

# Ultra-Fast (10-Minute) E-Commerce in India: An Analytical Study with Special Reference to Coimbatore City

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## Abstract

Ultra-fast (10-minute) e-commerce has emerged as a disruptive business model in India, powered by instant delivery platforms such as Blinkit, Zepto, Swiggy Instamart, and Dunzo. This study investigates the growth, consumer perception, operational efficiency, and challenges of the 10-minute delivery model, with a special reference to Coimbatore City. Using descriptive research design and both primary and secondary data, the study employs statistical tools including Chi-Square Test, ANOVA, and Correlation Analysis. Data was collected from 210 respondents through a structured questionnaire. The results show that convenience, time-saving, and emergency needs significantly drive adoption, while the concerns are delivery fees, product availability, and sustainability. The findings highlight that ultra-fast delivery is reshaping consumer behavior in Coimbatore, particularly among Gen Z and working professionals. The study concludes with recommendations for improving profitability, operational efficiency, and long-term sustainability of the quick-commerce sector.

**Keywords:** Ultra-fast E-commerce, consumer satisfaction, logistics technology, product assortment, digital platforms.

## 1. Introduction

Ultra-fast (10-minute) e-commerce has grown rapidly in India, driven by changing consumer habits, advancements in logistics technology, and increasing urban density. The integration of micro-fulfillment centers and hyperlocal delivery frameworks has transformed traditional retail expectations. In Coimbatore, the adoption of quick-commerce services reflects broader national trends, but also reveals unique regional patterns related to demographics, lifestyle, and purchasing behavior. This segment of retail is particularly influenced by time efficiency, product assortment, and trust in digital platforms. The Indian e-commerce industry has evolved rapidly over the last decade, driven by technological penetration, changing consumer lifestyles, and the rise of digital payment systems. The latest phase of this evolution is ultra-fast or 10-minute e-commerce, commonly known as quick commerce (Q-commerce). Quick commerce platforms promise delivery of groceries, FMCG products, and essentials within 10–20 minutes through hyperlocal warehouses called dark stores.

Coimbatore, known as the “Manchester of South India,” has witnessed remarkable growth in e-commerce adoption due to its expanding IT workforce, urban population, and digitally savvy consumers.

Platforms such as Zepto and Blinkit have seen fast expansion in key areas of the city including Gandhipuram, Peelamedu, Saibaba Colony, Saravanampatti, and Kuniyamuthur.

This study focuses on understanding the adoption, consumer satisfaction, challenges, and sustainability of 10-minute e-commerce in Coimbatore City.

## 2. Review of Literature

Several studies have explored e-commerce growth in India, digital consumer behavior, and last-mile delivery logistics. However, limited literature exists on the ultra-fast delivery ecosystem.

- **Rao & Mehta (2022)** emphasized that quick-commerce relies heavily on micro-fulfillment centers and predictive analytics to achieve delivery speed.
- **Kapoor (2023)** found that urban millennials prefer ultra-fast delivery due to busy lifestyles and higher disposable income.
- **BIS Research (2023)** reported that the Indian Q-commerce market is expected to reach \$5.5 billion by 2025.
- **Local studies in Tamil Nadu** highlight convenience and emergency needs as top reasons for adoption.

A significant research gap exists in understanding consumer perception at the city level, particularly Coimbatore.

## 3. Objectives of the Study

1. To analyze consumer awareness and usage patterns of ultra-fast e-commerce in Coimbatore City.
2. To examine customer satisfaction towards 10-minute delivery services.
3. To identify factors influencing adoption of ultra-fast e-commerce.
4. To offer suggestions for improving efficiency and sustainability of quick-commerce platforms.

## 4. Scope of the Study

The study focuses on Coimbatore City and analyzes consumer behavior related to Zepto, Blinkit, Swiggy Instamart, and Dunzo. The results are limited to urban and semi-urban consumers aged above 18 years.

## 5. Research Methodology

### Research Design:

Descriptive and analytical research design.

### Data Collection:

- **Primary Data:** Collected using a structured questionnaire from 210 respondents.
- **Secondary Data:** Journals, reports, websites, and industry publications.

### Sampling Technique:

Convenience sampling.

### Sample Size:

210 respondents.

