

The Economics Of Now: Consumer Time Sensitivity And The Rise Of Q-Commerce

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ABSTRACT

This study examines Q-commerce as an emerging retail model built around ultra-fast delivery, hyperlocal fulfilment and platform-based logistics. It highlights a shift from traditional and e-commerce models toward speed and convenience as key drivers of consumer value. The paper develops a conceptual framework linking demand-side factors (such as convenience, speed and instant gratification), operational processes and sustainability outcomes. It also considers the role of external influences and moderators like regulation, socio-environmental concerns and competition.

The analysis reveals that even though Q-commerce is growing rapidly and immensely, it faces structural challenges related to high operational costs, thin margins and socio-environmental impact. It also brings out important trade-offs between speed, cost efficiency and long term viability. The study contributes by offering an integrated holistic view of how these factors interact and provides a basis for understanding the sustainability of Q-commerce as a retail model.

Keywords: Q-commerce, Dark stores, Ultra-fast delivery, Last-mile delivery, Logistics, Consumer Dynamics.

INTRODUCTION:

Business is defined as any creative, legal, human activity done with the motive of earning profit. Commerce, a subset of business, includes all those activities which help in the distribution of goods and services to the customer or consumer. In the words of James Stephenson, Commerce is “the sum total of those processes which are engaged in the removal of hindrances of person, place and time in the exchange of commodities.” (Stephenson, 1933)

The consumer behavior and expectations have led to a paradigm shift from traditional commerce (comprising of brick and mortar) to e-Commerce (comprising of websites and online market places). With the advancement of technology, dominance of internet and changing lifestyle of consumers has further led to Q-commerce (the era of ultra-fast instant delivery). In India, the shift from traditional commerce to e-commerce began in the early 2010s and accelerated after 2015 with growing internet and smartphone use. Since around 2019, Q-commerce has emerged as the next phase, driven by demand for instant delivery and further boosted during the COVID-19 pandemic.

Q-commerce, an acronym for Quick commerce, is instant or ultra-fast delivery of goods, generally with ten to twenty minutes after placement of order through digital platforms using an app or website.

Stojanov states that “Q-commerce is a product of the integration of information and communication technologies and the migration of product exchange in the

online environment, which in combination with the possibilities of physical delivery within a relatively short period of time, creates a new business segment for product exchange” (Stojanov, 2022). He further explains that Q-commerce is an upgraded form of e-Commerce, inspired by the traditional supply of ready to eat foods/dishes delivered on the doorstep by restaurants. However, Q-commerce offers a wide range of products including FMCGs, medicines, food supplements, fruits, vegetables, electronic goods, consumables, cosmetics, packaged foods, printouts, etc. (Sheth, 2020)

Q-commerce is an emerging retail model focusing on the consumer needs of speed, convenience, variety, reliability as well as consumer satisfaction. Although Covid-19 turned Q-commerce from convenience to a necessity, it has become the need of the hour (Pizzi, Scarpi, & Dennis, 2020). It is disruptive in nature and needs substantial changes for long term sustainability. Blinkit, Instamart, Flipkart minutes, Swiggy, Zomato, Zepto, etc. are the emerging Q-commerce enterprises in India.

RESEARCH PROBLEM

Q-commerce is rapidly emerging as a new retail format built around speed, convenience, reliability and instant delivery, typically within minutes. Unlike traditional e-Commerce, which competes on price and assortment, Q-commerce shifts the focus to *immediacy* as the core value proposition.

This shift has created a clear paradox. On one hand, Q-commerce is witnessing strong adoption, particularly in urban markets, driven by changing lifestyles, higher digital penetration and growing preference for an on-

demand consumption. On the other hand, the model faces structural challenges including high operational costs, weak unit economics, supply chain complexities and socio-environmental impact.

Existing research has largely examined related areas such as e-commerce adoption and last-mile delivery. However, there is limited work that looks at Q-commerce in a holistic manner. In particular, the dynamics of Q-commerce and the interaction between them remain underexplored.

Accordingly, the central research question of this study is:

How do the key dynamics of Q-commerce—across consumer behavior, technology, operations and economics—shape its long-term sustainability as a retail model?

RATIONALE OF THE STUDY

Q-commerce is considered disruptive because it challenges the traditional logic of retail and supply chains by prioritizing speed over efficiency. This shift makes it important to examine the model from multiple perspectives.

From a consumer perspective, Q-commerce has reinforced instant gratification and consumption on-demand, leading to more frequent but smaller purchases. This change in buying behavior has important implications for demand patterns of consumers.

