

# Service Quality, Customer Satisfaction, Customer Trust, and Loyalty in Crowdsourced Delivery Logistics

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## Abstract

With advancements in technology, crowdsourced delivery models have increasingly become mainstream, showcasing numerous advantages compared to traditional delivery methods. However, a comprehensive literature review reveals a notable gap in research on service quality within crowdsourced delivery logistics.

This study constructs a research model to delve into the complex relationships between service quality, customer satisfaction, customer trust, and loyalty. The results indicate that personal contact quality, timeliness, order handling, order status, and operational information sharing all have a significant positive impact on customer satisfaction and trust, with timeliness and personal contact quality having the most pronounced effects. However, the influence of customer satisfaction on customer trust is not significant, suggesting that customer trust in crowdsourced delivery may be affected by other factors. Both customer trust and satisfaction significantly impact customer loyalty, with customer trust having a particularly prominent effect. Based on these findings, this study recommends that crowdsourced delivery service providers should enhance the timeliness and personalization of their services to improve customer satisfaction and trust. Additionally, considering the non-significant impact of customer satisfaction on trust, service providers should focus on other factors that influence customer trust, such as information security and service consistency, to strengthen long-term customer loyalty.

**Keywords:** Crowdsourced Delivery Logistics; Logistics Service Quality; Customer Satisfaction; Customer Trust; Customer Loyalty

## Introduction

Crowdsourced delivery has rapidly reshaped the last-mile logistics landscape by utilizing digital platforms to connect independent couriers with customers in real time. Compared to traditional logistics models, crowdsourced delivery offers flexibility and cost-effectiveness, but also introduces operational uncertainty due to the decentralized and dynamic nature of its workforce (Gdowska et al., 2018). In this context, service quality becomes a multifaceted concept, encompassing not only timeliness and accuracy but also the quality of personal contact, condition of the goods, and transparency of operational information. These service elements are fundamental to how customers evaluate their delivery experiences and form expectations.

High customer satisfaction is typically the immediate outcome of quality service. When services are delivered efficiently and in good condition, customers are more likely to feel content with their experience. However, in crowdsourced logistics where each transaction may involve a different delivery agent maintaining consistent satisfaction becomes more challenging. Moreover, satisfaction does not automatically lead to customer trust. Trust in this context depends not just on individual service interactions but on the perceived reliability, transparency, and security of the overall delivery platform (Chibotaru & Chankov, 2021). Customers must feel confident not only that deliveries will be completed as promised, but also that their personal data and service expectations are protected and respected.

Ultimately, customer loyalty—the willingness to repeatedly use and recommend a service—relies on the combined effect of satisfaction and trust. While satisfaction may drive short-term behavior, long-term loyalty is often secured through sustained trust in the platform's ability to deliver consistently, handle issues fairly, and communicate clearly (Kadadha et al., 2024). Despite the growing importance of crowdsourced delivery models, there is still limited empirical research that explores how these four constructs—service quality, satisfaction, trust, and loyalty—interact in this unique setting. This study aims to fill this gap by examining these interrelationships within the context of crowdsourced logistics services.

## Research objectives

1. Analysis of the impact of crowdsourcing delivery service quality characteristics on customer satisfaction.

2. Analysis of the direct impact of crowdsourcing delivery service quality characteristics on customer satisfaction and customer trust.
3. Analysis of the direct impact of customer satisfaction and customer trust on customer loyalty.
4. Analysis of the direct impact of customer satisfaction on customer trust.

## **Literature Review**

**1. Service Quality:** Recent trends in service quality research have highlighted the transformative effects of technology and shifting customer behaviors on service delivery standards. Huang & Rust (2018) conducted a critical exploration of redefining service quality. Park & Jeong (2019) emphasize the importance of understanding the dynamic nature of service quality in response to changing customer behaviors over time. In the context of crowdsourced logistics, the current study will build on these insights by developing a comprehensive framework that addresses the unique challenges and opportunities associated with service quality in this rapidly growing sector. This approach will provide a more holistic understanding of how service quality can be maintained and enhanced in the evolving landscape of crowdsourced delivery services.

**2. Customer Satisfaction:** Recent customer satisfaction research has focused on digital transformation, sustainability, and emotional factors. These studies indicate a trend towards more digitalized, personalized, and sustainable approaches to customer satisfaction. Sutrisno et al. (2019) demonstrated that the quality of service in logistics companies positively influences customer satisfaction and loyalty through five dimensions. Lai, Jang, Fang, & Peng (2022) identified the convenience of parcel lockers, service quality, and technological innovation as significant determinants of customer satisfaction in the last mile of logistics.