### Statistical Tools Used:

1. Percentage Analysis
2. Chi-Square Test

3. Correlation Analysis

4. ANOVA

## 6. Data Analysis and Interpretation

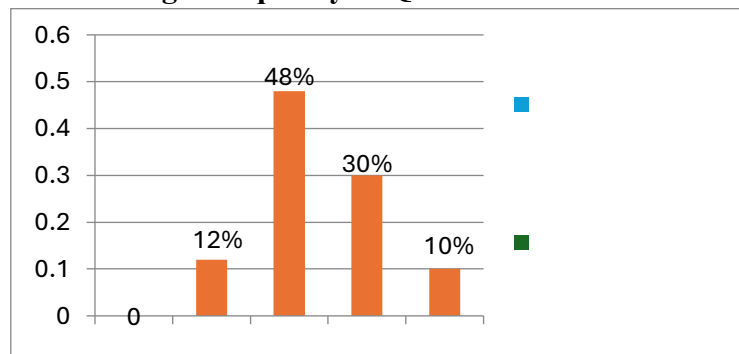
**Table 1: Demographic Profile of Respondents**

| Variable   | Category              | Percentage |
|------------|-----------------------|------------|
| Gender     | Male                  | 55%        |
|            | Female                | 45%        |
| Age        | 18–25 years           | 50%        |
|            | 26–35 years           | 28%        |
|            | Above 35              | 22%        |
| Occupation | Students              | 40%        |
|            | Working professionals | 38%        |
|            | Homemakers            | 12%        |
|            | Others                | 10%        |

**Table 2: Usage Frequency of Quick-Commerce Platforms**

|         | Percentage |
|---------|------------|
| Daily   | 12%        |
| Weekly  | 48%        |
| Monthly | 30%        |
| Rarely  | 10%        |

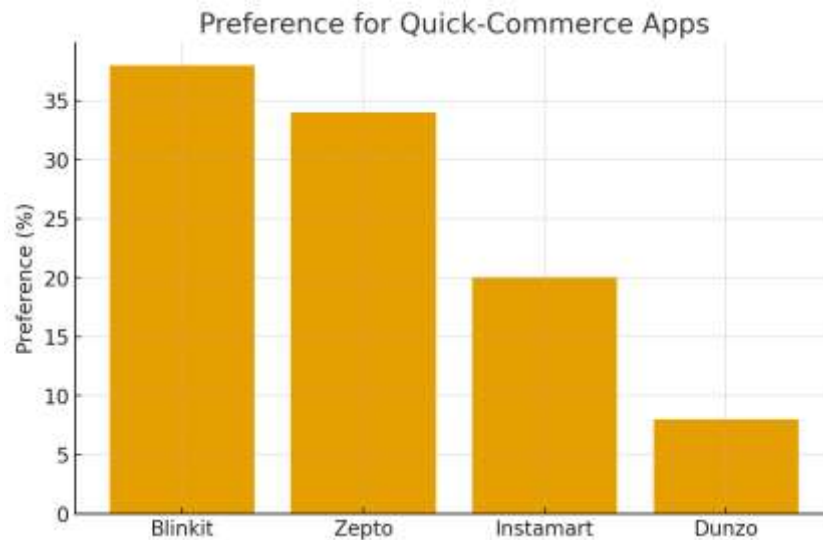
**Chart 2: Usage Frequency of Quick-Commerce Platforms**



**Table 3: Preference for Quick-Commerce Apps**

| Quick-Commerce App | Percentage of Users |
|--------------------|---------------------|
| Blinkit            | 38%                 |
| Zepto              | 34%                 |
| Instamart          | 20%                 |
| Dunzo              | 8%                  |

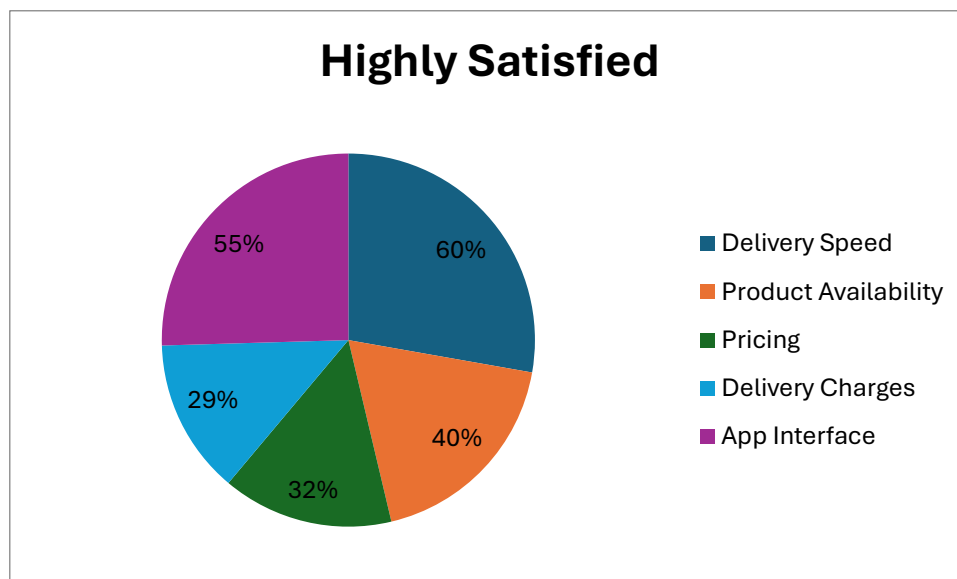
**Chart 3: Preference for Quick-Commerce Apps**