From an operational perspective, the model depends on new logistics systems and delivery systems such as dark stores, micro-fulfilment centers and hyperlocal delivery networks. Though these improve speed and responsiveness, they also increase complexity and cost of operations.

From an economic standpoint, Q-commerce operates under high competition with heavy promotional strategies, high customer acquisition/retention costs and thin margins. This raises questions about long-term profitability, scalability and viability.

From a social and environmental perspective, concerns regarding gig worker conditions, packaging waste and carbon emissions are becoming increasingly relevant.

Finally, from a policy perspective, the sector is still evolving within an unregulated environment, making governance and regulation important for its sustainable growth.

All these factors, taken together, highlight the need for complete understanding of Q-commerce for its long-term profitability and sustainability.

RESEARCH METHODOLOGY

This study is conceptual in nature and aims to develop a framework to understand the dynamics of Q-commerce. Since the field is still evolving, a conceptual approach is suitable to bring together existing ideas and identify key relationships within the model.

The study is based on a review of existing literature from academic journals, industry reports and working papers related to e-commerce, Q-commerce, consumer behavior, supply chains, dark-stores and digital platforms. Emphasis

has been placed on recent studies to ensure relevance, especially those focusing on technology integration and last-mile delivery.

Based on this review, the framework is structured around four key components:

Key drivers (consumer convenience, urban lifestyle, marketing and technology)

Mediating factors (consumer behavior and operational efficiency)

Sustainability (the main objective and result)

Moderating factors (regulation, socio-environmental concerns and competition).

The relationships between these elements are developed through logical interpretation of existing theories in consumer behavior and supply chain management. While the study does not use primary data, it provides a structured base for future empirical research to test and validate the proposed framework.

CONCEPTUAL FRAMEWORK: DYNAMICS OF Q-COMMERCE

The Q-commerce model explains how the key drivers (independent variables) influence consumer behavior and operational efficiency (mediators) which in turn determine business sustainability (dependent variable / outcome) while external factors act as moderators.

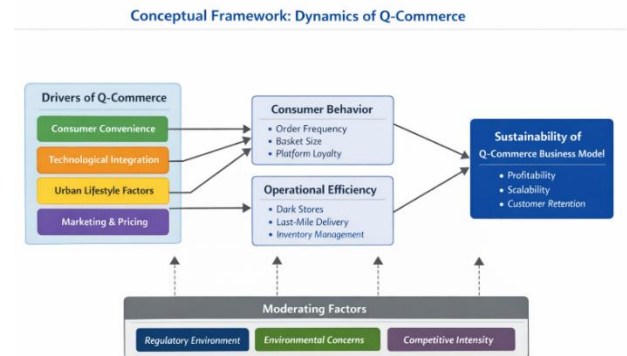


Fig 1.1 Source – Authors’ compilation

Key Drivers of Q-commerce (Independent Variables)

Consumer Convenience Orientation: It is the primary demand side driver of Q-commerce. It is built on instant gratification. There is a paradigm shift in consumption and behavioral pattern of customers (Dhar, 2000). Traditional retail was based on variety and price. But now customers focus on speed, reliability and efficiency. Consumers prefer convenience and show reduced price sensitivity.

Instant Gratification: Consumers are impulsive buyers. They believe in consumption on demand. They do not like to postpone consumption and seek immediate fulfilment of demand.

Need for speed: The consumer expects delivery within minutes rather than a couple of days. For this ultra-fast delivery, the consumer is also willing to pay a premium. (Jayapal, 2025)

Ease of use: Mobile applications with easy intuitive interfaces, one-click ordering, saved preferences, AI-

driven recommendations and digital payment integration significantly reduce cognitive and physical effort in the purchasing process.

Urban Lifestyle Factors: Q-commerce thrives because of major shift in the lifestyle of urban consumers. The change in lifestyle is due to the following enumerated socio-demographic factors and working conditions

Busy schedules, long commutes and odd working hours of professionals / employees

Increasing number of nuclear families and bachelors living alone

Dual income households / increase in female employment

Higher disposable income

High smartphone usage and internet accessibility

Increasing digital literacy and digital payments

Technological Integration: It acts as the backbone of Q-commerce. It ensures speed and accuracy in operations. AI is used to forecast demand (Cao, 2021). Advanced systems, real-time tracking system and GPS help determine the shortest routes, avoid traffic, enhance rider productivity and ensure timely delivery. Online payment modes, after sales services and reviews increase the trust and satisfaction of customers. (Ivanov, Dmitry & Dolgui, Alexandre, 2020)