**3. Customer trust:** Recent studies Masudin et al. (2020) investigated the influence of humanitarian logistics service quality on customer loyalty and the moderating role of customer trust, revealing a significant effect of personnel service quality on customer satisfaction and a notable impact of customer satisfaction and technical service quality on customer loyalty. Atmaja et al. (2022) examined the role of supply chain agility in gaining customer trust in the e-commerce industry, demonstrating a positive and significant correlation between supply chain agility and customer trust, while electronic tracking did not strengthen or weaken this relationship. Studies indicate that various aspects of logistics

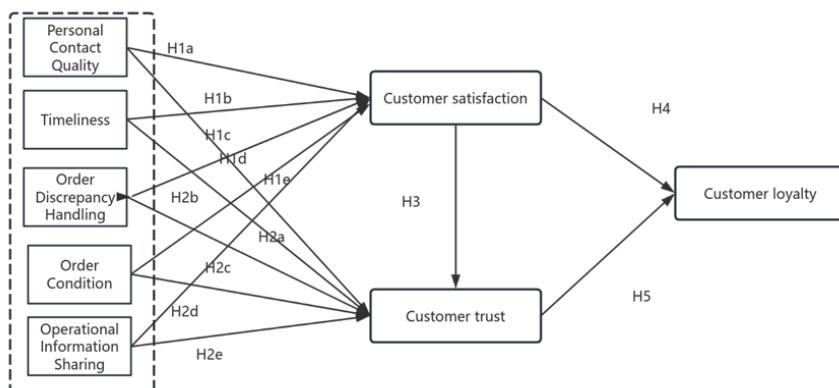
and supply chain management, including service quality dimensions and agility, significantly influence customer trust.

**4. Customer loyalty:** In recent studies, customer loyalty in B2B logistics is influenced by tracking information quality, which affects loyalty through service flexibility and efficiency, with service pattern diversity moderating this relationship (Rai et al., 2022). Additionally, service recovery, customer satisfaction, and corporate image are significant predictors of customer loyalty, emphasizing the importance of maintaining and enhancing these factors for loyalty retention (Zaid et al., 2021). Recent research highlights that the retention of customer loyalty is significantly influenced by service recovery, customer satisfaction, and corporate image, underscoring the multifaceted nature of loyalty-building strategies.

The research on crowdsourced logistics highlights the critical importance of service quality, customer satisfaction, and trust in building customer loyalty. Despite the advantages of crowdsourced delivery models over traditional methods, there is a noted gap in the literature regarding service quality within this sector. Based on these insights, it is recommended that service providers prioritize timeliness and personalization, while also addressing other key trust influencers to cultivate lasting customer loyalty. A comprehensive framework that integrates these elements is necessary to elevate service quality in the dynamic landscape of crowdsourced delivery logistics.

## Conceptual Framework

The researchers constructed the research concept based on the concepts presented in the literature review, with detailed information as follows as **ผิดพลาด! ไม่พบแหล่งการอ้างอิง.**



**Figure 1** The conceptual framework (Source: Constructed by researcher, 2024)

## Research Methodology

### 1. Research Design:

This study employs a quantitative research design focusing on adult customers in Guangzhou, China, particularly those who frequently use crowdsourced delivery logistics services.

### 2. Sample Group:

A sample of 400 participants was selected for this study. According to Bentler & Yuan (1999), the sample size should be 10 to 20 times the number of measurement items, with an upper limit of 500 samples. Given that this study involves 40 measurement items, the recommended sample size falls between 400 and 800 participants ( $40 * 10 = 400$  to  $40 * 20 = 800$ ). However, considering that the optimal sample size for structural equation modeling should not exceed 500, this study selected 400 participants based on practical considerations and research requirements.

### 3. Sampling Method and Research Tools:

The study adopted a probability random sampling method combined with stratified sampling. The research tool used was an online open-ended questionnaire, with questions based on a Likert scale (1932). The questionnaire underwent evaluation by three experts for item-objective congruence (IOC), and its reliability was tested. Following Cronbach's (1951) guidelines, the reliability coefficient (Cronbach's alpha) was 0.937. Data collection was carried out by the researcher through online platforms.

