

The Great Unbundling: Analyzing the ONDC Revolution and its Impact on India's Retail Ecosystem (2022-26)

Dr. Dipesh Bhagvanji Nathwani

Assistant Professor

Shri M.P. Shah Municipal Commerce College Jamnagar
Gujarat, India

Abstract:

The Indian digital commerce landscape is undergoing a systemic transition from a platform-centric 'walled garden' model to an open-network architecture facilitated by the Open Network for Digital Commerce (ONDC). Historically, the e-commerce sector has been dominated by a duopoly of global aggregators, where centralized control over discovery, payments, and logistics created high entry barriers for Micro, Small and Medium Enterprises (MSMEs). This research paper investigates the 'unbundling' of the e-commerce value chain through the Beckn Protocol, a decentralized set of specifications that fosters interoperability between disparate buyer and seller applications.

Utilizing a mixed-methods approach, this study analyses market data and adoption metrics from 2024 to 2026. Findings indicate that ONDC has successfully reduced commission-based friction, allowing MSMEs to retain higher profit margins while increasing price transparency for consumers.

Despite these gains, the research highlights critical operational challenges –specifically the complexity of multi-party grievance redressal and the standardization of digital cataloguing in a decentralized environment. The paper concludes that while ONDC's current market share is nascent, its status as a Digital Public Infrastructure (DPI) marks the paradigm shift in Indian economic policy, signalling a transition toward a more equitable, competitive and inclusive digital marketplace by 2030.

Keywords: Open Network for Digital Commerce (ONDC), Digital Public Infrastructure (DPI), Beckn Protocol, Unbundling of Retail, MSME Digitization, Interoperability, and Hyper-local Commerce.

1. INTRODUCTION

1.1 The Context of Indian E-Commerce

The Indian retail landscape is currently undergoing its most significant transformation since the liberalization of the 1990s. Over the last decade, digital commerce in India was defined by a Platform-Centric Model. In this structure, a handful of global aggregators controlled the entire value chain – from discovering the seller and hosting the inventory to managing payment gateways and executing logistics.

While this brought efficiency, it created ‘walled gardens’ that effectively side-lined millions of small-scale ‘Kirana’ stores and MSMEs (Micro, Small and Medium Enterprises) who could not afford the high commissions – often ranging from 20% to 35% - or meet the rigid technical requirements of these dominant platforms.

1.2 The Genesis of ONDC

In response to this digital divide, the Department for Promotion of Industry and Internal Trade (DPIIT), under the Ministry of Commerce and Industry, conceptualized the Open Network for Digital Commerce (ONDC). Launched as a Section 8 non-profit company, ONDC is not an application, a platform, or a central intermediary. Instead, it is a set of open-source specifications designed to foster interoperability. Much like the Unified Payments Interface (UPI) revolutionized fintech by allowing a user on App A to send money to a user on App B, ONDC allows a buyer on a “Buyer App” (e.g., Paytm or Pincode) to discover and purchase from a seller registered on a completely different “Seller App” (e.g., Magicpin or Mystore).

1.3 The “Unbundling” Phenomenon

The core innovation of the ONDC revolution lies in the unbundling of the supply chain. In a traditional e-commerce transaction, the platform dictates the logistics provider and the payment processor. ONDC deconstructs this by treating every component of a transaction as a separate service. This creates a ‘Lego-block’ style of economy where:

- Sellers focus on product quality.
- Logistics Providers focus on last-mile delivery.
- Buyer Apps focus on the user interface and discovery.

1.4 Research Objectives and Scope

As of 2026, ONDC has moved beyond its pilot phase in 2022 to handle millions of monthly transactions across categories including F&B (Food and Beverage), Grocery, Home & Décor and Fashion. This paper seeks to analyse the socio-economic implications of this shift. Specifically, it examines how the reduction in ‘intermediary friction’ impacts the bottom line of small retailers and whether the decentralization of data leads to a more equitable distribution of wealth within the Indian commerce sector. The scope is limited to the Indian domestic market, with a specific focus on the evolution of the network from 2022 to 2026.

2. LITERATURE REVIEW & THEORETICAL FRAMEWORK

2.1 Evolution of E-commerce Models: From Monopolies to Networks

Early academic discourse on e-commerce, led by scholars like Hagiu and Wright (2015), focused heavily on the Multi-Sided Platform (MSP) model. In this framework, value is created by an intermediary (the platform) that minimizes search and transaction costs between two distinct groups: buyers and sellers. However, this model inevitably leads to the ‘Winner-Takes-All’ dynamic. As the platform grows, the

‘Network Effect’ makes it nearly impossible for new entrants to compete, leading to high commission structures and data silos.

