

Our Take

The five Es to drive digital commerce

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The Open Network for Digital Commerce (ONDC) aims to redefine e-commerce in India by reducing entry barriers and removing digital monopolies. **Nitin Nagpal** and **Ravi Kapoor** take stock of the progress made so far and outline five solutions that could enable ONDC to emerge as a game changer in this space.

E-commerce in India

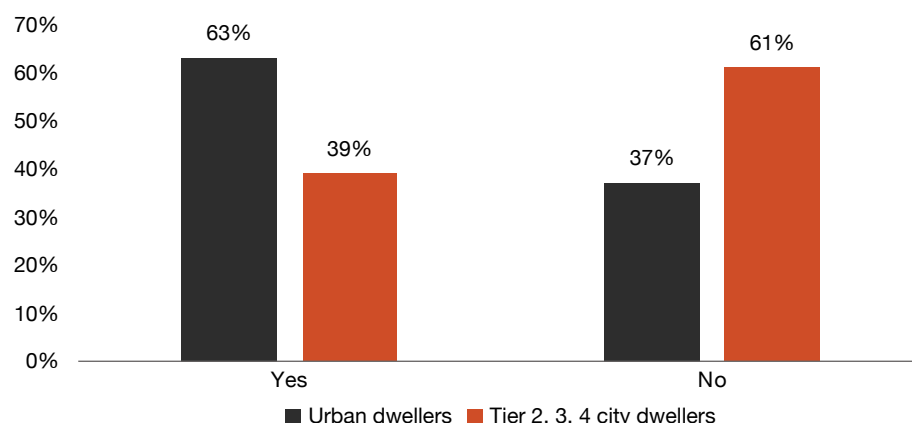
The Indian e-commerce market size is expected to reach USD 400 billion by 2030.¹ The defining factor of this growth will be e-commerce expansion in tier 2 and tier 3 cities, driven by the untapped customer base and proliferation of startups in these regions.² In the past three years, about 12.5 crore³ consumers, primarily from tier 2, 3 and 4 cities, shopped online for the first time. This is where Open Network for Digital Commerce (ONDC) with its robust network infrastructure can be a game changer, facilitating e-commerce growth in tier 2 and tier 3 cities.

Piloted in 2021 to democratise and decentralise e-commerce, ONDC, an initiative by the Department for Promotion of Industry and Internal Trade (DPIIT) of the Government of India, was established as a private non-profit Section 8 company.

ONDC will digitally enable small and indigenous businesses by onboarding them on various multilingual ONDC-compliant seller applications. The option to choose from multiple seller applications means that small businesses can navigate terms and conditions that are imposed by established e-commerce platforms and which may be unfavourable to them. The open network also allows for the building blocks of transactions such as logistics, warehousing and packaging from diverse service providers to be seamlessly stitched together, empowering small businesses from rural areas.

Already, ONDC is witnessing active participation from sellers in rural India.⁴ Among consumers, too, the popularity of ONDC is growing. A 2024 PwC India report, **How India shops online**, found that while consumers in metropolises are more aware of ONDC, those in rural areas are catching up, with various platforms making it attractive for consumers to shop via ONDC because of low prices and product varieties.⁵

Are you aware of the ONDC platform?



Source: PwC, How India shops online

1. Inc42, State of Indian ecommerce report Q3 2023

2. Ibid.

3. Indian E-commerce Industry Analysis | IBEF

4. ONDC cross border trade

5. PwC, How India shops online



Redefining the e-commerce ecosystem

The ONDC network has already completed successful transactions in over 1,000 cities and towns across India. Through its network of 90+ and growing ONDC-compliant applications, the network aims to have on board as many as 900 million buyers and 1.2 million sellers on its decentralised network, while achieving a gross merchandise value of USD 48 billion in the next four years.⁶ It's an ambitious goal, given that in FY 2023, the gross merchandise value (GMV) of e-commerce platforms in India stood at USD 60 billion – a 22% increase from the previous year's value of USD 49 billion.⁷ Thus, ONDC aims to redefine the e-commerce ecosystem by creating a more accessible digital marketplace through:



Enabling a shift from a platform-centric to open-network model

The current e-commerce landscape is dominated by platform-centric models where buyers and sellers have to be part of the same platform to discover each other and enable transactions between them. An open network allows buyers and sellers to transact regardless of the platform or application they use. ONDC can prevent digital monopolies by bringing inclusivity and interoperability into supply chains, buyer universes, logistics and technology services. It will put equal access to the marketplace in the hands of small business owners who can access buyers at scale and provide best-in-class quality of experiences.