Marketing & Pricing Strategies: It plays an important role in customer acquisition, retention and satisfaction. Some of the promotional strategies are enumerated below;

Introductory pricing

Free delivery

Promotional offers

Exclusive deals

Dynamic pricing

Cashback

Loyalty points

Targeted ads

Push notifications

Subscription plans

Mediating Variables: It explains how Q-Commerce transforms key input drivers into sustainable outcomes. They represent the internal functioning of the system, capturing both demand-side and supply-side mechanisms of the model. (Goswami & Kumari , 2024)

Consumer Purchase Behavior: It reflects the demand-side transformation triggered by Q-Commerce. It answers when, how and why consumers make purchases. Low-value higher-frequency orders though increase the operational costs but also increases the reliability of consumers on the platform.

Order Frequency and Basket Size: Q-commerce encourages high-frequency and impulsive purchasing behavior. The consumer has shifted from higher volume purchases to smaller frequent orders. They no longer accumulate needs and order on demand. Low Average Order Value (AOV) results in lower profitability.

Platforms thus use AI-driven up selling at checkout to push the basket value above the free-delivery threshold to enhance sales volume.

Brand and Platform Loyalty: Consumer focus on transactional loyalty rather than on emotional loyalty. Loyalty is based on speed, reliability and quality of service. Delay or issues in delivery lead to platform hopping among customers. Loyalty is driven by convenience and promotional offers. Price of products, discounts, sale, special offers, product availability, faster delivery, etc. are factors which influence consumer loyalty. Internally, platforms use Churn Prediction Models to identify users, who had a bad experience (e.g., wrong delivery or a late delivery) and offer them instant compensation to prevent them from platform hopping. (Joshi, Patil, & Gaware, 2025)

Operational Efficiency: It highlights the supply side capabilities of firms. It focuses on ultra-fast delivery. (Kavitha & Santhanalaxmi, 2026)

Dark Stores: Also known as micro fulfilment centers, are the engine of Q-commerce. They are mini warehouses in high demand areas for storing, packing and picking to ensure timely delivery of goods. They are strategically placed in high demand areas to reduce delivery time. Location optimization and efficient inventory/waste management are crucial for profitability and efficiency. Poor inventory management can lead to stock-outs and customer dissatisfaction whereas poor waste management can lead to lower profits and higher wastage. Internal systems use dynamic pricing to automatically discount items nearing their expiration date to reduce waste and increase profitability. (Paché, 2022)

Last-Mile Delivery Speed: Last-mile delivery is the most complex and cost-intensive component of Q-Commerce. Speed of delivery (within minutes) is the primary value proposition. Thus, dark stores are usually located within kilometers of high demand areas. Efficiency depends on rider availability, route optimization and traffic conditions. Delay in delivery leads to customer dissatisfaction. AI predictive dispatching suggests when the order will be ready and assigns a rider even before the bag is packed. Faster delivery often leads to higher operational costs, lowering margins thereby creating pressure on profitability.

Inventory Turnover: Inventory turnover measures how efficiently the stock moves through the system. It ensures a balance between availability of stock and cost control. Higher the turnover, lower is holding costs. Forecasting inventory demand plays a crucial role in maintaining optimal stock levels. Overstocking increases warehousing costs while understocking leads to loss in sales. Real-time synchronization is important to reflect the exact available stock.

Dependent Variable: Sustainability of Q-Commerce

Sustainability of Q-Commerce is the ultimate outcome variable in the conceptual framework. The long-term objective of Q-commerce is thus sustainability. It focuses on the long-term ability of Q-Commerce firms to operate effectively and efficiently by remaining profitable and

competitive thereby generating consistent value for stakeholders. Against the short-term growth metrics such as user acquisition, customer retention or higher order volume, sustainability focuses on the endurance and stability of the business model over time. Given the inherent high-cost and speed-driven nature of Q-Commerce, sustainability is a multi-dimensional construct encompassing financial, operational and customer-centric aspects. Sustainability should also integrate environmental and social responsibility. (Gupta & Jha, 2025)

The Flywheel Effect: The goal of the model is to reach a state where volume of sales lowers the delivery costs. This then helps lower prices and give more discounts, which further increases sales. If a company can spin this flywheel fast enough, the model becomes sustainable. If the Cost of Acquiring a Customer (CAC) remains higher than the Lifetime Value (LTV) of that customer, the model remains a "leaking bucket" leading towards unsustainability in the long run.

