



Empowering MSMEs in the Digital Marketplace: The Role of ONDC in Unlocking Opportunities

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Abstract

The Open Network for Digital Commerce (ONDC) is a groundbreaking initiative launched by the Department for Promotion of Industry and Internal Trade (DPIIT) of the Government of India. This innovative platform aims to create open networks for e-commerce, with the potential to transform India's digital marketplace. It promotes inclusivity and accessibility for both consumers and sellers across various apps and platforms, fostering a more equitable digital economy. By implementing ONDC, the platform seeks to open up new opportunities, reduce the dominance of digital monopolies, and support micro, small, and medium enterprises (MSMEs) and individual entrepreneurs in their transition to online business. This effort, led by the DPIIT under the Ministry of Commerce and Industry, marks a significant advancement in digital commerce. The study focuses on the unique features of ONDC that drive innovation, lower barriers to entry, and encourage inclusive economic participation. It provides a concise overview of ONDC, highlighting entrepreneurial opportunities in e-commerce solutions, logistics and delivery services, payment solutions, supply chain management, and consumer services. The findings suggest that ONDC offers a promising environment for entrepreneurial ventures in digital commerce. However, to fully realize its potential, ongoing policy refinement and technological support are essential to address any emerging challenges.

Keywords: ONDC, Digital Commerce, Entrepreneurship, SMEs, Financial Inclusion

Introduction

The Open Network for Digital Commerce (ONDC) was announced in 2020, followed by the formation of an advisory council in July 2021. Officially registered as a Section 8 non-profit company on December 31, 2021, ONDC began its implementation in earnest. The pilot phase began in April, targeting cities such as Delhi, Bhopal, Bengaluru, Shillong, and Coimbatore. ONDC's goal is to develop a comprehensive network involving participants from various sectors, including retail, logistics, and hospitality. These participants can join ONDC as buyer-side apps, seller-side apps, or through the gateway. This initiative comes in response to the global trend toward digital economies, where businesses are continuously seeking innovative ways to connect with consumers.

ONDC offers a platform where businesses of all sizes can seamlessly connect and conduct digital transactions. As internet usage reshapes communication and commerce, robust digital infrastructure is essential for businesses to stay competitive. Online digital commerce is booming, but there remains significant potential for improvement in product sales. One promising approach is to establish an open network that simplifies and enhances transaction processes. ONDC is a collaborative effort to create such an open ecosystem for digital commerce, based on open protocols. This allows any compatible application to be used for local business transactions across various segments like groceries, mobility, food ordering and delivery, hotel reservations, travel, and more. The platform aims to attract new customers, reduce digital monopolies, and support micro, small, and medium-sized enterprises (MSMEs), as well as individual entrepreneurs, in going online. It provides a safe and accessible space for businesses of all sizes to engage with each other and third-party vendors. Furthermore, ONDC promotes innovation by enabling businesses to share their best ideas. The initiative is initiated by the Department for Promotion of Industry and Internal Trade (DPIIT), under the Ministry of Commerce and Industry.

ONDC, envisioned as an e-commerce equivalent to UPI, seeks to democratize digital commerce by shifting from a platform-centric model to an open network. This will allow traders to save their data, build credit history, and reach consumers more effectively. The government-backed platform aims to create a level playing field in e-commerce, adhering to the Information Technology Act of 2000 and the upcoming Personal Data Protection Bill. The objective of ONDC is to enable sellers and buyers to connect digitally and conduct business through an open network, regardless of the platform or app used. This initiative will dismantle existing silos, fostering a unified network for merchants and customers alike.

This open network approach is designed to spur innovation and growth across various industries, from retail to food and transportation. The new structure promotes open networks based on open-source methodology, utilizing open specifications and network protocols that are not tied to any single platform. ONDC aims to revolutionize the entire value chain by digitizing processes, standardizing transactions, integrating suppliers, enhancing logistics efficiency, and ultimately improving consumer value. Committed to data confidentiality and privacy, ONDC will not require participants to share transaction-level data. Instead, it will collaborate with members to release anonymous aggregate metrics on network efficiency, ensuring data privacy is upheld.

The present paper covers the market challenges that prompted the government to launch the ONDC initiative. ONDC aims to create equal opportunities for small merchants, shifting Indian e-commerce away from the current platform-centric model dominated by a few major players. With ONDC, even small retailers can gain immediate visibility across multiple platforms. The government believes this non-profit system will be a game-changer, dispersing digital monopolies and duopolies held by big tech companies. Even though, the lack of initial hype, the ONDC initiative is expected to be more revolutionary than UPI.

