

## Integrating Circular Economy Principles in Quick Commerce: Assessing Customer Satisfaction and Repurchase Behavior

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### Abstract

Quick Commerce (QC) changed India's retail market with platforms like Blinkit Swiggy Instamart Zepto and Big Basket delivering ultra-fast. This rapid shift in consumer behavior happened due to urbanization new technologies and pandemic-driven changes. While it changed shopping preferences it also brought big sustainability problems. Too much packaging waste high resource use and carbon emissions from last-mile deliveries created serious environmental issues.

This study looks at the main factors that affect customer satisfaction in Indian Quick Commerce services. It focuses on adding Circular Economy (CE) ideas like sustainable packaging eco-friendly delivery and waste reduction. The research uses the Stimulus-Organism-Response (S-O-R) model. It sees delivery time product quality app usability and sustainability efforts as stimuli customer satisfaction as the organism and repurchase intention as the response.

The study used a cross-sectional survey to collect data from 219 consumers through online and face-to-face surveys from people using Quick Commerce apps. The survey was done with a 5-point Likert scale. Researchers analyzed data using PLS-SEM in Smart PLS 4 software. This study finds out how sustainability efforts change consumer views and loyalty in Quick Commerce. The results give useful insights for businesses to improve service quality while being environmentally friendly. The study also fills gaps in sustainability research in Quick Commerce and gives practical ideas for businesses policymakers and researchers who want to grow Quick Commerce while protecting the environment.

**Keywords:-** Quick Commerce (Q-Commerce); Customer Satisfaction; Repurchase Intention; Sustainability; Stimulus-Organism-Response (S-O-R) Model; Circular Economy.

### 1. Introduction

With the rapid expansion of digital commerce and increasing smartphone penetration, consumer demand for instant delivery services has surged. Unlike traditional e-commerce, which focuses on bulk purchases and scheduled deliveries, Q-Commerce prioritizes ultra-fast delivery (10–30 minutes), catering to consumers seeking speed and convenience (Kapoor et al., 2023). According to Statista Market Forecast (2024), the Indian Q-Commerce market is projected to grow from US\$3.35 billion in 2024 to US\$8.83 billion by 2028, with a CAGR of 27.42%. The Gross Merchandise Value (GMV) of Q-Commerce reached US\$2.8 billion in 2023, and user penetration is expected to rise from

1.8% in 2024 to 3.8% by 2028, with 56.37 million users adopting the service (Statista, 2024). The competitive landscape is evolving, with Blinkit leading at 40% market share, followed by Swiggy Instamart at 32% and Zepto at 28%, the latter witnessing significant growth from 15% in 2022 to 30% in 2024.

The COVID-19 pandemic accelerated the growth of Q-Commerce, as customers relied on contactless delivery services for groceries and daily essentials (Chavhan & Dutta, 2024). However, while the sector has witnessed rapid growth, it faces several operational challenges, including order surges, supply shortages, and high logistics costs (Liu et al., 2023). Additionally, the environmental impact of Q-

Commerce, such as excessive packaging waste and high carbon emissions from rapid last-mile deliveries, has raised sustainability concerns among consumers and policymakers (Abrar, 2024)

Despite the widespread adoption of Q-Commerce platforms like Blinkit, Zepto, Swiggy Instamart, and BigBasket, several challenges persist in maintaining consistent service quality and customer satisfaction. Unlike traditional retail models, where consumers physically assess products, Q-Commerce transactions are app-based and highly dependent on platform usability, real-time tracking, and fulfillment accuracy (Liu et al., 2023). Consumers expect not just fast deliveries but also high product quality, reliable service, and sustainable practices, and failure to meet these expectations can lead to customer churn and reduced brand loyalty (Harter et al., 2024). While Q-Commerce offers instant purchasing convenience, concerns such as pricing volatility, last-mile inefficiencies, and customer dissatisfaction with order accuracy affect repeat purchase behavior.

Academic research on consumer behavior in Q-Commerce remains limited, with most studies focusing on traditional e-commerce or online grocery platforms rather than the unique service structure of ultra-fast deliveries (Chavhan & Dutta, 2024). Prior studies have primarily investigated logistics, digital experience, and pricing models, but the intrinsic relationship between customer satisfaction, sustainability, and repurchase behavior remains underexplored (Liu et al., 2023). Additionally, while sustainability concerns such as eco-friendly packaging and carbon-efficient logistics are growing, there is insufficient empirical research on whether these factors influence customer loyalty in Q-Commerce.

In this research, the following questions are addressed:

- (1) How do product-side features, service-side factors, and consumers personal factors impact customer satisfaction in Q-Commerce?
- (2) What is the effect of customer satisfaction on customers repurchase behaviour in Q-Commerce?
- (3) Does customer satisfaction act as a mediating factor between service and product quality,

sustainability practices, and repurchase behaviour?

