Impact of digital payment infrastructure on accelerating Quick commerce growth

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Abstract: This descriptive analysis explores the rapid growth of quick commerce in India, focusing on how digital payment infrastructure has played a crucial role. We will first define quick commerce and digital payments, outlining their current state and how each has grown independently in India. The study then evaluates the direct impact of digital payments on accelerating the growth and adoption of quick commerce services. It will highlight specific ways digital payments facilitate quick commerce, such as enabling seamless transactions, building trust, and improving operational efficiency. Finally, the analysis will also discuss other significant factors influencing quick commerce expansion and the challenges it faces, providing a comprehensive understanding of this evolving market.

Keywords: Quick commerce, Digital payment infrastructure

INTRODUCTION

The rapid expansion of the digital payment infrastructure has been a pivotal force in the evolution of quick commerce, fundamentally reshaping consumer expectations and operational logistics. This symbiotic relationship has enabled the quick commerce sector to thrive by providing seamless, secure, and instantaneous transaction capabilities that are essential for its core value proposition of speed and convenience. The widespread adoption of UPI (Unified Payments Interface), mobile wallets, and other digital payment methods has not only accelerated the checkout process but also unlocked new business models, allowing for a frictionless customer journey from order placement to delivery. Consequently, a robust digital payment ecosystem is no longer just a convenience but a critical enabler, directly influencing the scalability, profitability, and market penetration of quick commerce platforms.

LITERATURE REVIEW

(Singh & Tomar, 2024) highlighted how the retail world is changing rapidly, with new technologies and shifting customer habits, especially since the COVID-19 pandemic. A key development in this landscape is Quick Commerce (Q-commerce), which promises very fast delivery of many different products. Studies generally show that consumers value the convenience and speed offered by Q-commerce compared to older ways of shopping. For instance, the presented study in Thane City, India, confirms these broader trends, finding that most local residents see Q-commerce as much more convenient and faster, leading to higher satisfaction with delivery speed and product choice.

(Ranjekar & Roy, 2023) shows that the quick commerce surge in India, driven by increased internet penetration and COVID-19's impact on online grocery shopping, has led to a boom in instant delivery services. This paper examines the diverse business models and essential infrastructure, particularly warehouses, underpinning this rapidly evolving sector. To make quick commerce last and be responsible, its delivery system needs to be fast and use more automation.

(Malviya, 2025) highlights the transformative impact of information technology on e-commerce, leading to the emergence of quick commerce (q-commerce) that promises ultra-fast deliveries, even within 15 minutes. This study specifically observes that Indore consumers are rapidly adopting q-commerce for urgent needs, but still prefer traditional e-commerce, malls, or kirana shops for regular, larger orders. They also strategically use minimum order quantities to avail free delivery, while recognizing the potential threat q-commerce poses to traditional kirana stores.

(Tyagi, 2025) highlights how quick commerce, like Zepto and Blinkit, is reshaping India's retail scene beyond traditional stores. While disruptive, it offers

significant economic benefits: creating jobs, altering buying habits, advancing technology in logistics, and fostering infrastructure growth.

(Goswami & Rashmi Kumari, 2024) examined how quick commerce affects consumer decisions, considering factors like delivery speed and promotions.The study explored how speed, promotions, and satisfaction influence Q-commerce recommendations. Although it hypothesized increased impulsivity, the research found that while quick commerce influences specific behaviors and preferences, it doesn't broadly alter overall consumer decision-making strategies.

(FarazAhmed & Shafighi, 2022) highlights convenience and speed as key drivers for Q-commerce adoption in South Asia, with pricing also influencing consumer decisions. However, challenges persist, particularly concerning customer service, security concerns over data, and the crucial need for diverse payment options, including cash on delivery. To succeed, brands must prioritize exceptional customer experience and product quality amidst growing market competition.

(Banerjee et al., 2022) highlights that India's quick commerce, an extension of its supply chain, is experiencing substantial growth, significantly influenced by the recent pandemic. This evolution benefits customers with reduced expenditures and prompt order fulfillment. On-demand deliveries have now become the norm, rather than an occasional requirement, and platforms with a strong and reliable behind-the-scenes supply chain are most likely to survive.