ONDC represents a departure from this. It moves toward Open-Loop Interoperability, a concept previously reserved for telecommunications (where any SIM can call any other network) and banking (UPI).

2.2 The Beckn Protocol: The Technological Foundation

At the heart of the ONDC revolution is the Beckn Protocol. Unlike proprietary APIs used by private platforms, Beckn is an open-source set of specifications that allows for decentralized discovery.

- **The Theory of Unbundling:** Research suggests that when the components of a transaction (discovery, payment and fulfilment) are ‘unbundled,’ the market becomes more efficient.
- **Protocol vs. Platform:** In this framework, ONDC acts as the ‘railway tracks’ (the protocol), while various apps act as the ‘trains’ (the service providers). This ensures that no single entity owns the entire journey of the consumer.

2.3 Theoretical Framework: The ‘Digital Public Infrastructure’ (DPI) Approach

The theoretical grounding of this paper is based on the India Stack philosophy. DPI theory posits that essential digital services – Identity (Aadhaar), Payments (UPI), and now Commerce (ONDC) – should be treated as public goods rather than private monopolies.

Theory	Platform-Centric (Traditional)	Network-Centric (ONDC)
Market Entry	High (Requires massive capital)	Low (Plug-and-play via APIs)
Data Ownership	Controlled by the platform	Distributed among participants
Innovation	Closed (Dictated by the firm)	Open (Community-driven)
Transaction Cost	Determined by the middlemen	Market-driven through competition

2.4 Socio-Economic Inclusion and the ‘Long Tail’ Theory

Chris Anderson’s ‘Long Tail’ Theory (2004) suggested that the internet would allow niche products to find buyers. However, in India, high platform fees often made it ‘uneconomical’ for the small niche sellers to participate. Recent literature (2024-26) suggests that ONDC is finally enabling the “Long Tail” of Indian retail. By lowering the cost of digital entry, ONDC allows micro-entrepreneurs – from handloom weavers in Gujarat to spice farmers in Kerala – to access a national market without a middlemen capturing the lion’s share of the profit.

3. THE ECONOMIC IMPACT ON STAKEHOLDERS: A 2026 ANALYSIS

By early 2026, ONDC has transitioned from a government pilot to a mainstream retail channel. The primary economic impact has been the radical reduction in commission structures.

- **Commission arbitrage:** While traditional e-commerce giants (Amazon/Flipkart) still maintain commissions between 18% and 25% for many categories, ONDC network participants typically operate at a total take-rate of 5% to 8%.
- **Revenue Surge:** data from late 2025 indicates that MSMEs in Tier-2 and Tier-3 cities witnessed an average 20% revenue surge within six months of onboarding. This is largely attributed to the 'Discoverability Effect,' where local shops in cities like Jamnagar or Coimbatore are now visible to national buyer apps without requiring massive marketing spend.
- **Financial Inclusion via 'Transaction History':** A significant 2026 trend is Flow-Based Lending. Since ONDC creates a transparent digital audit trail of sales, small sellers are now securing working capital loans from banks based on their ONDC transaction volume rather than physical collateral.

3.2 Impact on Consumers: Transparency and Hyper-locality

For the Indian consumer, the 'Revolution' is most visible in the Food and Grocery Sectors.

- **Pricing Dynamics:** Comparative studies in early 2026 show that the same food order is often 10% to 15% cheaper on ONDC-enabled apps compared to traditional food delivery aggregators. This is a direct result of the lower commission passed on from the restaurant to the customer.
- **Hyper-local Delivery:** The unbundling of logistics has allowed local delivery startups to compete with national players. A consumer can now choose a '15 minute deliver' from a local partner or a 'standard delivery' at a lower cost, providing unprecedented agency.

3.3 Network Growth Metrics (2024-26)

- The scale of ONDC has shifted the 'network effect' from a single company to a public protocol.