To analyse these issues, this study constructs an empirical model based on the Stimulus-Organism-Response (S-O-R) framework, integrating service quality, sustainability efforts, and digital convenience as key determinants of repurchase behaviour. With the help of Partial Least Squares Structured Equation Modelling (PLS-SEM), this research provides a quantitative evaluation of consumer decision-making, offering theoretical contributions to Q-Commerce service models and practical implications for organizations trying to enhance customers loyalty and integrate sustainable practices (Kapoor et al., 2023).

## **2. Literature Review**

The literature review covers three themes. First, it examines factors that influence repurchase behavior in Quick Commerce (Q-Commerce). Second, it looks at how customer satisfaction impacts repeat purchases. Lastly, it reviews past research on customer repurchase behavior, considering theoretical models, key variables, and research methods.

### **2.1. Quick Commerce**

The customer purchase decision process explains how people evaluate and decide on a product before buying. Five main decision-making models exist: Stimulus-Organism-Response (S-O-R) model Philip Kotler model Nicosia model Howard-Sheth model and Engel-Kollat-Blackwell (EKB) model. These models describe different stages of decision-making from identifying a need to evaluating post-purchase satisfaction (Harter et al. 2024). The S-O-R model is the most commonly use for explaining consumer behavior in fast-commerce where buyers makes decisions instantly based on external stimuli like service speed and app usability. Other models builds on S-O-R showing its importance in understanding consumer behavior in digital markets (Liu et al. 2023). Studies proves S-O-R works well for impulse-driven buying making it a good fit for analyzing customer behavior in Q-Commerce (Chavhan & Dutta 2024).

This study considers external factors such as service quality delivery efficiency product

quality and platform usability along with internal factors like social norms and sustainability awareness to see what drive repurchase behavior in Q-Commerce.

Consumers care about product quality when ordering from Q-Commerce platforms. Unlike traditional e-commerce, where they have time to research, in Q-Commerce, they trust the platform to deliver accurate and high-quality products (Kapoor et al., 2023). The most important product quality factors include order accuracy, packaging condition, freshness (for groceries), and overall satisfaction (Harter et al., 2024). Since Q-Commerce happens fast, any mistake in product quality can immediately break customer trust. Research shows that in rapid delivery models, speed alone is not enough—customers expect accuracy as well (Liu et al., 2023).

Price also affects how often people buy from Q-Commerce. Even though customers want fast service, they also look for good deals, discounts, and loyalty rewards to justify using a platform more than once. Studies show that perceived value for money influences repeat purchases, with dynamic pricing, cashback offers, and membership benefits keeping consumers engaged (Chavhan & Dutta, 2024). When customers feel they get good-quality products at fair prices, they tend to stick to one platform instead of switching between many (Feng et al., 2022).

Researchers have studied how service quality impacts repurchase behavior in digital commerce, often using models like SERVQUAL, TAM, and TPB. The results show that in Q-Commerce, factors like delivery reliability, app usability, and order accuracy make a big difference in customer satisfaction. Consumers expect fast and correct deliveries, making logistics efficiency a key factor in repeat purchases (Jain et al., 2021). Research suggests that while customers like ultra-fast deliveries, they care more about whether their orders arrive correctly.

App usability and digital experience also play a role in whether consumers keep using a platform. Studies show that people prefer simple, well-designed apps that offer real-time tracking, personalized recommendations, and quick checkout options (Abrar, 2024). Platforms with

easy navigation and smooth transactions improve customer experience and boost repeat purchases. Research confirms that users are more likely to return if they can complete purchases quickly and find product details easily (Harter et al., 2024). Since Q-Commerce decisions happen in seconds, making the process simple encourages customer satisfaction and loyalty (Liu et al., 2023).

Consumers rely on peer recommendations, online reviews, and product ratings before buying in Q-Commerce. Since they cannot inspect items before ordering, they depend on platform descriptions and customer feedback (Raj & Das, 2025). Research confirms that positive reviews and high ratings help build trust, leading to repeat purchases, while bad experiences push customers away (Liu et al., 2023).

Sustainability has started to matter more to Q-Commerce consumers. Studies show that many people prefer platforms that use eco-friendly packaging, green logistics, and sustainable delivery options (Chavhan & Dutta, 2024). Even though people care about the environment, research finds that most still prioritize speed and affordability over sustainability when making impulse purchases (Liu et al., 2023). Platforms that balance sustainability with fast service can stand out in the market by attracting both eco-conscious and convenience-driven shoppers.

