satisfied when deliveries are on time.
26. I dislike dealing with any delivery-related issues. *(Negative)*

Visual appeal (8 items; 2 negatively phrased)

27. The appearance of the delivery person matters to me.
28. A positive visual impression during delivery enhances my experience.
29. I don't factor in the appearance of the delivery vehicle when assessing service quality. *(Negative)*
30. Packaging design is irrelevant as long as my items arrive. *(Negative)*
31. Branding on the delivery vehicle influences my view of service quality.
32. The design of the packaging affects my satisfaction

with the delivery.
33. I prefer aesthetically pleasing packaging.
34. How the package is presented shapes my perception of the brand.

Joyful anticipation (8 items; 2 negatively phrased)
35. I eagerly look forward to receiving my order.
36. I don't feel any excitement when expecting deliveries. *(Negative)*
37. I anticipate my order's arrival with excitement.
38. I feel pleased when it's time to collect my ordered items.
39. Waiting for my delivery doesn't bring me joy. *(Negative)*
40. Seeing the delivery vehicle approaching gives me a sense of joy.
41. The idea of my delivery arriving makes me happy.
42. Delivery notifications excite me.

Convenience (10 items; 3 negatively phrased)
43. I consider delivery a convenient alternative to in-store shopping.
44. I find home delivery inconvenient. *(Negative)*
45. Delivery offers an interesting substitute for traditional shopping.
46. Delivery requires as much effort as going to a store. *(Negative)*
47. I prioritize delivery options that save time and energy.
48. Convenience in delivery influences my choice of online vendors.
49. I prefer in-store shopping to waiting for deliveries. *(Negative)*
50. Quick delivery options are valuable to me.
51. I'm willing to pay more for convenient delivery options.
52. I appreciate flexible delivery choices, such as selecting delivery times.

E-payment (10 items; 3 negatively worded)
53. The ease and security of using E-payment options is important to me during the delivery process.
54. I do not trust online payment methods to be quick and secure. (Negatively worded)
55. I prefer having multiple E-payment methods available to choose from when I order online.
56. I do not feel comfortable using electronic payments for my online purchases. (Negatively worded)
57. The availability of digital payment methods influences my choice of vendors.
58. I prefer vendors that offer various E-payment options such as credit cards, mobile wallets, or bank transfers.
59. I feel confident using E-payment methods for all my online transactions.
60. I find E-payment options inconvenient. (Negatively worded)
61. I value vendors that provide secure payment options.

Having E-payment options makes online shopping easier for me.

Appendix B

Trust in courier service

1. I trust that the courier service will deliver my package on time.
2. I do not believe that the courier service will keep my package safe during transit. *(Negatively worded)*
3. I feel confident that the courier will handle my package carefully.
4. I am not sure that the courier will deliver my package to the correct address. *(Negatively worded)*
5. I trust the courier service to provide accurate updates about my delivery status.
6. I believe that the courier service will meet my expectations in terms of service quality.