RESEARCH GAP

Previous research has thoroughly explored various aspects of quick commerce, including its evolution, business models, and the role of dark stores. However, there is a noticeable gap in research that specifically focuses on the direct and quantified impact of digital payment infrastructure on the growth of this industry. While studies acknowledge the importance of digital payments in general e-commerce, few delve into how the emerging digital payment options and their features—such as instant UPI payments and attractive coupon offers—are directly influencing consumer behavior in quick commerce and driving the rapid increase in online orders. This study aims to fill that gap by analyzing the unique relationship between these two rapidly expanding sectors.

OBJECTIVES

- Define quick commerce and its current market landscape in India, including key players.
- To describe the importance of digital payment infrastructure for quick commerce growth.
- To analyse the growth of both digital payment infrastructure and quick commerce growth.
- To describe the key drivers responsible for the growth of the quick commerce industry.

Defining Quick Commerce and its Market in India

Quick commerce (q-commerce) is an e-commerce model designed for lightning-fast deliveries, generally completing orders in just 10 to 30 minutes. Unlike traditional e-commerce, which may take days for delivery, q-commerce relies on a network of "dark stores" or micro-warehouses strategically located in dense urban areas, allowing for rapid order fulfillment and last-mile delivery. The product range is typically limited to daily essentials, groceries, snacks, beverages, and other impulse-buy items.

The quick commerce sector in India is undergoing explosive growth, with its market size anticipated to nearly triple from $3.34 billion in 2024 to an estimated $9.95 billion by 2029. This growth is primarily driven by the increasing demand for instant gratification and convenience among urban consumers.

Key Players of Quick Commerce Market:

- Blinkit: A market leader, acquired by Zomato, it operates a vast network of dark stores to deliver groceries and essentials within 10-20 minutes.This strategic acquisition significantly strengthened Zomato's presence in the quick commerce segment.This is achieved primarily through a dark store model, allowing Blinkit to offer a wide assortment of products including fresh produce, packaged foods, household items, electronics, and even some fashion accessories.
- Zepto: Zepto emerged as a strong contender in the quick commerce market, having focused purely on this segment from its inception. The company

gained considerable momentum by aggressively marketing its 10-minute delivery service. Zepto's strategy emphasizes the efficient management of hyper-local dark stores and a streamlined supply chain to achieve these ultra-fast delivery times. The company focuses on maintaining a curated inventory to ensure both speed and consistent availability, providing a diverse range of groceries, fresh produce, dairy, snacks, and household essentials, with speed being a paramount differentiator.

- Swiggy Instamart: Another dominant food delivery platform, launched Instamart as its entry into the quick commerce arena, quickly becoming one of the largest players in terms of geographical presence and order volume. Its strategy capitalizes on its existing robust delivery infrastructure and rider network, employing a dark store model to ensure quick fulfillment. Swiggy Instamart is continuously expanding its product categories and exploring new partnerships, offering a comprehensive range of groceries, fruits and vegetables, snacks, beverages, personal care products, and other convenience items, all delivered with speed.
- BigBasket Now: Tata Digital, following its acquisition of BigBasket, a prominent online grocery retailer, introduced BB Now to compete in the quick commerce sector. Its strategy combines BigBasket's established strengths in sourcing and inventory management with a rapid delivery model. BB Now also leverages the broader Tata Group's ecosystem for effective customer acquisition and loyalty. It offers a wide array of groceries, fresh fruits and vegetables, meat, and gourmet products, striving for rapid delivery within urban centers to meet consumer demand for immediate access.
- Flipkart Minutes: Walmart-owned Flipkart has made its entry into the quick commerce segment with Flipkart Minute, aiming to cater to the growing demand for instant deliveries. This initiative allows Flipkart to leverage its extensive and well-established logistics network and robust supplier relationships, which have been developed over years in the broader e-commerce space. Flipkart Minute's strategy is centered on providing quick delivery options for a curated selection of groceries and daily essentials, thereby enhancing convenience for its vast existing customer base and complementing its comprehensive e-commerce offerings.
- Amazon Fresh:Amazon Fresh represents Amazon's dedicated service for offering fast delivery of groceries and household items in India. Leveraging Amazon's global expertise in logistics and its strong existing customer base, Amazon Fresh aims to provide a seamless and rapid delivery experience for everyday essentials. The service focuses on convenience, offering a wide range of fresh produce, pantry staples, and household goods, with delivery options designed to meet immediate consumer needs. This allows Amazon to compete directly in the quick commerce space, building on its reputation for customer-centric services.