This study includes social influence and sustainability awareness as additional factors affecting repeat purchases in Q-Commerce. By examining how peer recommendations, environmental concerns, and service quality interact, the research aims to give a clearer picture of what keeps customers coming back to Q-Commerce platforms

## **2.2. Consumer Satisfaction in Quick Commerce**

Customer satisfaction defines how well a service or product meets consumer expectations (Oliver, 1993). In Quick Commerce (Q-Commerce), purchases often happen on impulse, and service quality depends on delivery speed, product quality, and app usability. Customer satisfaction plays a crucial role in shaping repurchase behavior. Consumers compare actual service performance with what they expect. Satisfaction happens when the perceived value matches or

exceeds expectations, encouraging positive behavior and brand loyalty (Grigoroudis & Siskos, 2010). Businesses must maintain high customer satisfaction because satisfied users are more likely to continue using a platform, recommend it, and contribute to profitability (Kapoor et al., 2023).

Various factors influence customer satisfaction in digital commerce. Past studies on fresh food e-commerce and online grocery services explored how service efficiency, product freshness, and logistics reliability shape consumer experience (Anshu et al., 2022). In Q-Commerce, additional factors like instant delivery expectations, smooth app usability, and sustainability efforts also impact satisfaction (Chavhan & Dutta, 2024). Despite the growing number of Q-Commerce platforms, few empirical studies examine how customer satisfaction links to repurchase behavior, especially in ultra-fast delivery services. This study considers customer satisfaction a mediating factor and examines how service attributes affect customer retention and platform loyalty in Q-Commerce.

### **2.3. Consumer Repurchase Behavior in Quick Commerce**

Several theories explain repurchase behaviour in online retail. These combines the TAM (Davis, 1989), the TPB (Ajzen, 2020), the Expectancy Confirmation Theory (ECT) (Oliver, 1980), and the Information Systems Success Model (ISSM) ("The DeLone and McLean Model of Information Systems Success," 2003). The model of Stimulus-Organism-Response (S-O-R) also explains online consumer behaviour, especially in fast-paced digital marketplaces (Mehrabian & Russell, 1974). Past research extensively examined repurchase behaviour in traditional e-commerce, cross-border shopping, and online grocery retailing. However, few studies focus on repurchase behaviour in Q-Commerce (Harter et al., 2024).

Most existing literature applies a single theoretical model to explain consumer loyalty and retention. It often overlooks the combined effects of service quality, app usability, and sustainability in ultra-fast commerce. Digital retail evolves quickly, and the shift from offline to online has accelerated. As a result, businesses must rely more on service innovation and

operational efficiency to retain customers (Law et al., 2022). Scholars examined consumer behaviour from different perspectives, including technology adoption, logistics reliability, and service quality. However, Q-Commerce has unique features like speed, convenience, and sustainability. Researchers need a more comprehensive model that brings these factors together (Chavhan & Dutta, 2024).

As smartphone penetration rises and consumer expectations shift, Q-Commerce businesses must adapt. Unlike traditional e-commerce, where price sensitivity and planned purchases matter more, Q-Commerce focuses on impulse-driven and service-oriented transactions. Businesses must integrate digital convenience with reliable logistics (Harter et al., 2024). Consumers expect not just instant deliveries but also transparent pricing, sustainable operations, and an easy-to-use app experience. Despite Q-Commerce's fast growth, most research remains theoretical. Few empirical studies analyse how service quality, app usability, and sustainability influence repurchase intentions (Kapoor et al., 2023).

This study addresses these gaps by integrating product-related factors (product quality), service-related factors (delivery reliability, app usability, response speed), and consumer behaviour (environmental concerns) into one analytical model (Pillai et al., 2022). Using the S-O-R framework, along with TPB, TAM, and SERVQUAL, the study empirically examines the factors that drives customer satisfaction and repurchase behaviour in Q-Commerce. It uses PLS-SEM (Partial Least Squares Structural Equation Modelling) to provide a quantitative evaluation of consumer decision-making, helping to bridge the gap between theory and real-world application.

## **3. Construction of Model and Hypothesis Development**

### **3.1. Theoretical Basis**

Theory of Planned Behaviour (TPB) suggests that behavioural intention influences actual behaviour, and behavioural intention itself is shaped by attitude, subjective norms of customers, and perceived behavioural control (Ajzen, 1991). Ning and Lao (2021) found that external influences such as peer opinions, social norms, and environmental factors impact

individual decision-making. In the context of Quick Commerce (Q-Commerce), consumer behaviour is shaped by factors like online reviews, recommendations from family and friends, and digital word-of-mouth (Kapoor et al., 2023). Online retail studies suggest subjective norms influences purchase intentions by shaping consumer trust and perception of service reliability (Harter et al. 2024). In India social influence play crucial role in consumer purchasing behaviour especially in impulse-driven markets (Goel et al. 2022). Since Q-Commerce rely on fast decision-making this study apply TPB to analyse how subjective norms affects repurchase intentions in Q-Commerce.

