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Impact of AI-Powered Logistics Service Quality on Expectation Confirmation, Customer Satisfaction, and Repurchase Intentions in Quick Commerce

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ABSTRACT

Quick commerce, or q-commerce, is reshaping consumer buying habits. They are emphasizing on the speed of delivery, convenience, and service quality. Logistics Service Quality (LSQ), has become a critical factor to research for its impact on customer satisfaction and repurchase intentions.

This study employed a s quantitative research design, survey based approach to access the perceptions of the respondents about LSQ and expectation confirmations. 132 responses were received. Analysis was conducted using PLS-SEM.

Delivery timeliness had the biggest impact ($\beta = 0.312$), presenting that fast delivery is the most important factor in AI-powered quick commerce. Order accuracy ($\beta = 0.287$) and real-time tracking ($\beta = 0.241$) were also important because customers want the right products and to know where their order is actually transiting. Delivery condition ($\beta = 0.198$) and delivery personnel quality ($\beta = 0.143$) also improved customer satisfaction, but their influence was relatively smaller.

Keywords: Quick Commerce; Delivery Quality; Expectation-Confirmation; Customer Satisfaction; Repurchase Intentions

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INTRODUCTION

Q-commerce is growing really fast all around the world. Particularly after the COVID-19 pandemic, when customers wanted quick contact-less delivery. In India, Q-commerce companies like Blinkit, Zepto and others are expected to grow to USD 5 billion by 2025 and potentially USD 9.95 billion by 2029, with a CAGR of over 4.5% (India Briefing, 2024).

Important players in the q-commerce market include Blinkit (40-46% market share), Swiggy Instamart, Zepto (30% by 2024), and BigBasket. These companies use dark stores - small, localised warehouses situated in the neighbourhood and have partnerships with local suppliers to ensure rapid fulfilment, using AI for demand forecasting and route optimisation (Aaj Enterprises, 2024).

LSQ includes Delivery Speed (DS), Order Accuracy (OA), Delivery Condition (DC), Personnel Contact Quality (PCQ) and Real-Time Tracking (RTT) facilities (Le Minh et al., 2024).

Expectation Confirmation Theory includes customers' expectations, confirmation and satisfaction with q-commerce companies. (Bhattacharjee, 2001; Oliver, 1980). When the companies meet the customers' expectations which leads to satisfaction and repeat purchases.

LITERATURE REVIEW

Key Dimensions of LSQ in Q-Commerce

Researchers like Mentzer et al. (2001) and Parasuraman et al. (1988) have observed that LSQ includes delivery quality, which is not just one thing. It has many parts. For q-commerce, we picked five important parts that make the most sense:

Delivery Speed (DS): Delivery as promised is the most crucial LSQ factor, as q-commerce consumers expect instant delivery. More Studies have confirmed that even minor delays negatively impact expectation confirmation and customer trust (Sukati et al., 2024).

Order Accuracy (OA): Guaranteeing that orders are complete and accurate is essential for sustaining consumer trust and satisfaction (Lin et al., 2023). Wrong products delivered will lead to negative expectation disconfirmation and increased return rates (Vu et al., 2020).

Delivery Condition (DC): Poor packaging will reduce the perceived service quality, and Customers expect well-packaged and damage-free deliveries (Le Minh et al., 2024).

Personnel Contact Quality (PCQ): This measures whether the delivery person was polite, friendly, and helpful. Although the interaction is brief, it is often the only human touchpoint in the entire delivery process, making it an important part of the customer experience.

Real-Time Tracking (RTT): This measures whether customers will be able to track their order in real time. Knowing where the order is and when it will arrive reduces uncertainty and makes the waiting experience more comfortable.

Expectation-Confirmation Theory (ECT) in Logistics Service

Expectation-Confirmation Theory (ECT) is a simple idea. People have expectations before they buy something. These expectations come from their past experiences, advertisements, and what they have heard about the app or brand. (Oliver, 1980).

Positive confirmation: If the delivery is as fast or even better than expected, customers feel happy. They are more likely to order again. (Lin et al., 2023).