**Table 4: Consumer Satisfaction Factors**

| Factor               | Highly Satisfied | Satisfied | Neutral | Dissatisfied |
|----------------------|------------------|-----------|---------|--------------|
| Delivery Speed       | 60%              | 28%       | 8%      | 4%           |
| Product Availability | 40%              | 35%       | 17%     | 8%           |
| Pricing              | 32%              | 38%       | 20%     | 10%          |
| Delivery Charges     | 29%              | 36%       | 22%     | 13%          |
| App Interface        | 55%              | 30%       | 10%     | 5%           |

**Chart 4: Consumer Satisfaction Factors**



## 7. Statistical Analysis

### 7.1 Chi-Square Test

**Hypothesis:** - H0: There is no significant relationship between age and preference for 10-minute delivery. - H1: There is a significant relationship.

**Result:** Calculated  $X^2 = 18.23$ , Table value = 12.59 (df = 6). Since **18.23 > 12.59**, the null hypothesis is rejected.

**Inference:** Age significantly influences preference.

### 7.2 Correlation Analysis

Variables: Delivery speed & overall satisfaction

**Correlation coefficient (r): 0.78**

**Inference:** Strong positive relationship—faster delivery improves satisfaction.

### 7.3 ANOVA

**Objective:** To test whether occupation influences frequency of use.

**Result:** F-value = 4.32, P-value < 0.05.

**Inference:** Occupation significantly influences how frequently consumers use quick commerce.

## 8. Findings of the Study

- Ultra-fast e-commerce adoption is high among young consumers aged 18–25 in Coimbatore.
- Blinkit and Zepto are the most preferred apps in the region.
- Delivery speed and emergency convenience are the major motivators.
- Students and working professionals use quick-commerce more frequently.
- Product availability and high delivery charges remain common concerns.
- Strong correlation ( $r = 0.78$ ) proves that delivery speed drives satisfaction.
- Chi-square results show age significantly influences app preference.
- Occupation affects usage frequency as per ANOVA.
- Respondents expect more offers, better stock availability, and reduced delivery fees.
- Sustainability concerns include high packaging waste and carbon emissions.

## 9. Suggestions

- Dark store expansion is needed in outer-city areas to improve service reach.
- Platforms should adopt eco-friendly packaging and electric delivery vehicles.
- Improved stock prediction algorithms can reduce product unavailability.
- Loyalty programs may increase customer retention.
- Delivery charges can be reduced through subscription models.
- Tie-ups with local Kirana stores can expand inventory.
- Maintain rider safety by avoiding pressure to meet 10-minute targets.

## 10. Conclusion

Ultra-fast e-commerce has successfully reshaped consumer behavior in Coimbatore by offering unparalleled convenience and speed. The study confirms that younger consumers are the primary drivers of adoption. In Coimbatore, the adoption of quick-commerce services reflects broader national trends, but also reveals unique regional patterns related to demographics, lifestyle, and purchasing behavior. This segment of retail is particularly influenced by time efficiency, product assortment, and trust in digital platforms. Companies such as Blinkit, Zepto, and Swiggy Instamart have invested heavily in infrastructure to optimize delivery speed while maintaining operational profitability. The interplay of consumer psychology, convenience preferences, and digital literacy has created a fertile environment for

the growth of ultra-fast e-commerce. Despite the benefits, challenges such as delivery costs, workforce management, and sustainability concerns remain central to academic discussion and policy deliberation. While the market shows strong growth potential, platforms must address challenges related to cost, operational efficiency, and environmental sustainability. If supported by innovative strategies, technological enhancement, and responsible practices, the 10-minute delivery model can continue to expand and remain relevant in the competitive Indian e-commerce landscape.

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