Review of Literature

Many research papers and articles on Entrepreneurial Opportunities in the ONDC provide comprehensive analysis. Few of the findings from some of the research papers are given below:

Ming-Hsien, Chandrees, Binshan & Hung-Yi (2009) discovered that consumers tend to trust websites that possess ethical practices in ecommerce. This includes adhering to privacy policies, explicitly stating them, and accurately describing products or services and their study focused on e-commerce trends.

Rekha (2010) emphasized the importance for online shoppers to adopt secure methods of payment and explore alternative options like virtual credit cards, which reduce the risk of exposing payment information.

Alice Shemi and Chris Procter (2018) explored the social implications of e-commerce platforms like Facebook, highlighting how they broaden the toolkit available to SMEs. Their study offers a theoretical perspective on entrepreneurial processes in e-commerce, particularly within developing country contexts.

CM Tembhurnekar (2021) studied the growth and impact of e-commerce in India, as well as the types of e-commerce, e-commerce opportunities and challenges for various Industries.

Ritika Bhat and Shivank Singh Chauhan (2023) conducted a research study aiming to identify key factors influencing consumers' and retailers' decisions to adopt digital payment technologies. Their survey encompassed 150 participants from Delhi-NCR, Meerut, and Sonipat.

Need for the study:

The study of entrepreneurial opportunities within the ONDC through a case study approach is essential for a comprehensive understanding of the evolving digital commerce landscape. This study addresses the dynamic interplay between ONDC and entrepreneurship, shedding light on the impact of ONDC on business models, innovation, and regulatory frameworks. By adopting a case study methodology, the research aims to uncover practical insights, success factors, and challenges faced by entrepreneurs engaging with ONDC. The findings are not only valuable for academia, providing educational resources for researchers and students, but also crucial for policymakers, industry professionals, and entrepreneurs seeking to harness the full potential of ONDC. This investigation delves into the collaborative dynamics within ONDC, fostering a deeper understanding of how entrepreneurs can leverage the open network for strategic partnerships and resource-sharing. Ultimately, the study contributes to strategic decision-making for entrepreneurs, offering a roadmap based on real-world instances, best practices, and lessons learned within the ONDC ecosystem.

Objectives of the Study:

- ✓ To investigate the organizational framework of the ONDC and its potential to transform the Indian market landscape.
- ✓ To determine the essential components of the ONDC ecosystem.
- ✓ To evaluate the potential of ONDC to enhance market access for MSMEs.

Sources of Data: The present study is mainly based on secondary data sources. The data collected from articles, journals, periodicals, case studies, social media and websites.

Organizational Framework of the ONDC

The Open Network for Digital Commerce (ONDC) adopts a free-software approach, leveraging open network protocols and specifications. This allows customers and merchants to transact goods and services independently of any specific application or platform. The technology and specification layer, provided by Beckn, will shape the network's trust, policies, grievance management, and credibility systems.

ONDC aims to reduce business costs for all participants by implementing dynamic pricing models, digitalized inventory monitoring, and optimized distribution costs. The platform utilizes a hyper-local search engine model based on GPS proximity data, which is usually used by the user. Customers can choose sellers and logistics partners separately to complete their orders.

Network Participants: There are three types of network participants in the ONDC:

1. **Buyer Apps (Buyer Nodes):** These facilitate buyers in placing orders on the network and handle buyer-side operations such as acquisition, search, and discovery.
2. **Seller Apps:** There are two types of Seller Apps for managing seller-side operations:
 - **Marketplace Seller Nodes (MSNs):** Act as aggregators, allowing dealers who are not network members to execute transactions. MSNs are pure marketplaces without holding inventory.
 - **Inventory Seller Nodes (ISNs):** Sellers who manage their inventory and are actively involved in the network.
3. **Gateways:** These nodes are crucial for multicasting search queries and storing results, playing a significant role in search and discovery.

Under the e-Commerce Rules 2020, Buyer Nodes and Marketplace Seller Nodes are defined as Marketplace e-commerce entities, while Inventory online business entities are classified accordingly. Gateways fall under the general definition of online business entities.

The ONDC's architecture clearly outlines rights and responsibilities while maintaining its decentralization principle. The terms of any sale are binding to both the buyer and the seller, with the invoice transferring ownership to the purchaser. Buyers and sellers form legal relationships through their respective apps and the Network Participant Agreement (NP Agreement) with ONDC. A digital contract, executed over the ONDC Protocol, establishes an immediate legal relationship for transactions between buyers and sellers, independent of ONDC's direct involvement.