The Importance of Digital Payment Infrastructure for Quick Commerce

A robust and efficient digital payment infrastructure is the backbone of quick commerce. The rapid delivery model is entirely dependent on frictionless transactions. Key reasons for the crucial role of digital payments include:

- Speed and Convenience: Instantaneous digital payments like UPI eliminate the need for cash on delivery, speeding up the checkout process and enabling a truly seamless customer experience. This is crucial for a business model where every minute counts.
- Scalability: Digital payments allow q-commerce platforms to scale their operations without the logistical challenges and risks associated with handling large volumes of cash.
- Security: Secure payment gateways, tokenization, and multi-factor authentication build trust with customers, ensuring their financial data is protected.
- Operational Efficiency: Digital payment records provide valuable data for inventory management, demand forecasting, and financial reconciliation, leading to greater operational efficiency.
- Financial Inclusion: Digital payment methods, particularly UPI, have brought a large portion of the unbanked and underbanked population into

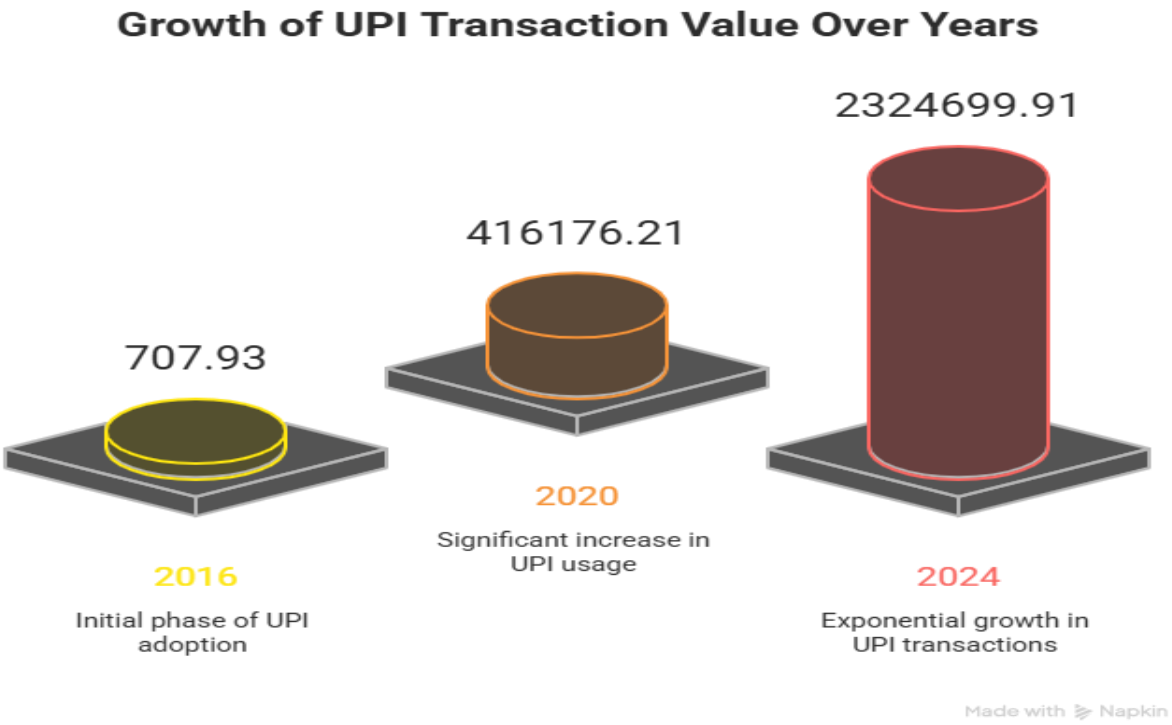
the digital economy, expanding the potential customer base for quick commerce platforms.

Analysis of the Growth of Digital Payment Infrastructure and Quick Commerce

There is a strong correlation between the growth of digital payment infrastructure and the quick commerce industry in India.

- Digital Payment infrastructure Growth: India's digital payment ecosystem has witnessed phenomenal growth, with UPI leading the charge. The total volume of digital payment transactions has increased from 162 crore in FY 2012-13 to over 16,443 crore in FY 2023-24, a 129-fold increase. This growth is driven by government initiatives like Digital India, increased smartphone penetration, affordable internet, and the ease of use of platforms like UPI.