### 4. Data Analysis:

Basic statistical analysis and structural equation modeling (SEM) were used to analyze the collected data.

## Research Results

### 1. Characteristics Description Analysis

Sample Feature Description Sample feature description refers to describing and analyzing the basic information and characteristics of the sample population participating in the survey. This study collected a total of 400 valid questionnaires. In this survey, the gender distribution showed that there were slightly more female respondents than male respondents, accounting for 52.25% compared to 47.75%. In terms of age structure, respondents aged 30–39 constitute the largest group, accounting

for 50% of the total sample, while the groups aged 18–20 and over 50 are relatively small, accounting for 9.25% and 3.25% respectively. The average monthly income is mainly concentrated between 2000–10001 yuan, with 44% of respondents in this income range. The education level mainly consists of college and undergraduate degrees, accounting for 63.5% of the total. In terms of usage frequency, the respondents who use it 1–3 times a week are the most, accounting for 34.75%, while the groups who rarely use it and use it more than 8 times a week are relatively small, accounting for 16%. Each as shown in Table 1.

**Table 1** Sample Feature Description

Category	Variable	Frequency	Percentage (%)
Gender	Female	209	52.25
	Male	191	47.75
Age	18–20 years	37	9.25
	21–29 years	83	20.75
Monthly Average Income	30–39 years	200	50
	40–49 years	67	16.75
Education Level	50+ years	13	3.25
	Below 2000 yuan	51	12.75
Usage Frequency	2000–10000 yuan	176	44
	10001–20000 yuan	117	29.25
Education Level	Above 20000 yuan	56	14
	High school or below	79	19.75
Usage Frequency	Junior college	134	33.5
	Bachelor's degree	120	30
Usage Frequency	Master's degree or above	67	16.75
	Rarely use	64	16
Usage Frequency	1–3 times per week	139	34.75
	4–7 times per week	131	32.75
Usage Frequency	8 times or more per week	66	16.5

## 2. Reliability and Validity

In the analysis of scale reliability, Cronbach's Alpha is commonly used to assess the internal consistency of items within a scale. A Cronbach's Alpha value above 0.7 indicates acceptable reliability, while values closer to 1 suggest higher internal consistency.

Based on the results for the eight variables in this study Personal Contact Quality, Timeliness, Order Discrepancy Handling, Order Condition, Operational Information Sharing, Customer Satisfaction, Customer Trust, and Customer Loyalty the Cronbach's Alpha values for all variables are well above the 0.7 threshold, indicating strong reliability across the scales. In this study, the reliability of the eight variables Personal Contact Quality, Timeliness, Order Discrepancy Handling, Order Condition, Operational Information Sharing, Customer Satisfaction, Customer Trust, and Customer Loyalty was assessed using Cronbach's Alpha. Cronbach's Alpha is a widely accepted measure to evaluate internal consistency, where a value greater than 0.7 is considered acceptable for reliability, and higher values indicate stronger internal consistency among the items within the scale. As shown in Table 2.

**Table 2** Reliability analysis results

Variable	Cronbach's Alpha
Personal Contact Quality	0.898
Timeliness	0.891
Order Discrepancy Handling	0.892
Order Condition	0.87
Operational Information Sharing	0.878
Customer Satisfaction	0.911
Customer Trust	0.878
Customer Loyalty	0.848

**Table 3** KMO and Bartlett's Test

KMO	0.924
Approx. Chi-Square	11164.917
Bartlett Sphericity test	820
<i>p</i>	0.000***

As Table 3. The KMO value is 0.930, and the Bartlett test is significant ( $p=0.000$ ), indicating that the data is suitable for factor analysis. This shows that the correlation between variables is strong and suitable for factor analysis to identify potential factors. Based on this, further structural equation modeling (SEM) analysis can be carried out to verify the relationship between variables and the fitness of the model.

These results suggest that the constructs used in the study are reliable and valid for further analysis. This robustness enhances the credibility of the findings derived from subsequent analyses, such as Structural Equation Modeling (SEM).