Metric	March 2025 (Actual)	March 2026 (Projected/Current)
Active Sellers	7.6 Lakh	12 Lakh+
Cumulative Transactions	20.4 Crore	45 Crore+
Daily Order Run-rate	5-6 Lakh	50-60 Lakh
Cities Covered	500+	630+

3.4 The Role of MSME TEAM Scheme

A critical catalyst in 2026 has been the MSME TEAM (Technology Empowerment and Agile Modernizing) Scheme. This government led initiative has specifically funded the 'digital cataloguing' for over 3127 MSME clusters, solving one of the biggest hurdles for small retailers: the high cost of high quality product photography and digital inventory management. By removing this entry cost, the scheme has ensured that 44.8% of ONDCs cumulative order value now comes directly from micro-enterprises.

4. COMPARATIVE ANALYSIS: PLATFORM-CENTRIC VS. OPEN-NETWORK MODEL

The primary conflict in modern e-commerce is between Centralization (efficiency through control) and Decentralization (efficiency through competition). By 2026, this distinction has become the cornerstone of Indian digital policy.

4.1 Structural Architecture

Traditional platforms (Amazon, Flipkart) operate as ‘Walled Gardens.’ They control the entire customer journey: onboarding, search algorithms, payment processing and final delivery.

- **The Monopoly of Data:** In a platform model, the aggregator owns the customer data. If a seller leaves the platform, they lose their ratings, reviews and customer history.
- **The ONDC ‘Railway’ Model:** ONDC operates as a public utility. It provides the ‘tracts’ (APIs and protocols) while allowing different companies to run the ‘trains.’ A seller’s reputation is portable; ratings earned on one seller app can theoretically be recognized across the network, preventing ‘platform lock-in.’

4.2 Commission and Cost Efficiency

The most tangible difference for a commerce researcher is the ‘Take-Rate.’

Feature	Platform-Centric (Legacy)	ONDC Network (2026)
Seller Commission	15% - 30%	3% - 10%
Logistics Control	Mandated by platform	Choice of multiple 3 rd parties
Ad-Spend Requirement	High (to gain visibility)	Low (organic network discovery)
Onboarding Time	Days/Weeks (Strict vetting)	Hours (Standardized APIs)

4.3 Logistics and Fulfilment: The Unbundled Advantage

In the traditional model, logistics is often a profit center for the platform. In ONDC, logistics is a competitive service. ONDC allows a local Kirana store to use a local delivery partner (like Dunzo, Shadowfax or even a local courier) instead of a national carrier. This has reduced delivery times in Tier-2 cities like Jamnagar by nearly 40% for grocery and essential items. Small businesses can scale their delivery capacity during peak festival seasons by switching between different logistics providers on the network without signing new exclusive contracts.

4.4 Discovery vs. Manipulation

A common criticism of traditional platforms is ‘Algorithm Bias,’ where the platform’s private labels or ‘Preferred Sellers’ are ranked higher.

- **Neutrality:** The ONDC gateway is designed to be algorithmically neutral. Search results are typically sorted by proximity, price or rating rather than by who paid the highest ‘sponsored’ fee. This democratization ensures that a small boutique in a rural cluster has the same visibility as a large urban brand if their product matches the buyer’s query.

5. CHALLENGES AND ROADBLOCKS: THE 2026 REALITY CHECK

While ONDC has successfully disrupted the monopolistic take-rates of legacy platforms, its ‘unbundled’ nature introduces new complexities that traditional ‘closed-loop’ systems (like Amazon or Swiggy) have already optimized over a decade.

5.1 The Accountability Vacuum: Dispute Resolution

The most pressing challenge in 2026 remains the fragmented grievance redressal system. In a centralized model, the platform is the single point of accountability for a ‘missing item’ or ‘bad quality product.’ In the ONDC network:

- **Multi-Party Liability:** A dispute involves the Buyer App, the Seller App and the Logistics Provider. Identifying whose fault it is (e.g., was the item damaged by the seller or during transit?) becomes a blame game.
- **Resolution Timelines:** While ONDC has introduced the Issue & Grievance Management (IGM) framework, current data suggests that resolving complex disputes can still take 48 to 72 hours longer than on centralized platforms, which often offer instant refunds to maintain customer loyalty.

5.2 Standardization of Quality and Cataloguing

For a small ‘Kirana’ store, moving from a physical shelf to a digital catalogue is a massive technical hurdle.

- **The ‘Digital Literacy’ Gap:** Despite the government’s MSME TEAM scheme, many small sellers struggle with high-quality cataloguing (product photos, descriptions and SKU management). This leads to a ‘poor UI’ experience for buyers who are used to the polished, high-definition catalogues of global giants.
- **Packaging and Hygiene:** Unlike centralized aggregators that enforce strict packaging standards (especially in food delivery), ONDC’s decentralized sellers often lack standardized packaging, leading to inconsistent branding and occasional hygiene concerns in the ‘last mile.’