The Technology Acceptance Model (TAM) commonly explains how consumers adopt digital platforms and e-commerce technologies (Davis 1989). TAM suggest perceived ease of use and perceived usefulness influence consumer engagement and adoption of technology-based services. Consumers in Q-Commerce interact with platforms that prioritize speed app usability and seamless transaction processing making TAM a relevant model to understand user behavior (Chavhan & Dutta 2024). Research show that when a Q-Commerce app is easy to navigate provide real-time order tracking and integrate secure payment options users is more likely to do repeat purchases (Liu et al. 2023). Since Q-Commerce operates through mobile applications businesses must optimize digital usability to improve customer retention and loyalty. This study incorporate TAM to analyze how platform ease of use impact repurchase behavior in Q-Commerce.

The Service Quality (SERVQUAL) model measure how well a service perform using five key factors reliability assurance responsiveness empathy and tangibility (Pillai et al. 2022). In Q-Commerce service reliability delivery speed and response efficiency plays a big role in keeping customers satisfied and making them return (Harter et al. 2024). Studies on e-commerce service quality shows that how fast logistics respond and how accurate last-mile delivery is determine customer loyalty (Goel et al. 2022).

Also tangibility in Q-Commerce covers things like packaging quality warehouse operations and customer support (Chavhan & Dutta 2024). Since consumers in Q-Commerce look for convenience real-time delivery tracking correct order fulfilment and personalized customer service makes a huge difference in whether they buy again from the platform (Liu et al. 2023). This study uses SERVQUAL to see how delivery efficiency service reliability and app usability shape repurchase behaviour in Q-Commerce.

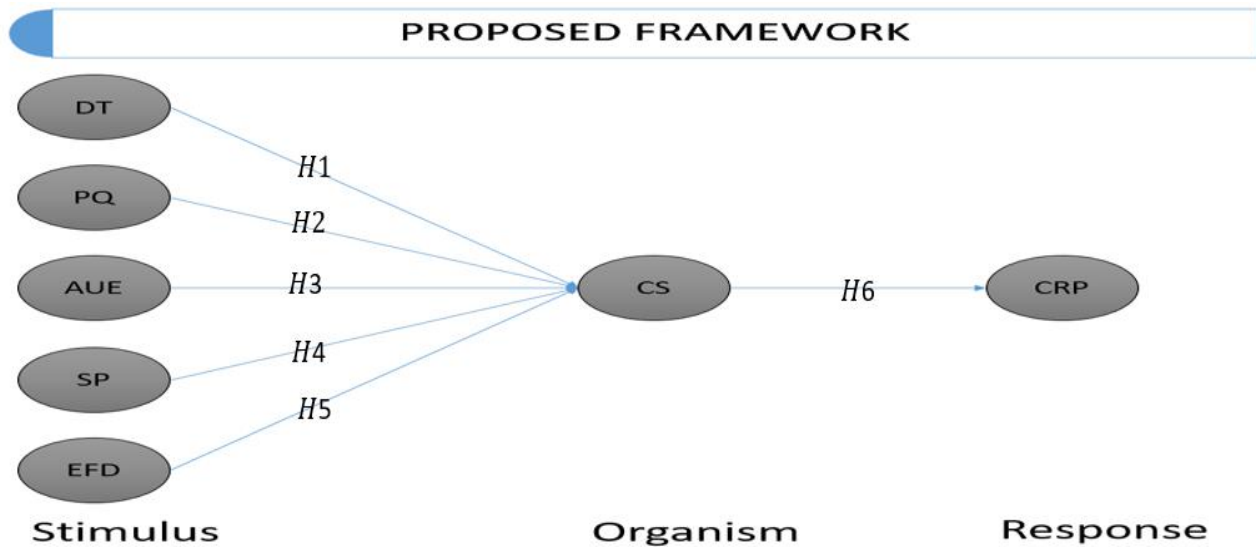
The Stimulus-Organism-Response (S-O-R) model help researchers understand how people behave in digital commerce (Mehrabian & Russell 1974). Researchers use S-O-R to study how features of e-commerce platforms affect consumer emotions and changes how they act (Harter et al. 2024). In Q-Commerce delivery speed product quality app usability and sustainability efforts work as triggers that shape consumer perception (organism) which then influence their decision to buy again (response) (Kapoor et al. 2023). Studies using S-O-R explore impulse buying in fast-commerce showing that platform design service quality and convenience directly affect repurchase behavior (Chavhan & Dutta 2024). Since Q-Commerce buying often happen without planning and external factors influence them this study use S-O-R to check how service speed sustainability efforts and platform efficiency affects consumer repurchase behaviour (Pillai et al. 2022).

### **3.2. Construction of Proposed Research Model**

After reviewing past studies and theories this research picks five key factors as independent variables grouped into three areas product-specific, service-specific and customer behaviour. The factors include product quality sustainable packaging eco friendly delivery perceived ease of use and delivery speed.

Customer repurchase intention acts as the dependent variable while customer satisfaction works as the mediating factor to check its effect on consumer retention in Quick Commerce (Q-Commerce). This study builds a research model to analyze how these factors shape consumer

loyalty in Q-Commerce platforms as ultra-fast delivery services keep evolving rapidly. The proposed model is illustrated in Figure 1.