UPI has revolutionized quick commerce by enabling instant, secure payments, perfectly matching its need for speed. This ease of transaction reduces cart abandonment and expands customer reach, even in smaller cities. For businesses, UPI's real-time settlements improve cash flow, driving the efficiency and growth of the q-commerce sector. We can clearly understand this relation with the following data.



Source : www.pib.gov.in

Table shows overall growth of digital payment infrastructure in india

Indicator	March 2014 / December 2014 / June 2014	June 2024 / August 2024 / December 2024	Growth / Change
Internet Connections	25.15 crore (March 2014)	96.96 crore (June 2024)	285.53% growth
Broadband Connections	6.1 crore (March 2014)	94.92 crore (August 2024)	1452% growth

Villages with 4G Mobile Connectivity	6,15,836 out of 6,44,131 (Dec 2024)		95.6% coverage
Average Revenue per GB (Wireless Data)	Rs 268.97 (Dec 2014)	Rs 8.31 (June 2024)	>96.91% reduction
Average Monthly Data Consumption per Subscriber	61.66 MB (March 2014)	21.30 GB (June 2024)	353 times increase
5G Services Rollout	4,62,084 BTS across 779 districts (Dec 2024)		Fastest rollout in the world
Median Mobile Broadband Speed	1.30 Mbps (March 2014)	95.67 Mbps (December 2024)	~73 times increase
4G Base Transceiver Stations (BTS)	24,96,644 across 783 districts (Dec 2024)		Extensive 4G infrastructure

- Quick Commerce Growth: The quick commerce market has grown in tandem with this digital payment revolution. The surge in digital transactions, especially post-demonetization and the COVID-19 pandemic, created a fertile ground for businesses built on fast, contactless transactions. The availability of a vast user base accustomed to digital payments has been a key factor in the rapid adoption and scaling of quick commerce services.

App name	Downloads (in millions)
Zepto	11
Swiggy Instamart	9.8
Blinkit	6.6
Tata’s Bigbasket	3.5

India's quick commerce growth is deeply linked to its digital payment infrastructure. A 129-fold increase in digital transactions (FY 2012-13 to FY 2023-24), driven by UPI, government initiatives, smartphone adoption, and affordable internet, created a robust cashless economy. Improved connectivity, reduced data costs, and rapid 5G/4G rollouts further enabled this digital environment. This fostered quick commerce's rise, especially post-demonetization and COVID-19, as consumers embraced contactless transactions. High app downloads for platforms like Zepto and Swiggy Instamart show this direct correlation: a mature digital payment system has actively propelled quick commerce's rapid adoption and scalability, fundamentally reshaping India's retail and consumer landscape.

Key Drivers for the Growth of the Quick Commerce Industry

1. Changing Consumer Behavior: The modern urban consumer's quest for convenience and instant gratification is a primary driver. Busy lifestyles, a growing preference for on-demand services, and a shift from price-focused to value-based purchasing (where time-saving is a key value) are fueling demand.
2. Technological Advancements: The use of AI for demand forecasting, optimized inventory management in dark stores, and route optimization for last-mile delivery are crucial technological enablers.
3. Widespread Smartphone and Internet Penetration: High smartphone adoption and affordable mobile data have made app-based q-commerce platforms accessible to a massive user base.
4. Strategic Business Practices: Aggressive marketing, discounts, strategic location of dark stores, and expansion into new product categories beyond groceries are driving market penetration.
5. Rise of the Gig Economy: The availability of a large workforce of delivery partners provides the necessary human capital for the last-mile delivery model.

CONCLUSION

The growth of quick commerce in India is inextricably linked to the burgeoning digital payment infrastructure. Our analysis reveals that quick commerce, defined by its ultra-fast delivery model for daily essentials and driven by key players like Blinkit, Zepto, and Instamart, has witnessed explosive growth, projected to reach nearly $10 billion by 2029. This rapid expansion has been significantly fueled by the parallel surge in digital payments, particularly UPI, which has transformed transactional speed, convenience, and security. The robust digital payment ecosystem has not only facilitated seamless order placement and contactless deliveries but also unlocked new avenues for consumer engagement through innovative offers, directly accelerating the adoption and expansion of quick commerce platforms across diverse demographics and geographies in India.

FUTURE SCOPE

- Further research can be done on sustainable practice and the environmental impact of quick commerce.
- Future research should identify specific strategies and technological adaptations required for quick commerce to successfully penetrate non-metro and rural areas.
- Similar research can be conducted collecting primary data on quick commerce and digital payment infrastructure.

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