6. What is ONDC

7. India's ecommerce boom



Promoting digital inclusion

Within the country, ONDC will bridge the digital divide by enabling sellers, even in rural areas, to access digital commerce. In March 2024, the Universal Service Obligation Fund (USOF) under the Department of Telecommunications (DoT) joined hands with ONDC and Prasar Bharati to bundle broadband services with over the top (OTT) and e-commerce for rural India. Under the MoU, ONDC will provide the technical expertise and necessary framework to enable digital commerce in products and services.⁸

Moreover, micro, small and medium enterprises (MSMEs) can leverage ONDC's features and tools to enhance their digital presence and customer experience. It will also benefit retailers, consumers and tech providers.

- **For retailers:** Access to more buyers, increased visibility, an opportunity to compete with large market players, and reduced costs as increased competition among network participants will lead to lower commissions and more autonomy. For smaller merchants, logistics concerns and payment issues can be removed. ONDC can also help businesses to diversify their offerings. For instance, a player in the mobility sector has broadened its scope to include the food and beverages segment through ONDC.⁹
- **For consumers:** More choices at better prices, access to hyper-local retailers and a single checkout experience.
- **For tech providers:** Rapid adoption of products and services and achieving scale in go-to-market efforts. New opportunities to drive innovation in the e-commerce value chain.



Fostering cross-border trade

Cross-border transactions on the network are expected to grow rapidly, boosting exports. ONDC's emphasis on interoperability and compliance will ensure that merchants can navigate diverse regulatory environments, thus reducing the hurdles associated with cross-border trade. For example, ONDC has collaborated with a Singapore-based platform to expand overseas business-to-business export. The collaboration seeks to connect small and medium enterprises, logistics providers, banks and cross-border payment providers for seamless exports.



Encouraging innovation and entrepreneurship

The open network will enable and encourage the adoption of technology stacks and tools like artificial intelligence, machine learning and blockchain at an accelerated pace through innovation and experimentation. ONDC has teamed up with a major technology player to use generative AI (GenAI) to increase adoption of e-commerce in India. GenAI-powered tools will offer product descriptions, translations in local languages, voice commands and more. As part of this partnership, a nationwide event, Build for Bharat, has been launched¹⁰ and the finale is scheduled in May 2024. This is meant to foster an ecosystem of developers, students and startups to drive innovation within the ONDC framework and solve e-commerce challenges such as catalogue digitalisation, better supply chain visibility and inventory management. Startups, too, would get an opportunity to showcase their products and promote their services without the need for extensive technological infrastructure or marketing expertise. They can partner with established players and government organisations, and leverage their infrastructure and expertise to build a fertile ground for technological advancements and new business models in the e-commerce space.

8. Tripartite MoU signed among USOF, Prasar Bharati and ONDC: Propelling the mandate for Digital Empowerment for Rural India

9. Cross-border trades to be a game-changer for ONDC

10. Build for Bharat Hackathon



Creating a level playing field amid challenges

As the digital commerce landscape evolves and competition increases, ONDC seeks to revolutionise the sector with its unified and interoperable network. However, amid its attempt to create a level playing field, the network will encounter distinct challenges in onboarding new players. These barriers encompass technological disparities, reluctance from established players and regulatory complexities.

Currently, there are about 12 million mom-and-pop stores in India, of which only about 0.12% are tech enabled, while e-retail accounts for only 4% of the USD 800 billion retail market in India.¹¹ This limited tech penetration can pose a substantial obstacle for the seamless integration of mom-and-pop stores onto the ONDC network. It also impacts the comprehensive inclusivity that ONDC aims to achieve.

As for larger players who have made significant investments in developing their proprietary infrastructure and ecosystem, joining ONDC might entail significant restructuring or adaptation of their existing systems, which could be complex and costly. ONDC CEO T Koshy has acknowledged that onboarding sellers of different sophistication levels was a challenge for the network, and he and his team have been working with various government departments to bring on board people from diverse backgrounds.¹²

Given that ONDC has so many moving parts and components, it is also bound to face some teething concerns. Understanding and addressing these concerns is vital to ensuring the successful implementation and sustainable growth of ONDC. Some of the concerns include:

1. Cyberthreats: Businesses, especially SMEs, must enhance their data security measures, ensuring that they comply with necessary regulations and safeguard consumer data from threats and breaches. Reduced control over data flow in an open network could lead to challenges in regulating and securing data. Cybersecurity solutions like firewalls, intrusion detection systems and encryption should be at the core of designing the digital strategy.