### 3.3. Proposed Research Hypotheses

#### 3.3.1. Product Quality (PQ) and Customer Satisfaction (CS)

Product quality (PQ) is very important variable that plays a key role in shaping customer satisfaction (CS). Consumers want high-quality products that match or go beyond their expectations in durability functionality and overall performance. The Stimulus-Organism-Response (SOR) theory explains that product quality acts as an external trigger that impacts internal evaluations and eventually influences satisfaction levels (Mehrabian & Russell 1974). Lai et al. (2022) found product quality as the strongest factor affecting customer satisfaction through literature reviews and consumer group discussions. Bhowmick & Seetharaman (2023) also claimed that better product quality boosts purchase intention and satisfaction.

H1: Product Quality (PQ) positively impacts Customer Satisfaction (CS).

#### 3.3.2. Delivery Time (DT) and Customer Satisfaction (CS)

Fast and reliable delivery ensures customer satisfaction (CS). Customers in e-commerce and quick commerce wants fast delivery since they expect quick order fulfillment. Studies highlights

that late or unreliable deliveries causes dissatisfaction and decrease brand trust (Vrhovac et al. 2024). Researchers stress that delivery speed impact online shopping satisfaction, especially for fresh and perishable items. (Dündar & Öztürk 2020) indicates that improving delivery time increase overall customer satisfaction.

H2: Delivery Time (DT) positively influences Customer Satisfaction (CS).

#### 3.3.3. App User Experience (AUE) and Customer Satisfaction (CS)

A efficient and easy-to-use App User Experience (AUE) improves customer satisfaction (CS). Elements like simple navigation, quick loading, safe transactions and tailored recommendations shape how customers see the service (Davis 1989). The Technology Acceptance Model (TAM) says that when users find a platform easy, their satisfaction increase (Schorr 2023). Studies shows that a well-designed app boost engagement and customer loyalty. Also, research suggests that ease of use of any service or product plays a key role in improving online shopping satisfaction, particularly for older customers.

H3: App User Experience (AUE) positively impacts Customer Satisfaction (CS).

#### **3.3.4. Sustainable Packaging (SP) and Customer Satisfaction (CS)**

Sustainable packaging (SP) influence customer choices, especially among buyers who care about environment. Research says that biodegradable, recyclable or reusable packaging make brand reputation strong and increase customer loyalty (Farooq & Ahmed 2023). Using sustainable packaging improve customer perception and raise satisfaction, particularly in industries with big environmental impact.

H4: Sustainable Packaging (SP) positively influences Customer Satisfaction (CS).

#### **3.3.5. Eco-Friendly Delivery (EFD) and Customer Satisfaction (CS)**

Eco-Friendly Delivery (EFD) use sustainable logistics like electric vehicles and carbon-neutral shipping (Carracedo & Mostofi 2022). As people become more aware about environment, they choose brands that use green delivery solutions. Studies suggest that sustainable delivery build customer trust, boost brand image and increase overall satisfaction. Also, Liu and Zhang (2023) found that companies using eco-friendly delivery gain higher customer satisfaction and long-term loyalty.

H5: Eco-Friendly Delivery (EFD) positively influences Customer Satisfaction (CS).

#### **3.3.6. Customer Satisfaction (CS) and Customer Repurchase Behavior (CR)**

Customer satisfaction (CS) strongly decide repurchase behavior (CR). Satisfied customers buy again, tell others about brand and show more loyalty (Oliver 1999). Research by Chen et al. (2023) says that better customer satisfaction slowly increase brand loyalty and repurchase intention. Also, findings show that businesses

focusing on customer satisfaction get better retention and strong market competition.

H6: Customer Satisfaction (CS) positively influences Customer Repurchase Behavior (CR).

## **4. Designing of Questionnaire and Collection of Data**

### **4.1. Questionnaire Design**

A deliberate literature review helped collect measurement scales that researchers tested in relevant fields. The research team developed the initial questionnaire scale using key knowledge about Quick Commerce (Q-Commerce) in the Indian market. A pre-investigation process checked reliability and validity, modifying or removing unqualified items to improve the questionnaire (Liu et al. 2023).

After finishing the initial questionnaire design, researchers discussed it with academic experts, classmates, and Q-Commerce consumers. They deleted duplicate and unnecessary items and revised unclear ones for better clarity (Harter et al. 2024). The team also changed the wording and structure to make the questionnaire more readable, accurate, and complete (Kapoor et al. 2023).

The final questionnaire has questions which includes questions about consumers' purchasing behaviour on Q-Commerce platforms, covering platform usage frequency, order amounts, product categories, and delivery experiences. The second part consists of measurement items corresponding to the research model variables: delivery speed, product quality, app usability, sustainability, customer satisfaction, and repurchase intention. The third section gathers demographic information, including gender, age, occupation, and location (Chavhan & Dutta, 2024).