Revolutionize the Indian markets

The ONDC initiative aims to democratize participation in India's digital commerce market, valued at 2.85 billion rupees (USD 38 billion). Its goals include:

1. Enabling local retail ecosystems to meet online demand.
2. Developing digital commerce participation for businesses of all sizes and locations.
3. Expanding geographical and socioeconomic coverage to enhance India's digital commerce landscape, facilitating financing by building active digital histories for businesses.
4. Creating economic development opportunities and new jobs across the digital commerce value chain, including logistics, packaging, and last-mile delivery.
5. Reducing overhead costs such as acquisition and digital presence expenses, as well as inventory costs, to improve efficiency.

ONDC is focused on expanding the market potential of digital commerce in retail, boosting investment in MSMEs, and increasing the trade of locally manufactured goods in India.

Components of the Open Network for Digital Commerce (ONDC)

ONDC is aimed at transforming India's e-commerce landscape by creating a more inclusive and accessible model. It is a platform for facilitating the establishment of local digital commerce businesses across various sectors. Any network-enabled program can seamlessly discover and engage with ONDC, making it a pivotal hub for hosting all existing digital commerce apps and platforms that choose to integrate with it.

1. Network of Buyers and Sellers

ONDC encompasses a diverse array of participants, bolstering the network and encouraging more stakeholders to join. It spans multiple industries including retail, logistics, hospitality, and more. These industries are broadly categorized into buyers and sellers. ONDC supports a wide spectrum of digital commerce platforms, startups, and enterprises, enabling them to showcase their offerings within the network. This can range from aggregating products to offering white-labelled seller applications. Over the next five years, ONDC intends to expand its network to include 1.2 million sellers and serve 900 million buyers, leading to an estimated additional annual purchase volume of 7.3 billion transactions. This initiative is projected to generate an additional gross merchandise value of Rs. 3.75 lakh crore (approximately US\$ 45.42 billion), driving significant growth in India's e-commerce sector.

2. Technological Integration

The Open Network for Digital Commerce (ONDC) comprises various essential components aimed at enhancing India's e-commerce landscape. Key components include:

- **Gateway:** It is a pivotal component, which enhances discoverability by broadcasting buyer search queries to all relevant seller applications based on criteria like location, availability, and consumer preferences. This cross-sectional approach boosts visibility for micro, small, and medium enterprises (MSMEs) on the platform, fostering inclusivity and expanding their market reach.

- **Buyer and Seller Applications:** ONDC includes dedicated applications for both buyers and sellers with user-friendly interfaces. These applications aim to attract a larger audience to the platform, fostering growth in the network.
- **Adaptor Interfaces:** Adaptor Interfaces, functioning as Open APIs, enable the seamless exchange of transaction-related information. These standardized ONDC-approved interfaces facilitate integration among all network participants, enhancing operational efficiency.
- **Network Policies:** ONDC adopts a straightforward and inclusive policy framework designed to promote transparency and sustainability throughout the network. These policies are intended to build trust among buyers and sellers, thereby bolstering India's E-commerce industry.

Evaluation of ONDC to increase market access for MSMEs

The ONDC is an innovative effort in India designed to level the playing field in the e-commerce industry. By challenging the dominance of a few major platforms, ONDC provides MSMEs (Micro, Small, and Medium Enterprises) with a level playing field and greater market access in the digital realm. Over 60% of India's population lives in rural and tier IV-VI cities, making villages our economic base. Besides agriculture, forest produce, and animals, these regions have numerous distinct crafts, skills, and traditional treasures. Despite recent advances in logistics and delivery by Indian companies connecting even remote areas, these communities have struggled for decades to promote their products effectively.

The Open Network for Digital Commerce (ONDC) aims to revolutionize e-commerce by leveling the playing field for platforms and sellers, significantly improving digital market access for millions of small businesses and dealers. As an open-source e-commerce network, ONDC empowers consumers and sellers to engage in trade independently of specific platforms. This allows sellers from smaller platforms to reach millions of potential buyers, fostering greater inclusivity and opportunity in the digital marketplace. This initiative will significantly benefit state government platforms promoting handicrafts and arts, fostering internal commerce when integrated with ONDC.