### 3. Structural Equation Modeling (SEM) Analysis

#### 3.1 Structural Equation Modelling Results

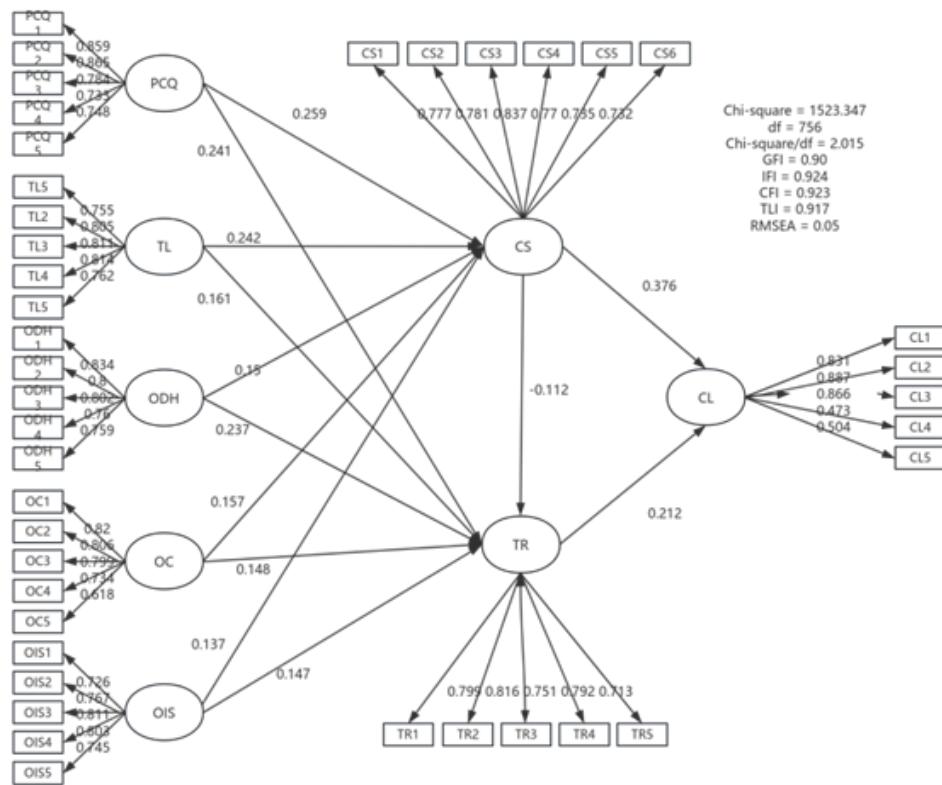
Based on the above data analysis and indicators, the research data meets the requirements for structural equation modeling. Structural equation modeling is performed on the data through AMOS software and explains the relationship between the variables to verify whether the hypotheses are valid. Structural equation modeling needs to test the model's fitness. Chi-square/df needs to be less than 3 to meet the research criteria. Meanwhile, GFI, CFI, and TLI all need to exceed 0.9 as excellent, more significant than 0.8, less than or equal to 0.9 as acceptable, and RMSEA needs to be less than 0.08 to meet the requirements of the model fit indexes, as shown in Table 4. According to the results, the Chi-square value in the study is 1523.347, with df being 756, resulting in a Chi-square/df ratio of 2.015, which is less than 3 and meets the criteria. The GFI is 0.9, which is more significant than 0.8 and falls within the acceptable range. The IFI, CFI, and TLI all exceed 0.9, and the RMSEA is 0.05, which is less than 0.08. Therefore, the model fitting indicators meet the requirements.

**Table 4** Model fit assessment.

Model fit indicator	Chi-square	df	Chi-square/df	GFI	IFI	CFI	TLI	RMSEA
Threshold Range	-	-	<3	>0.9	>0.9	>0.9	>0.9	<0.10
Observed Values	1523.347	756	2.015	0.9	0.924	0.923	0.917	0.05

Overall, while a few indices fall slightly short of the ideal standards, the majority of the fit indices meet the recommended thresholds, indicating that the model demonstrates an acceptable level of fit.