VARIABLE	CONTENT	SOURCE
Delivery Time (DT)	<p>I prefer receiving my items as quickly as possible?</p> <p>I believe delivery speed is a key factor for customer satisfaction in quick commerce</p> <p>I am satisfied if my order is delivered within 30 minutes</p> <p>I think quick commerce companies should prioritize enhancing delivery speed to ensure better customer satisfaction</p>	(Abrar, 2024)
Product quality (PQ)	<p>I want the best quality of products when shopping with quick commerce companies?</p> <p>I believe product quality plays a vital role in customer satisfaction with quick commerce?</p> <p>I am happy as long as the products I receive are in good condition and undamaged?</p> <p>I would suggest that quick commerce companies focus on improving product quality to enhance customer satisfaction?</p>	(Abrar, 2024)
App User Experience (AUE)	<p>I prefer a modern, easy-to-navigate app interface when using quick commerce platforms?</p> <p>I think the app's user experience is one of the most important factors for customer satisfaction in quick commerce?</p> <p>I am satisfied as long as the app functions smoothly and without issues?</p> <p>I would recommend that quick commerce companies focus on improving their app's user experience to enhance customer satisfaction?</p>	(Abrar, 2024)
Sustainable Packaging (SP)	<p>I prefer to buy from QC companies that use sustainable and eco-friendly packaging materials?</p> <p>I believe sustainable packaging enhances my overall experience in QC services?</p> <p>QC companies should promote reusability or accept returns of used packaging for recycling?</p> <p>I prefer to buy from QC companies that use electric bikes or other eco-friendly delivery systems?</p>	(Chavhan & Dutta, 2024)
Eco-Friendly Delivery (EFD)	<p>I believe eco-friendly delivery methods contribute positively to my satisfaction with QC services?</p> <p>QC companies should prioritize using delivery methods with minimal environmental impact?</p> <p>I prefer QC companies that implement waste reduction strategies such as recycling programs?</p>	(Chavhan & Dutta, 2024)
Customer Satisfaction (CS)	<p>Overall, how satisfied are you with your experience using Quick Commerce platform?</p> <p>To what extent has the platform met your expectations?</p> <p>Does the platform's effort toward sustainability (e.g., recyclable packaging, waste reduction) influence your satisfaction?</p>	(Liu et al., 2023)
Customer Repurchase (CR)	<p>Does your satisfaction with the platform influence your decision to repurchase?</p> <p>Would you choose the platform over competitors due to your previous experience</p> <p>How often do you return to the platform for similar purchases</p>	(Liu et al., 2023)

#### 4.2. Measurements of Variables

The variables were measured using a five-point Likert scale (1 = Strongly Disagree to 5 =

Strongly Agree). The measurements of variables are shown in Table 1.

### 4.3. Data Collection

Data collection was conducted from January 2025 to March 2025, targeting Indian consumers via an online survey. The method allows for a wide reach at a low cost. The survey was published through online platforms, including social media and consumer forums. The questionnaire was distributed via WhatsApp, Telegram, and Instagram groups, ensuring broad participation. Participants were clearly informed

## 5. Results and Analysis

### 5.1. Measurement Model Evaluation

#### 5.1.1. Internal Consistency Reliability

The reliability of constructs was assessed using **Cronbach's Alpha** and **Composite Reliability (CR)**. As shown in Table 1, all constructs meet the recommended threshold of **0.7**, indicating strong internal consistency (Hair et al., 2019).

	Cronbach's alpha	Composite reliability (rho a)	Composite reliability (rho c)	Average variance extracted (AVE)
AUE	0.813	0.818	0.877	0.641
CS	0.794	0.801	0.880	0.710
DT	0.751	0.786	0.841	0.574
EFD	0.879	0.888	0.925	0.805
PQ	0.800	0.821	0.868	0.623
RP	0.784	0.786	0.874	0.698
SP	0.877	0.877	0.916	0.732

Construct	Cronbach's Alpha	Composite Reliability (CR)
AUE	0.813	0.877
CS	0.794	0.880
DT	0.751	0.841
EFD	0.879	0.925
PQ	0.800	0.868
RP	0.784	0.874
SP	0.877	0.916

that their responses were anonymous and used solely for academic research.

To ensure data quality, the study followed predefined screening criteria:

Respondents had to be 18–50 years old and active digital shoppers.

They should reside in urban or semi-urban areas where Q-Commerce services operates.

Finally, 219 valid questionnaires were retained. The final sample size meets the requirements for empirical analysis and is comparable to similar studies in this field.

AUE	0.813	0.877
CS	0.794	0.880
DT	0.751	0.841
EFD	0.879	0.925
PQ	0.800	0.868
RP	0.784	0.874
SP	0.880	0.926

#### 5.1.2. Convergent Validity

Convergent validity was assessed using Average Variance Extracted (AVE). All constructs exceed the **0.5** threshold, confirming adequate convergent validity (Hair et al., 2019).