Profitability: Profitability is a major indicator of whether Q-Commerce firms can transit from growth-driven models to financially viable enterprises. It is important to analysis the revenue earned per order with the cost per order which includes acquisition cost, delivery costs, discounts, promotional costs and operational expenses. The contribution margin also needs to be analyzed. It should be accessed whether an individual transaction contributes positively after accounting for the variable costs incurred. Sustainability depends on whether long-term customer value exceeds customer acquisition and retention costs.

Q-commerce firms also generate income through ad revenue. They are becoming advertising giants. Many brands pay a premium for "top shelf" digital placement on the app/website which often provides a higher profit margin than the actual groceries sold.

Scalability: Scalability implies the ability of Q-Commerce models to expand operationally and geographically without proportional increase in costs. It ensures feasibility of replicating infrastructure to strengthen logistics network. It includes setting up dark stores and micro fulfilment centers in new regions to ensure superfast delivery. It also incorporates geographical expansion, i.e., ability to function beyond metro cities into tier-2 and tier-3 markets. In smaller markets/cities, the cost per delivery remains high and the willingness to pay a premium for delivery fee drops significantly. Scalability in these markets often requires a hybrid model (i.e., more delivery time to allow riders to batch multiple orders together). (Balasundaram, Sudheer, Patil, Sethuraman, & Vijayakumar, 2025)

Customer Retention: Customer retention reflects the ability of Q-Commerce platforms to maintain a stable and loyal customer base over time. It is a battle between organic loyalty and incentivized usage. Most users are platform hoppers, who shift from one platform to the other based on discounts and deals. Sustainability can only be achieved in the long run when the platform moves from discounts/deals to annual subscriptions. This increases the repeat purchase rate and helps predict customer behavior

for inventory planning. It is noticed that in the short run customer loyalty is based on price sensitivity, promotional offers and speed whereas in the long run customer loyalty is based on service quality, reliability, grievance redressal and trust.

Long-Term Viability: Long-term viability refers to the ability of Q-Commerce to sustain operations without excessive reliance on external funding. It aims to reduce dependency on venture capital or external investment and finance through profitability and income generation. It aims to make firms operational resilient by withstanding market shocks, regulatory changes and competitive pressures.

Viability can be achieved when the model can maintain equilibrium between cost, speed and service quality. Many Q-Commerce firms are currently operating as loss-making models supported by funding, raising concerns about profitability and future sustainability.

The model's survival depends on its ability to outrun its Burn Rate. To survive in the long-term, companies are looking at reducing labor costs through automation of inventory management and packaging. Also, diversification is the most common path to long-term viability thereby selling variety of products with high-margin categories like electronics, pharmacy or clothing; moving from FMCGs and perishable goods with low margins.

Moderating Variables:

Moderating variables refer to external factors that influence how the key drivers of Q-commerce translate into consumer behavior, operational efficiency and ultimately sustainability. These factors do not directly drive the model, but they shape the strength and direction of relationships within the model. In Q-commerce, regulatory conditions, environmental concerns and competitive intensity play an important role in determining how effectively the model performs over time.

Regulatory Environment

The regulatory environment affects how Q-commerce firms operate. As the sector is still evolving, it is functioning under an undeveloped policy framework. Regulation helps support growth through standardization and consumer protection. However, it also increases compliance and operational costs and limits flexibility.

Labor laws are especially important due to the sector's dependence on gig workers. Policies related to wages, social security, insurance and working conditions can improve the service quality. Moreover, these policies also raise operational costs which potentially affects long term profitability (Raj & Das, 2025).

Urban zoning regulations influence the infrastructural development and feasibility of dark stores. The restrictions in construction of commercial units in residential areas can limit location choices and affect delivery speed and efficiency.

Data privacy regulations also play a crucial role. These firms heavily rely on consumer data for personalization and demand forecasting. Stricter rules may reduce the effectiveness of AI and technology-driven operations while increasing compliance requirements.

Environmental Concerns

Environmental issues are becoming increasingly relevant in Q-commerce. Frequent but small value orders result in higher packaging waste and increased delivery activity, contributing to higher carbon emissions.

The rising consumer awareness is beginning to shape the preferences of firms, increasing the demand for eco-packaging and greener delivery options. However, adopting such practices often increases costs leading to the creation of a trade-off between environmental responsibility and profitability.