2. Competition: Local businesses may find it challenging to compete with discounts and other lucrative offers being offered by prominent e-commerce players. Robust checks need to be in place to ensure fairness and facilitate inclusivity on the platform in the long run.

3. Risk of transaction failure: Allowing multiple entities in the payment and settlement process could increase the risk of transaction failure. However, plans are afoot to develop a framework to address the risk. The exclusion of ONDC from the ambit of the RTI could also be a point of concern.¹³

11. Kirana stores on ONDC

12. ONDC challenge is onboarding stakeholders

13. ONDC has a data problem



Our take

For ONDC to achieve success, it would require a multipronged strategy that addresses the following questions:

1. How can the network drive stakeholder onboarding and address implementation challenges and infrastructure requirements?
2. How can ONDC address consumer doubts and build trust while being a disruptive force in the e-commerce segment?
3. How can the network tackle cybersecurity issues, establish a data governance framework and comply with data privacy regulations?

Prioritising these areas and laying a solid foundation for success would require ONDC to focus on the five Es mentioned below.

The five Es to drive digital commerce

1. Empower smaller businesses

ONDC will allow banks to have access to a larger customer base, enabling them to identify and address the needs of MSMEs by offering working capital and Capex loans. It will help banks acquire more retail customers and increase upselling opportunities to their digital customers. Also, with access to both buyer and seller apps, financial services companies can become all-inclusive tech stack providers across the business-to-business-to-customer (B2B2C) landscape, thus creating new revenue streams through value-added services.¹⁴ Over 20 financial entities, including some top players, have begun their integration with ONDC in the credit segment.¹⁵

The network is also planning to introduce mutual fund investments. Non-banking financial companies could also tailor their offerings for targeted consumers using open data. However, offerings such as bond investments, stocks and live trading are still outside the purview of ONDC. Private sector banks are keen on early adoption of ONDC among its customers. One of them has started the process of onboarding small merchants, who are its current account customers, onto a partner app registered with ONDC.¹⁶ The app is expected to help small merchants carry out transactions over ONDC's electronic network and step up their digital footprint.¹⁷ In a bid to boost customer engagement, another private bank is offering gift cards to its customers to shop on any ONDC-enabled buyer application.¹⁸

14. Unlocking opportunities for banks

15. ONDC's fintech fiesta

16. Private bank joins ONDC

17. Ibid.

18. Ibid.





2. Enable stakeholder onboarding

The success of ONDC depends upon the participation of merchants and buyers. Onboarding them is likely the biggest challenge for ONDC. While an e-commerce giant had recently said it would join ONDC via its logistics arm,¹⁹ it is yet to find a mention on the platform. In August 2023, ONDC said it had 150,000 merchants, including 90,000 taxi and auto drivers.²⁰ By the end of 2023, the network was clocking more than 100,000 transactions in the mobility category, and another 55,000 in retail (excluding gift cards).²¹ The growth in the mobility category has received an additional boost with Kochi Metro Rail becoming the second metro service – Chennai Metro was the first one to get onboard – to join ONDC in April 2024.²²

While ONDC may be making strides in mobility, takeoff in other segments has been slow. In the major segments of retail and consumer business, such as fashion, beauty and consumer electronics, top brands are still missing from the platform. Still, there is progress. Retail e-commerce purchases are rapidly growing. Of the 5.5 million transactions made through ONDC in December 2023, 3.4 million were in the mobility category, while retail accounted for 2.1 million transactions – up from just 1,281 transactions in January 2023.²³

Overcoming barriers in onboarding necessitates tailored strategies, extensive support, and seamless integration policies, ensuring participation of both small and large players within the ONDC ecosystem. As part of its efforts to streamline onboarding, ONDC has teamed up with a major tech company to help sellers build scale on the platform. The company is launching an accelerator programme for the government's e-commerce initiative to offer digital sellers access to retail artificial intelligence tools. It will be providing core and infrastructure application program interfaces (APIs) to ONDC, with the aim of enhancing the overall experience on the network.

For smaller players, however, awareness generation and a simplified onboarding process could be crucial in the beginning. Efforts are already on to onboard nearly 1.3 million kirana stores on the network, helping them compete with e-commerce and quick service grocery retailers.²⁴ For larger players to come on board, ONDC has to offer subsidies or exclusive benefits. This could include promotional support or priority access to certain features. That said, unless the platform addresses the inadequacies associated with already established players, such as price surges for mobility apps and customer service queues, it will be tough to upend the status quo.