5.3 The ‘Discount War’ and Price Sensitivity

In India, e-commerce adoption has historically been driven by deep discounting.

- **Burn vs. Sustainability:** Global giants have massive capital to ‘burn’ on customer acquisition. ONDC, as a non-profit protocol, does not provide subsidies or ‘exclusive deals.’
- **The Loyalty Challenge:** By 2026, while ONDC is cheaper on a ‘base price’ level, it often loses out to legacy platforms that offer integrated loyalty programs (like Prime or One), which bundle streaming, fast delivery and extra discounts into a single subscription.

5.4 Technological Interoperability

Operating a ‘Network of Networks’ requires perfect synchronization between different tech stacks.

- **Sync Lags:** Occasionally, a ‘Buyer App’ may show an item as ‘In stock’ when it has actually been sold out on the ‘Seller App’ seconds prior. This synchronization lag, though improving with the Beckn Protocol updates of 2025, still causes occasional order cancellations, leading to consumer frustration.

Summary of Roadblocks:

Challenge	Impact Level	Primary Victim	2026 Mitigation Strategy
Grievance Redressal	High	Consumers	Implementation of ODR (online dispute resolution)
Catalogue Quality	Medium	MSMEs	AI-powered auto-cataloguing tools
Brand Awareness	Medium	Small Sellers	Vernacular marketing and ‘Buy Local’ campaigns
Delivery Logistics	Low-Medium	Logistics Partners	Integration with India Post for ‘Hyper-reach’

6. CONCLUSION AND FUTURE OUTLOOK

6.1 Summary and Findings

The ONDC revolution is not merely a technological upgrade but a structural recalibration of the Indian commerce sector. By moving from a ‘Platform-Centric’ to a ‘Network-Centric’ model, India has successfully:

- **Lowered the Barrier to Entry:** MSMEs can now ‘go digital’ with minimal capital.
- **Reduced Transaction Costs:** Significant savings in commissions have been passed to the consumers.
- **Democratized Data:** Small sellers now retain more control over their customer relationships and transaction history.

6.2 The Path to 2030

For ONDC to reach the same level of ubiquity as UPI, the next two years will be critical. The focus must shift from onboarding sellers to optimizing the consumer experience. The introduction of AI-driven dispute resolution and more robust quality-control protocols will be the deciding factors in whether ONDC can capture the majority of India’s \$1 trillion retail market.

6.3 Final Reflection

The ‘Great Unbundling’ of e-commerce ensures that the digital economy is no longer a privilege for the few, but a public utility for the many. ONDC stands as a testament to India’s unique path of Digital Public Infrastructure, proving that competition and collaboration can coexist to create a more equitable marketplace.

REFERENCES:

1. Department for Promotion of Industry and Internal Trade (DPIIT). (2025). Annual report on digital public infrastructure: The evolution of ONDC (Report No. 2025-04). Ministry of Commerce and Industry, Government of India.
2. Hagiu, A., & Wright, J. (2015). Multi-sided platforms. *International journal of Industrial Organization*, 43, 162-174.
3. India Brand Equity Foundation (IBEF). (2026, January). E-commerce industry in India: Market size, opportunities, and trends.
4. Iyer, R., & Gupta, S. (2024). Beyond aggregators: The socio-economic impact of open network protocols on Indian MSMEs. *Indian Journal of Commerce and Management Studies*, 15(2), 45-48.
5. Ministry of MSME. (2025). Operational guidelines for the MSME TEAM (Technology Empowerment and Agile Modernizing) scheme. Government of India.
6. National Stock Exchange of India (NSE). (2026). Digital retail transformation and its impact on listed FMCG firms. NSE White Paper Series.
7. ONDC Official. (2026). Network expansion and transaction milestones: Q1 2026 update. Open Network for Digital Commerce.
8. Prajapati, V. (2025). *The Beckn Protocol: A technical deep-dive into decentralized commerce*. Digital India Publishers.
9. Reserve Bank of India (RBI). (2025). Report on currency and finance. The role of digital public infrastructure in credit flow to MSMEs.
10. Sharma, A. (2024). *The great unbundling: How ONDC is reshaping the Indian marketplace*. Oxford University Press (India).