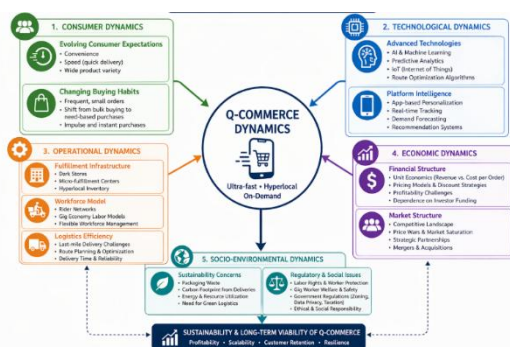
Overall, environmental factors act both as a constraint and a driver. They push firms toward adopting more sustainable practices while challenging their existing cost structures.

Competitive Intensity

Competition in Q-commerce is particularly strong in urban markets where multiple firms compete on price, speed and service-quality. This often leads to aggressive discounting, increased promotional costs and high customer acquisition/retention costs, thereby putting immense pressure on profit margins. While competition encourages innovation and growth, it makes achieving high profitability difficult. Market saturation further intensifies this challenge.

It is important to understand that consolidation through mergers and acquisitions can reduce competitive pressure and improve efficiency. Larger firms may attain the benefit of economies of scale and stronger infrastructure which help in long-term sustainability.

ANALYSIS AND DISCUSSION



The proposed framework views Q-commerce as an integrated system shaped by the interaction of consumer demand, technology, operations and external constraints. At its core, the model highlights speed and immediacy as the defining features of Q-commerce, around which all other elements are organized (Stojanov, 2022).

From a consumer perspective, there is a clear shift toward convenience-driven behavior. Consumers are moving away from planned bulk purchases to smaller but more

frequent orders. This reflects a growing preference for instant gratification. Customers prefer saving time over price advantages. As a result, consumer behavior becomes a key driver of demand, but it also creates pressure on margins due to lower order values.

Technology plays a central enabling role in this model. Tools such as real-time data systems, AI-driven data analysis, automation, demand forecasting and route optimization help firms respond quickly to consumer needs. However, technology alone does not ensure efficiency. It basically supports coordination between demand and supply. Its effectiveness still depends on how well technology is integrated with operational processes.

Operations form the backbone of Q-commerce. The use of dark stores and hyperlocal delivery networks allows firms to reduce delivery time. However, these increase operational cost and complexity. Last-mile delivery remains the most critical and costly component. Although gig-based labor offers flexibility, it also raises concerns about reliability and workforce stability, thereby making operations both an advantage as well as a constraint.

From an economic perspective, the model reveals a clear tension between growth and profitability. Although firms expand rapidly through aggressive pricing and promotion, high costs and thin margins make long-term sustainability controversial. Intense competition especially in saturated urban markets further reduces profitability.

The framework also brings out the importance of socio-environmental factors. Issues such as packaging waste, carbon emissions and gig worker conditions highlight the broader impact of Q-commerce beyond financial performance. Regulatory factors such as data privacy and urban zoning influence how firms function. These external forces act as constraints thereby pushing firms toward more sustainable practices.

Overall, the analysis shows that Q-commerce operates through a set of key trade-offs—between speed and cost, growth and profitability as well as convenience and sustainability. Its long-term viability will depend on how effectively firms manage these trade-offs rather than focusing on any single dimension in isolation.

CONCLUSION

This study positions Q-commerce as more than a faster variant of e-commerce; it represents a shift in how value is created and delivered in modern retail. By placing speed and convenience at the center, the model reflects changing consumer priorities, where immediacy often outweighs price and planning. This transition toward frequent, need-based consumption signals a deeper behavioral shift that is likely to influence the future of retail more broadly.

At the same time, the analysis highlights that the success of Q-commerce is not guaranteed. While technology enables responsiveness and scale, the model remains heavily dependent on operational efficiency, especially in last-mile delivery, where costs and complexities are concentrated. The tension between rapid growth and sustainable profitability continues to define the sector, further intensified by competitive pressures.

Importantly, the study brings out the growing influence of external factors such as regulation, environmental concerns and labor conditions. These elements are no longer peripheral. They are becoming central to how Q-commerce firms design their strategies and operations. As expectations around sustainability and responsible business practices increase, firms will need to move beyond short-term growth metrics toward more balanced and resilient models.

Overall, Q-commerce operates within a set of unavoidable trade-offs—between speed and cost, expansion and profitability and convenience and sustainability. Its long-

term sustainability will depend on how effectively firms navigate these competing demands, rather than optimizing any single dimension in isolation.

In conclusion, Q-commerce captures the contemporary demand for immediacy, but its future will be shaped by discipline rather than speed alone. The ability to deliver quickly must be matched with the ability to operate effectively, efficiently, responsibly and sustainably.

In essence, while Q-commerce reflects the idea that “time is money,” its future will depend on how well firms manage the various dynamics of Q-commerce....

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