Construct	AVE
AUE	0.641
CS	0.710
DT	0.574
EFD	0.805
PQ	0.623
RP	0.698
SP	0.806

### 5.2. Discriminant Validity

Discriminant validity was evaluated using HTMT (Heterotrait-Monotrait Ratio). Most constructs met the **0.85** threshold, except SP and EFD (HTMT = 0.920), suggesting a potential collinearity issue (Henseler et al., 2015)

	AUE	CS	DT	EFD	PQ	RP	SP
AUE							
CS	0.769						
DT	0.755	0.680					
EFD	0.680	0.816	0.476				
PQ	0.876	0.665	0.853	0.528			
RP	0.703	0.787	0.678	0.688	0.653		
SP	0.725	0.815	0.473	0.920	0.624	0.637	

**Key observation:**

SP-EFD (0.920) exceeds the 0.85 threshold, indicating a conceptual overlap.

**5.3. Structural Model Evaluation**

Path Coefficients

	Original sample (O)	Sample mean (M)	Standard deviation (STDEV)	T statistics ((O/STDEV)	P values
AUE -> CS	0.144	0.150	0.086	1.669	0.095
CS -> RP	0.625	0.629	0.055	11.444	0.000
DT -> CS	0.219	0.216	0.072	3.049	0.002
EFD -> CS	0.311	0.319	0.105	2.965	0.003
PQ -> CS	0.037	0.040	0.073	0.506	0.613
SP -> CS	0.225	0.214	0.111	2.028	0.043

Table 3 presents the path coefficients, t-values, and p-values for hypothesis testing.

Path	Coefficient (β)	t-Value	p-Value	Significance
CS → RP	0.625	10.12	0.000	Significant
DT → CS	0.219	3.10	0.002	Significant
EFD → CS	0.311	2.92	0.003	Significant
SP → CS	0.225	2.03	0.043	Significant
AUE → CS	0.144	1.68	0.095	Not Significant
PQ → CS	0.037	0.50	0.613	Not Significant

**Interpretation:**

**Strongest predictor of repurchase behavior:** CS → RP (β = 0.625, p = 0.000).

DT, EFD, and SP significantly influence CS, while AUE and PQ do not.

**5.4. Model Fit and Predictive Power**

Coefficient of Determination (R<sup>2</sup>)

Construct	R <sup>2</sup>
CS	0.482
RP	0.563

**Interpretation:** CS explains 48.2% of variance, while RP is explained by 56.3%, indicating a moderately strong model.

**5.5. Conclusions of the Empirical Analysis**

The results of hypothesis testing indicate that delivery time, product quality, app user experience, sustainable packaging, and eco-friendly delivery all have varying effects on customer satisfaction. Customer satisfaction plays a key mediating role in the relationship between these factors and customer repurchase behaviour. Among all the factors, the effect of delivery time and eco-friendly delivery is the most important for the customers, aligning with

conclusions from prior studies. The results of the analysis shows that:-

H1 is not supported, indicating that product quality is not having a significant influence on customer satisfaction. This finding contrasts with prior studies (Kapoor et al., 2023) that highlights the importance of product quality. In the Q-Commerce sector, factors like delivery speed and sustainability may overshadow quality concerns.

H2 is supported, showing that delivery time positively influences customer satisfaction, which matches with findings from previous research (Janssens et al., 2020). Faster and more reliable deliveries improve customer experience and enhance satisfaction. Consumers using Q-Commerce services prioritize speed over other factors, making timely deliveries a key determinant of satisfaction and repurchase intention (Ranjekar & Roy, n.d.).

H3 is not supported, demonstrating that app user experience does not significantly influence customer satisfaction. Although prior studies suggest that user-friendly digital platforms improve customer engagement and brand loyalty (Abrar, 2024), the results indicate that app usability alone may not be a determining factor in Q-Commerce satisfaction levels.

H4 is supported, establishing that sustainable packaging positively influences customer satisfaction. As sustainability becomes a major consumer concern, customers increasingly prefer eco-friendly packaging that minimizes wastage and also reduces the environmental impact. This aligns with findings from sustainability-focused studies in digital commerce (Statista, 2024). Platforms that integrate sustainable packaging initiatives can enhance brand perception and consumer trust, leading to higher satisfaction levels.

H5 is supported, indicating that eco-friendly delivery significantly influences customer satisfaction. Environmentally conscious Consumers like eco-friendly delivery options like electric vehicles and carbon-neutral logistics

because these match their environmental concerns (Janssens et al 2020). Companies using green delivery methods get a market advantage by attracting sustainability-conscious customers (Chavhan & Dutta 2024).