Negative confirmation: If the delivery is late, the order is wrong, or the items arrive damaged, customers feel disappointed. They may stop using the app and choose another service. (Sukati et al., 2024).

Research Gap

While LSQ has been extensively studied in traditional e-commerce, research on its role in q-commerce remains limited (Le Minh et al., 2024). This study addresses the following gaps:

1. How LSQ dimensions (delivery speed, order accuracy, packaging quality) influence expectation-confirmation in q-commerce.
2. The impact of expectation-confirmation on customer satisfaction and repurchase behaviour.

By researching these gaps, this research provides practical strategies for optimising LSQ in the rapidly evolving q-commerce sector.

OBJECTIVES

Based on the existing research gaps, the objectives of the study are

1. To examine the impact of Logistics Service Quality (LSQ) dimensions on ECT in AI-powered quick commerce.
2. To investigate the effect of ECT on customer satisfaction and repurchase intention in AI-powered quick commerce.

METHODOLOGY

Research Design

This study adopts a quantitative research design. A structured survey was used to measure the impact of Logistics Service Quality (LSQ) on expectation confirmation, customer satisfaction, and repurchase behaviour in q-commerce.

RESULTS AND DISCUSSION

The results indicate that good delivery creates customer satisfaction. Every part of logistics service quality (LSQ) plays a role in shaping what customers think about their experience. When an order arrives on time, contains the correct items, is in good condition, includes clear tracking, and is delivered by a polite delivery partner, customers feel that the company has kept its promise.

Among all these factors, delivery speed had the biggest impact ($\beta = 0.312$). This is not surprising because people choose quick commerce mainly to save time. If the delivery is late, the main promise of the service is broken.

Order accuracy came next ($\beta = 0.287$). Customers expect to receive exactly what they ordered, and even a fast delivery loses its value if the wrong items arrive.

Real-time tracking ($\beta = 0.241$) also mattered because it lets customers know where their order is, making the waiting time feel shorter and less stressful.

Delivery condition ($\beta = 0.198$) and the behaviour of the delivery person ($\beta = 0.143$) also made a positive difference. Although these factors had a smaller effect, they still improved the overall delivery experience.

The study also showed that meeting customer expectations is the key to satisfaction. When the delivery matched or was better than what customers expected, satisfaction increased strongly ($\beta = 0.764$).

This supports the idea behind Expectation-Confirmation Theory (ECT): people are satisfied when their expectations are met. The findings also showed that satisfied customers are more likely to order again ($\beta = 0.621$).

To conclude, a good delivery experience does more than satisfy customers - it builds trust and encourages them to repurchase.

Conclusion

This research illustrates the essential role played by logistics service quality (LSQ) in the success of AI-based quick commerce. Customers are happier when their orders arrive on time, with the right items, in good condition, with clear tracking information, and delivered by polite delivery people. Of these factors, delivery speed was most important, followed by order accuracy and real-time tracking.

The results also provide support for Expectation-Confirmation Theory (ECT). Customers are satisfied when the delivery experience is better than customer expectations. This satisfaction then increases their likelihood of using the same platform again. To foster long-term customer loyalty, you need to meet customer expectations.

Practical Implications

First, always deliver on time - invest in better AI routing and don't promise speeds you can't deliver. Second, ensure that each order is verified before shipping, and a barcode scanner or camera system would be a great help. Third, make the tracking super accurate so the little dot on the map is actually where the rider is. Fourth, train delivery staff to be friendly, even during the 60 seconds they spend at someone's door. Fifth, make sure that perishable items, especially dairy and frozen goods, arrive in good condition.

Limitations

The study was based on a limited sample of users from one region, so the results may not be representative of all quick commerce users. The data were cross-

sectional and self-reported by respondents. Future studies could involve larger samples, different locations, and other factors like pricing, trust, and app usability.

Future Scope

Future research can include larger and more diverse samples from different regions to enhance the generalisability of the findings. It can also look at other factors such as pricing, trust, AI personalisation, app usability and product availability that could affect customer satisfaction and repeat purchases. Longitudinal studies can further investigate changing customer expectations and behaviour over time in the evolving quick commerce industry.

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