In collaboration with NABARD, ONDC is incorporating Agri-tech e-commerce players into its network and developing innovative strategies to accelerate network adoption, thereby activating e-commerce in the agricultural sector. The agriculture sector often lacks the resources to build a comprehensive supply value chain, posing challenges for market connectivity. ONDC could provide a solution by enabling Farmer Producer Organizations (FPOs) to sell their produce online, while other agencies handle payment processing, supply chain logistics, and technology infrastructure. This could significantly boost rural-led GDP growth in India, where 60% of the population depends on agriculture.

Handicrafts are a significant contributor to the Indian economy, with unique products such as woodware, art metal products, hand-printed fabrics, embroidered goods, imitation jewelry, sculptures, ceramics, and glassware. Most Indian handicraft production units are located in rural and small towns, employing over 56%

female artisans. Despite high demand for these products in Indian cities, their potential is limited by minimal internet visibility, leaving customers unaware of where to buy them. ONDC's interoperable platform will unify these vendors, enhancing consumer choice and expanding the reach of sellers.

Small merchants have faced significant challenges in moving their businesses online. Many lack the technical skills needed, are deterred by the high initial costs, and find the complex processes overwhelming. It is transforming the game by simplifying the process for small retailers. With standardized procedures and workflows, ONDC makes it easy for them to establish and manage their online presence quickly and without any hassle.

- **Open Network: Breaking Down Walled Gardens:** Unlike existing e-commerce platforms that function as closed ecosystems, ONDC operates as an open network. This allows MSMEs to list their products on the platform and reach consumers through various buyer applications, thereby eliminating the constraints of a single platform's user base and enabling access to a broader customer pool.
- **Reduced Costs and Increased Profitability:** ONDC operates with a significantly lower fee structure compared to traditional e-commerce platforms. This results in substantial cost savings for MSMEs. With lower fees for listing, commissions, and other charges, MSMEs can price their products more competitively and retain higher profit margins.
- **Enhanced Discoverability and Wider Reach:** ONDC integrates with a variety of buyer apps, ensuring that MSMEs are discoverable by a much larger audience. Consumers searching for specific products on any ONDC-compliant app will see offerings from MSMEs alongside established brands, increasing the likelihood of purchases.
- **Greater Control and Brand Building:** ONDC empowers MSMEs by giving them more control over their online presence. Unlike traditional platforms where algorithms dictate product placement and visibility, MSMEs on ONDC can independently manage their listings, pricing, and promotions. This fosters direct relationships with consumers and allows MSMEs to build their brand identity more effectively.
- **Data-Driven Decision Making and Growth:** ONDC empowers MSMEs by collecting data through digital transactions, offering valuable insights into customer preferences, buying habits, and market trends. This wealth of information allows businesses to refine their product offerings, tailor their marketing strategies, and make informed decisions that drive future growth. By leveraging these insights, MSMEs can optimize their operations and better meet the needs of their customers, ensuring sustainable development and success in the digital marketplace.
- **Potential for Improved Financial Inclusion:** By generating digital transaction records on ONDC, MSMEs establish a credit footprint, potentially enhancing their access to loans and other financial services. Previously, the lack of a formal financial history often hindered MSMEs from securing funding for growth. ONDC will be able to connect this gap and enhance new financial opportunities.

Conclusion

The ONDC system can transform Indian markets. With an inclusive framework embracing government, businesses, and consumers, the ONDC fosters transparency and accessibility. Its emphasis on interoperability and standardization promises efficiency gains and market democratization. By empowering small businesses and streamlining transactions, the ONDC could stimulate economic growth and enhance market competitiveness. However, realizing its transformative impact hinges on addressing regulatory challenges and ensuring robust technological infrastructure. Ultimately, understanding the ONDC's structure illuminates its pivotal role in reshaping India's market landscape towards greater efficiency and inclusivity. Through analysis, the key components of the Open Network for Digital Commerce have been identified. These include a robust technological infrastructure, transparent governance mechanisms, interoperable systems, stakeholder engagement frameworks, and standardized protocols. The ONDC's architecture facilitates seamless interactions among stakeholders, fostering inclusivity and innovation. The ONDC envisions transforming the Indian market by democratizing access to digital commerce infrastructure and promoting interoperability. However, successful implementation hinges on addressing challenges such as regulatory compliance and cyber security. Overall, understanding these components provides insight into how the ONDC can drive economic growth and societal development in India. Indian digital entrepreneurs are well-positioned to capitalize on evolving consumer trends and technological advancements. Moreover, initiatives like the ONDC further expand opportunities by fostering a more inclusive and competitive marketplace. By leveraging their creativity, agility, and access to digital infrastructure, Indian digital entrepreneurs can play a pivotal role in driving economic development and societal transformation in the digital age.

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