

Major Research Project on
Study on the potential of open network for digital
commerce to fuel India's retail revolution

Submitted by
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CERTIFICATE

This is to certify that the dissertation report, titled “**Study on the potential of open network for digital commerce to fuel India’s retail revolution**” submitted by **Ms. Saman Rizvi** as partial fulfilment of the requirements for the two-year MBA (2021-2023) is a bonafide work carried out by the student at our university. This dissertation report is his/her original work and has not been submitted to any other University/Institute.

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DECLARATION

I, Saman Rizvi, student of MBA batch (2021-2023) declare that the project entitled **“Study on the potential of open network for digital commerce to fuel India’s retail revolution”** is my own work conducted under the supervision of Dr. Archana Singh as a partial fulfilment of dissertation project for the course of MBA submitted to Delhi School of Management, DTU, Delhi.

I further declare that to the best of my knowledge the project does not contain any part of any work which has been submitted for any other project either in this university or in any other without proper citation.

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I would like to avail this opportunity to extend my sincere gratitude to everyone who has been instrumental in helping me in the completion of this endeavor. Without their active guidance, help, encouragement, and cooperation this project would have never attained its current form.

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Yours Sincerely,

Saman Rizvi

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EXECUTIVE SUMMARY

This research is **exploratory research**. An investigation was done on the potential of open networks for digital trade and the actual role that current platforms are playing in the retail revolution. Retail players entered the digital commerce space as the greatest strategy for surviving the epidemic. Furthermore, the epidemic has caused popular, well-known platforms like Myntra, Amazon, Grofers, Big Basket, JioMart, and others to grow.

The country's online retail business is expected to grow from an estimated \$55 billion in 2021 to \$350 billion by 2030 as more Indians conduct their shopping online. Food and apparel are predicted to be the main drivers of growth in the Indian e-commerce sector, which is expected to increase at a 19.24 percent CAGR from \$46.20 billion in 2020 to \$111.40 billion by 2025.

Large international corporations like Amazon, Flipkart, Tata, and Reliance already control the majority of the Indian e-commerce market. The ONDC aims to "curb digital monopolies" by creating new opportunities and providing advice for developing a platform that can be used by all online businesses. By not competing with the present e-commerce companies, ONDC aims to give every player an equal chance to succeed.

China continues to maintain a 45 percent market share of the global e-commerce market, according to one of Goldman Sachs' most recent estimations. Currently, the US and China hold 24% and 20%, respectively, of the global e-commerce sector.

This research will explore the viability of an open network for electronic commerce. As a result, both the buyer's and seller's perspectives are considered. E-commerce will soon be more accessible to all clients, giving them the freedom to select their vendor and preferred practices. It is simple to locate small pop-up shops thanks to this open network, which is a significant step towards advancing digital commerce and encouraging creativity.

Due to the e-commerce boom, small businesses in India are moving their operations online. Future innovations could have huge advantages for both customers and sellers, such as the ability to find the best pricing in one place and enhanced product visibility. Instead of using a single company or platform to connect buyer, seller, payment, and logistics, open-source standards and protocols will be available.

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CHAPTER- 1

INTRODUCTION

1.1 Background

India – The Top Retail Destination



Industry Scenario

The Indian e-commerce market is projected to have a GMV of \$350 billion by 2030.

According to projections, sociodemographic and economic factors like urbanization, income growth, and an increase in nuclear households would cause the Indian retail sector to grow to \$2 trillion by 2032. The Indian e-commerce market, on the other hand, is projected to grow at a CAGR of 9% and reach \$350 billion by 2030.

E-commerce accounted for about a third of sales in a number of electronic categories in the first half of 2021, nearly half of all smartphone sales, and approximately a fifth of all textile sales in India.

Consumer internet and e-commerce businesses raised US\$38 billion

in 2021, up from US\$8 billion in 2020, as the Indian start-up ecosystem continues to develop and large-scale investments are made in the fintech, hyperlocal, and e-commerce sectors. By 2030, India will have a projected annual gross merchandise value of \$350 billion, making it the third-largest online retail industry. The retail industry in India is generally unorganized.

The share of modern retail, which includes e-commerce, will rise to 30-35% during the next 3–5 years, while the share of conventional retail will decline to 65-70%.

Digital Commerce in India

Within the next 10 to 15 years, India's economy, which is currently the fastest-growing in the world, is expected to be among the top three economic powers. India's gross domestic product (GDP) at current prices reached 51.23 lakh crore (FY22) in the first quarter of the fiscal year.

India's digital commerce sector has developed and gained considerable pace over the past few years, which was further pushed by COVID-19-related requirements.

Significant factors influencing this expansion include the ongoing digital transformation in terms of accessibility to connection at a reasonable price, the rise in internet and smartphone usage, and greater investments in the start-up ecosystem.