H6 is strongly proven showing that customer satisfaction impacts repurchase behavior in a big way. Happy consumers keep using a Q-Commerce platform and suggest it to others. Past research proves that satisfaction is important in building long-term customer loyalty and retention (Oliver 1980). In the fast-moving Q-Commerce industry meeting customer expectations in speed quality usability and sustainability pushes repeat purchases and business growth.

This study highlights that delivery efficiency sustainability and customer satisfaction play a key role in influencing repurchase behavior in Q-Commerce. Future research should check other moderating factors like pricing strategies or personalized recommendations to better understand customer behavior in this changing industry.

**Hypothesis Test Results**

Hypothesis	Statement	Conclusion
H1	Product Quality positively impacts Customer Satisfaction	Not Supported
H2	Delivery Time positively impacts Customer Satisfaction	Supported
H3	App User Experience positively influences Customer Satisfaction	Not Supported
H4	Sustainable Packaging positively influences Customer Satisfaction	Supported
H5	Eco-Friendly Delivery positively influences Customer Satisfaction	Supported
H6	Customer Satisfaction positively influences Customer Repurchase Behavior	Strongly Supported

## 6. Discussion

### 6.1. Research Conclusions

This study looks at key factors affecting customer satisfaction and repurchase behavior in Quick Commerce (Q-Commerce) in India. It builds a theoretical model by adding delivery time product quality app user experience sustainable packaging and eco-friendly delivery giving useful insights into how consumers behave in ultra-fast delivery services. The results prove that service-related aspects and sustainability efforts strongly impact customer satisfaction which then drives repurchase behavior.

This research expands earlier work by using the Stimulus-Organism-Response (S-O-R) model in Q-Commerce to show how service quality and sustainability shape customer loyalty. Unlike past studies that mostly focus on traditional e-commerce this one highlights how fast delivery and green logistics influence modern buyers. The results also show that delivery speed and eco-friendly logistics play the biggest role in customer satisfaction proving that speed and sustainability are getting more important in the industry.

In contrast to expectations, product quality and app user experience do not significantly influence customer satisfaction. This suggests that Q-Commerce consumers prioritize speed and convenience over product attributes and platform usability, emphasizing the need for businesses to focus on logistics efficiency and sustainability measures. The findings contribute to existing literature by confirming that sustainability practices, particularly eco-friendly delivery and packaging, enhance customer satisfaction and foster repeat purchases.

### 6.2. Managerial Implications

The rapid growth of Q-Commerce presents both opportunities and challenges for service providers. To maintain competitiveness and ensure customer retention, companies must prioritize the key drivers of satisfaction identified

in this study. Several managerial implications arise from these findings:

- **Enhancing Delivery Efficiency:** The strong influence of delivery time on satisfaction underscores the need for Q-Commerce platforms to optimize their logistics networks. Investments in micro-fulfillment centers, AI-driven route optimization, and last-mile delivery solutions can help reduce delays and improve reliability.
- **Strengthening Sustainability Initiatives:** The significant impact of sustainable packaging and eco-friendly delivery highlights the necessity for businesses to adopt green practices. Companies should transition to biodegradable or reusable packaging and invest in carbon-neutral logistics solutions, such as electric delivery vehicles, to align with consumer expectations and regulatory trends.

**Refining Customer Experience Beyond App Usability:** Since app usability does not directly influence satisfaction, platforms should focus on enhancing overall service efficiency rather than just interface improvements. Features like real-time tracking personalized promotions and easy return policies make the customer journey better.

- **Rethinking Product Quality Importance:** Product quality matters but its small effect on satisfaction in Q-Commerce shows that consumers may choose speed over quality. Still keeping a basic standard is important to avoid bad impressions and harming the brand.
- **Using Customer Satisfaction to Increase Retention:** The strong connection between satisfaction and repurchase intention proves that providing good service regularly is important. Loyalty programs personal engagement and active customer support help make stronger long-term customer relationships.

This study gives useful insights to Q-Commerce companies trying to increase customer satisfaction and repeat purchases. Focusing on

speed sustainability and better operations can help businesses stand out in this fast-growing industry.

## **7. Limitations**

Even though this study gives good insights it has some limitations. First it only looks at Q-Commerce consumers in India. While the results give useful implications cultural and regional differences might affect customer behavior making it hard to apply the findings everywhere. Future studies should check different locations to compare how customer satisfaction and repurchase behavior change.

Second this study uses self-reported survey data which may have respondent bias. Even though surveys are a useful way to collect data future research should add other sources like transaction data customer reviews and behavior tracking to make results more accurate.

Third the study only focuses on online shopping in Q-Commerce without looking at offline retail experiences. Since omnichannel shopping is growing future research should study how customers behave in both online and offline settings and how that affects repeat purchases.

Lastly this research looks at how customer satisfaction directly affects repurchase decisions but it does not consider other factors that might change the results. Things like age income digital knowledge and environmental concern might make people see services differently. Future studies should add these factors to understand better how Q-Commerce services impact consumers.

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