### 3.2 Direct Effect Validation



**Figure 2** Path diagram of structural equation modeling (Source: Constructed by researcher, 2024)

**Table 5** Results of Structural Equation Modeling

X → Y	Non-standardized			standardized		
	regression coefficients	SE	z (CR)	p	regression	coefficient
					coefficient	
PCQ → CS	0.243	0.059	4.138	0.000***		0.259
TI → CS	0.223	0.06	3.696	0.000***		0.242
ODH → CS	0.126	0.045	2.802	0.005***		0.15
OC → CS	0.135	0.047	2.882	0.004***		0.157
OIS → CS	0.155	0.062	2.509	0.012**		0.137
PCQ → TR	0.218	0.064	3.376	0.001***		0.241
TI → TR	0.143	0.066	2.188	0.029**		0.161

X → Y	Non-standardized			standardized	
	regression coefficients	SE	z (CR)	p	regression coefficient
ODH → TR	0.193	0.049	3.908	0.000***	0.237
OC → TR	0.123	0.051	2.414	0.016**	0.148
OIS → TR	0.16	0.067	2.397	0.017**	0.147
CS → TR	-0.108	0.071	-1.527	0.127	-0.112
CS → CL	0.37	0.059	6.315	0.000***	0.376
TR → CL	0.216	0.058	3.731	0.000***	0.212

Note: \* p<0.05 \*\* p<0.01 \*\*\* p<0.001

Based on the analysis presented in Table 5, the structural equation model (SEM) results reveal significant relationships between various factors and their influence on customer satisfaction, customer trust, and customer loyalty.

First, hypotheses regarding the influence of different factors on customer satisfaction were supported. Personal Contact Quality (PCQ) positively impacted customer satisfaction, with a standardized regression coefficient of  $\beta = 0.259$  ( $p < 0.01$ ). This result indicates that high-quality personal interactions significantly enhance customer satisfaction. Similarly, Timeliness (TL) showed a positive and significant effect on customer satisfaction ( $\beta = 0.242$ ,  $p < 0.01$ ), highlighting that prompt service delivery plays a crucial role in customer contentment. Order Discrepancy Handling (ODH) also positively affected customer satisfaction, with a coefficient of  $\beta = 0.150$  ( $p < 0.01$ ). Additionally, both Order Condition (OC) and Operational Information Sharing (OIS) had positive impacts on customer satisfaction, with coefficients of  $\beta = 0.157$  ( $p < 0.01$ ) and  $\beta = 0.137$  ( $p < 0.05$ ), respectively. These findings suggest that ensuring orders are in good condition and maintaining transparency in information sharing are essential for improving customer satisfaction.

Regarding the factors influencing customer trust, the hypotheses were also supported. Personal Contact Quality significantly impacted customer trust, with a standardized coefficient of  $\beta = 0.241$  ( $p < 0.01$ ). Timeliness had a positive influence on customer trust ( $\beta = 0.161$ ,  $p < 0.05$ ), indicating that timely service enhances customer trust. The positive effect of Order Discrepancy Handling on customer trust was also significant, with a coefficient of  $\beta = 0.237$  ( $p < 0.01$ ). Additionally, Order Condition and

Operational Information Sharing had positive impacts on customer trust, with coefficients of  $\beta = 0.148$  ( $p < 0.05$ ) and  $\beta = 0.147$  ( $p < 0.05$ ), respectively.

However, the relationship between customer satisfaction and customer trust was not supported ( $\beta = -0.112$ ,  $p = 0.127$ ), indicating that customer satisfaction did not significantly impact customer trust in this study. This result suggests that other factors may play a more prominent role in influencing trust, or that the relationship between satisfaction and trust is more complex than initially hypothesized.

On the other hand, the impact of customer trust on customer loyalty was strongly supported, with a significant coefficient of  $\beta = 0.376$  ( $p < 0.01$ ). This finding underscores the critical importance of trust in fostering customer loyalty. Additionally, customer satisfaction also had a significant positive effect on customer loyalty, with a coefficient of  $\beta = 0.212$  ( $p < 0.01$ ), indicating that satisfied customers are more likely to remain loyal to the service provider.

These results collectively highlight the intricate relationships between service quality factors, customer satisfaction, customer trust, and customer loyalty, providing valuable insights for improving customer relationships and retention strategies.

### 3.3 Hypothesis Test

H1a: Personal Contact Quality (PCQ) has a positive impact on Customer Satisfaction (CS). (Supported Hypothesis).

This hypothesis suggests that the quality of personal interactions during delivery logistics positively affects customer satisfaction. High-quality personal contact, characterized by courteous and attentive service providers, enhances customer experiences and satisfaction levels.

H1b: Timeliness (TI) has a positive impact on Customer Satisfaction (CS). (Supported Hypothesis). This hypothesis posits that the punctuality of deliveries impacts customer satisfaction. Customers value timely services, and delays can diminish their satisfaction. Ensuring that deliveries are made on time is critical for maintaining high levels of customer satisfaction.