3. Eliminate consumer doubts

With all major e-commerce portals offering loyalty programmes, one-day delivery and discounts, buyers need a compelling reason to shop from ONDC. Recent PwC India research has found that consumers in metro cities look for prompt delivery services, while consumers in smaller towns are bargain and discount hunters.²⁵ One of the often-touted benefits of ONDC – best deals for buyers – is still a long way off. Existing e-commerce players have forged deep ties with their consumers over the years by offering lucrative and interoperable services. For example, an e-commerce giant provides access to its video streaming platform along with its paid membership. Under such circumstances, drawing customers from the incumbents will not be easy.

19. Integrating with ONDC

20. Nearly 150,000 merchants are on ONDC

21. PwC analysis

22. Kochi Metro Rail joins ONDC network to enhance mobility experience

23. ONDC crosses 5 million transactions

24. Kirana stores to compete on ONDC

25. PwC, How India shops online



4. Enhance confidence

When shopping online, purchase decisions are influenced by two things – reviews and returns policy. At least 65% of India consumers – as opposed to 56% globally – use their smartphones to read product reviews, while 57% look up the returns policy before they purchase a product.²⁶ Customer reviews and a hassle-free returns policy contribute to building trust among consumers. The ONDC network does not have product reviews as of now. PwC India's report 'How India shops online' has confirmed that consumers in metros as well as tier 2, tier 3 and tier 4 cities like to read reviews before purchasing a product. Moreover, many network participants on ONDC offer items that are non-returnable and non-cancellable. Also, a lot of them lack cash on delivery options. ONDC also needs to put in place robust mechanisms to avoid malpractices on the network. PwC research has found that 57% of all fraud incidents in India were 'platform' frauds, a novel form of economic crime that involves fraudulent activities associated with social media, e-commerce, enterprise and FinTech platforms.²⁷ Given the decentralised system of ONDC, where responsibility and control lay with multiple entities, establishing trust and fixing accountability require novel approaches such as:

- **Transparent data handling:** By ensuring transparency in data handling, privacy policies and transaction processes, ONDC can seek to gain consumer trust.
- **Robust customer support:** By offering a robust customer support system and grievance redressal mechanism, ONDC can help establish confidence and reliability. ONDC also needs to fix liability in case a customer is unsatisfied with their purchase.
- **Secure rating system:** By implementing a transparent rating system for sellers and products, ONDC can influence trust levels among potential consumers.

As part of its trust-building measures, ONDC uses three levers for all outcomes at present.²⁸ The first is the ONDC network policy which lays down the overall rules of engagement and places some distinct responsibilities on the different network participants depending on the functions they perform. The second lever is the ONDC protocol specification which is the interoperability standard that all network participants have to follow to interact with each other on the ONDC network. The third lever is the transaction-level contract, which is a digital contract between a buyer app and seller app to facilitate the purchase of goods/services on the network.²⁹ The assertions made by ONDC, however, will have to be backed by an adequate roadmap, one that can reduce ambiguities and instil confidence.



5. Ensure data privacy

By design, digital commerce requires the exchange and transmission of data for transactions. According to ONDC, transaction data will reside only with the buyer and seller applications and will not be visible to ONDC. ONDC will not be storing or viewing transaction data. However, there is a risk of oversharing of 'anonymised performance metrics' across the network. This could lead to re-identification of anonymised data, given that some data points (such as pin code, date of birth and age) can be used for relocating users from anonymised datasets.³⁰ Further, it remains to be seen as to how various e-commerce laws will apply to ONDC, and how ONDC fits into the entire legal landscape of e-commerce in India. The issue of ONDC's liability remains open and unanswered to a certain extent for now.

26. PwC, Global Consumer Insights Pulse Survey: India perspective

27. PwC, Platforms: The new frontier of fraud in India

28. Building trust in the ONDC network

29. Ibid.

30. ONDC has a data problem





Way forward: Vocal for local

A growing middle class, affordable mobile connections and availability of skilled technological talent have made e-commerce the focal point of India's digital revolution.³¹ Digital access to markets and services is crucial for the prosperity of citizens of an Atmanirbhar Bharat. To maximise the positive impact of ONDC on the Indian market, the government needs to collaborate with stakeholders, invest in infrastructure development, and provide adequate support to MSMEs and startups. ONDC's objective is clear: to help make digital commerce systems become more efficient, transparent and responsive. Embracing the spirit of 'Vocal for Local', it has started promoting inclusivity for small and rural businesses by fostering local innovations, regional talent and a collaborative ecosystem. What will sustain it is continuous evaluation and refinement of the initiative to adapt to changing market dynamics and evolving consumer needs.



31. India improves its ranking by 6 spots in global biz environment rankings



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