H1c: Order Discrepancy Handling (ODH) has a positive impact on Customer Satisfaction (CS). (Supported Hypothesis).

This hypothesis indicates that the efficiency and effectiveness of resolving order discrepancies can influence customer satisfaction. Proper handling of discrepancies, such as incorrect items or missing parts, can reassure customers and enhance their satisfaction.

H1d: Order Condition (OC) has a positive impact on Customer Satisfaction (CS). (Supported Hypothesis).

This hypothesis suggests that the condition of orders upon delivery positively correlates with customer satisfaction. Delivering orders in pristine condition without defects or damages is essential for maintaining high levels of customer satisfaction.

H1e: Operational Information Sharing (OIS) has a positive impact on Customer Satisfaction (CS). (Supported Hypothesis).

This hypothesis proposes that transparent communication regarding operational details, such as delivery status updates, can enhance customer satisfaction. Providing clear and consistent information builds confidence and satisfaction among customers.

H2a: Personal Contact Quality (PCQ) has a positive impact on Customer Trust (TR). (Supported Hypothesis).

This hypothesis suggests that the quality of personal contact positively influences customer trust. Positive interactions that convey professionalism and reliability can foster a sense of trust in the delivery service.

H2b: Timeliness (TI) has a positive impact on Customer Trust (TR). (Supported Hypothesis).

This hypothesis posits that punctuality in service delivery positively affects customer trust. Customers who consistently receive timely services are more likely to develop trust in the company's ability to fulfill its promises.

H2c: Order Discrepancy Handling (ODH) has a positive impact on Customer Trust (TR). (Supported Hypothesis).

This hypothesis indicates that the manner in which discrepancies are resolved can impact customer trust. Efficient and fair resolution of discrepancies demonstrates the company's commitment to customer needs, thereby increasing trust.

H2d: Order Condition (OC) has a positive impact on Customer Trust (TR). (Supported Hypothesis).

This hypothesis suggests that delivering orders in excellent condition can positively correlate with customer trust. Ensuring that orders are delivered without issues can reinforce customer trust in the reliability of the service.

H2e: Operational Information Sharing (OIS) has a positive impact on Customer Trust (TR). (Supported Hypothesis).

This hypothesis proposes that sharing operational information transparently can enhance customer trust. Open communication about operational processes and potential issues can demonstrate the company's integrity and dedication to customer satisfaction.

**H3: Customer Satisfaction (CS) has a positive impact on Customer Trust (TR). (Unsupported Hypothesis).**

This hypothesis suggests that there is a positive relationship between customer satisfaction and trust. However, this relationship was not supported by the empirical evidence, indicating that while customer satisfaction is important, it does not necessarily translate into increased customer trust.

**H4: Customer Satisfaction (CS) has a positive impact on Customer Loyalty (CL). (Supported Hypothesis).**

This hypothesis posits that satisfied customers are more likely to exhibit loyalty. High levels of customer satisfaction can lead to repeated business and recommendations, strengthening customer loyalty.

**H5: Customer Trust (TR) has a positive impact on Customer Loyalty (CL). (Supported Hypothesis).**

This hypothesis suggests that customer trust positively influences loyalty. Customers who trust a delivery service are more inclined to remain loyal, making repeat orders and promoting the service to others.

## **Discussion**

The findings of this study provide valuable insights into the dynamics among service quality, customer satisfaction, trust, and loyalty within the context of crowdsourced delivery logistics. The results deepen our understanding of how these constructs interact to influence customer behavior in this rapidly evolving service model. Specifically, the study confirms that service quality significantly contributes to customer satisfaction, with dimensions such as personal contact quality and timeliness playing particularly crucial roles. These aspects, being the most immediately perceived by customers, reflect the importance of responsive, courteous, and efficient interactions in shaping a favorable service evaluation.

Beyond satisfaction, the study also underscores the importance of service quality dimensions in cultivating customer trust. In particular, effective order discrepancy handling and reliable order condition

management were found to strongly predict trust. This suggests that operational precision, including how errors are resolved and how goods are maintained during delivery, is critical to customers' belief in the platform's reliability. In the decentralized environment of crowdsourced logistics—where customers rarely engage with the same delivery agent twice—consistency in process and outcome becomes the cornerstone of trust, replacing the role of interpersonal familiarity found in traditional logistics.

Interestingly, this study did not find support for a direct path between customer satisfaction and trust, a finding that deviates from conventional service models. This discrepancy may be explained by the inherent variability in crowdsourced delivery systems. Unlike traditional courier services, where sustained relationships with service providers might gradually foster affective trust, the anonymous and shifting nature of gig-based logistics weakens the emotional continuity required for trust to develop. Thus, even if customers are consistently satisfied with the outcome of individual transactions, this may not translate into generalized trust in the overall platform or system. This finding aligns with Kadadha et al. (2024), who argued that in platform-mediated services, trust depends more on system-level assurances—such as consistent quality control, transparent communication, and secure transaction protocols—than on individual delivery experiences.

Despite the absence of a direct link from satisfaction to trust, this study strongly reaffirms the positive effect of trust on customer loyalty. Trust remains a central driver of sustained customer commitment, particularly in a service model where perceived risk and uncertainty are higher than in traditional delivery formats. As customers build confidence in the reliability and governance of the platform—rather than in individual delivery agents—their propensity to remain loyal increases. This finding supports the position that trust acts as a stabilizing mechanism, mitigating concerns about service variability and thereby fostering long-term engagement.

Additionally, the results highlight a significant positive relationship between customer satisfaction and loyalty, reinforcing the view that satisfied customers are more likely to continue using and recommending the service. This suggests that satisfaction and trust function as complementary, rather than redundant, antecedents to loyalty. In the case of crowdsourced delivery, where switching costs are low and service options are abundant, delivering a consistently satisfying experience remains crucial to retaining customers and achieving sustainable growth.

From a practical perspective, the findings offer actionable insights for crowdsourced delivery service providers. Prioritizing timely service, polite personal contact, and accurate order fulfillment can directly enhance satisfaction. To build trust, platforms must also emphasize discrepancy resolution protocols, order integrity assurance, and data security transparency. Service consistency and the reliability of platform-mediated communication are particularly important, as they compensate for the lack of personal continuity in driver–customer interactions and reduce perceived uncertainty.

However, this study is subject to several limitations. First, the use of a convenience sampling method may limit the generalizability of the results to broader populations, especially across different cultural or regional contexts. Second, the cross-sectional design restricts our ability to establish causal relationships between the studied variables. Longitudinal studies could more accurately capture how customer perceptions of service quality, trust, and loyalty evolve over time. Lastly, this study focused exclusively on customer perceptions and did not incorporate supply-side or platform-level variables. Future research may benefit from adopting mixed-methods approaches or incorporating qualitative interviews to explore nuanced factors such as emotional engagement, algorithm transparency, or AI-driven service customization in shaping the quality–trust–loyalty chain.

## Conclusion

This study enhances the understanding of the interrelationships between service quality, customer satisfaction, trust, and loyalty in crowdsourced delivery logistics. The findings affirm that service quality, particularly in aspects like personal contact quality, timeliness, and order handling, plays a crucial role in shaping customer satisfaction and trust. While customer satisfaction is strongly linked to loyalty, the expected direct connection between satisfaction and trust was not supported, highlighting the unique dynamics of the crowdsourced delivery model, where inconsistent interactions with different personnel may hinder trust development. Nevertheless, trust remains a critical factor driving customer loyalty, emphasizing its importance in retaining customers over the long term. For service providers in this sector, prioritizing operational reliability, personalized service, and secure information management will be essential strategies for fostering both customer satisfaction and trust.

## Suggestions

### 1. Enhance Personal Contact Quality

Personalized Service: Train drivers to provide personalized service, addressing customers by name and tailoring interactions to meet individual needs.

### 2. Improve Timeliness

Efficient Routing: Implement advanced algorithms to optimize delivery routes, reducing delivery times and improving punctuality.

### 3. Accurate Order Handling and Status Updates

Order Management System: Invest in a robust order management system that ensures accurate order processing and handling.

### 4. Transparency in Operational Information Sharing

Regular Updates: Keep customers informed about any changes in delivery schedules, policies, or procedures through regular updates via email or the app.

### 5. Strengthen Customer Trust

Information Security: Ensure that customer data is protected and secure. Implement robust security measures to prevent data breaches and maintain customer confidence.

### 6. Foster Customer Loyalty

Loyalty Programs: Introduce loyalty programs that reward repeat customers with discounts, free deliveries, or other incentives.

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