GROWTH DRIVERS

- **Growing Income**

By 2030 India will add 140 mn middle-income and 21 mn high-income households – Leading to a huge emerging middle class

- **Increased online spending**

Online shoppers in India age expected to each ~500mn in 2030 from +150mn in 2020

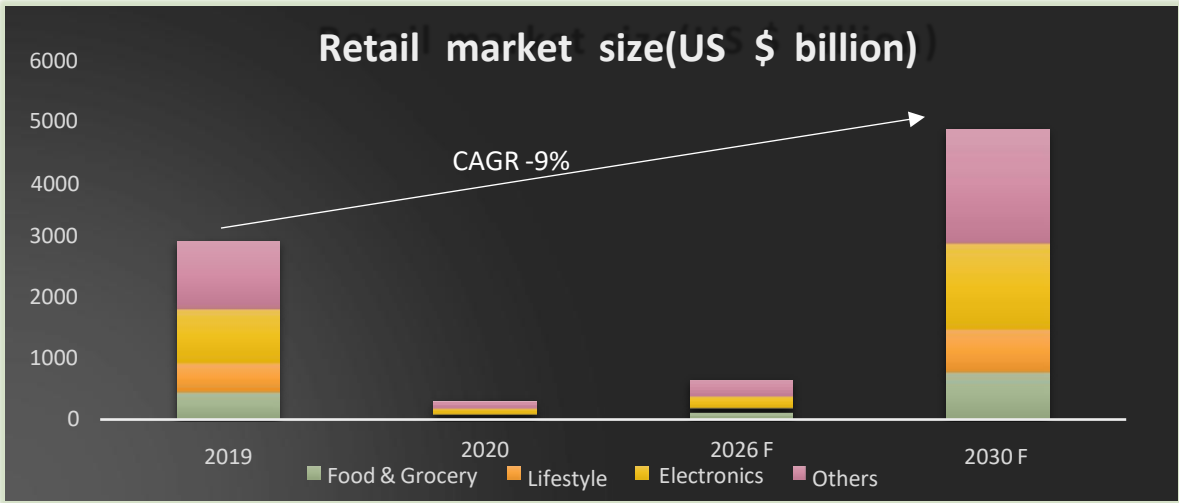
- **Growth of rural consumption**

Royal pie capita consumption will glow 4.3 times by 2030, compared to 3.5 times in urban areas

- **Young millennial households**

By 2030, India will add nearly 90 million new households headed by millennials, who were boon into liberalized India.

Retail Market Size



Risks & Challenges

Lack of Technology Adoption

Price War

Lack of Infrastructure & Logistics

Competition from Unorganized Retail

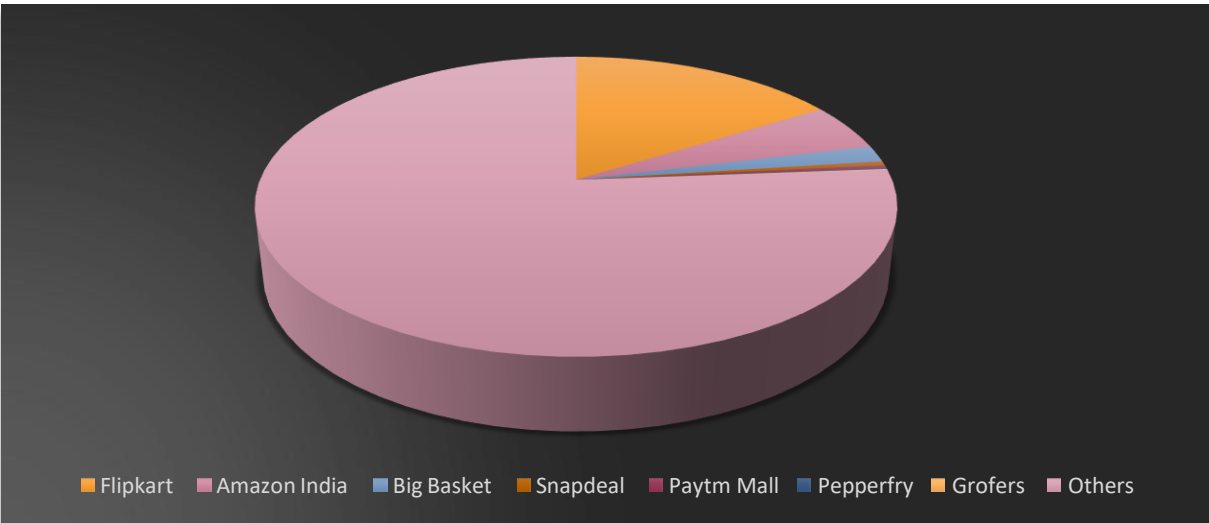
Ever- increasing customer demand

Inefficient Supply Chain Management

Frauds in Retail

Ever Changing Customer Demand

Competitive Landscape of Ecommerce in India



Transformational ONDC to disrupt the digital market

Humans have operated marketplaces and exchanged value as buyers and sellers from the beginning of time.

Through interactions between a seller or provider who has something to offer and the buyer or consumer, marketplaces of every size and form can be developed.

The decentralized and fragmented market across categories and regions makes the execution of these transactions sophisticated and complex. The marketplaces have grown digitally since the internet's invention, allowing suppliers and customers to conduct business online. The global distribution of goods and services has been considerably altered by digital, and market interactions have also undergone radical transformation. This has challenged traditional knowledge in a number of industries, including retail, mobility, travel, and hospitality.

Instances of that allowed for the creation of online marketplaces for buyers and sellers has grown into a vast array of integrated solutions that link the buyer and the seller with services like payment, logistics, warehousing, and more, all offered by a single service provider. Newsvendors' capacity to compete has been hampered by these platforms' exponential expansion, unless they are a part of an established end-to-end service provider. Even if new platforms can and do enter the market, the amount of investment required to develop such integrated solutions limits the number of participants. Due to the platforms' expanding scale, both buyers and sellers are subject to the concentration risk of the platforms. Even if it is government-run, consolidating the majority of digital commerce transactions onto one platform increases risk and creates a single point of failure. With such faculty specialization, the freedom to exclude others and discretionary behavior also starts to emerge. By doing this, the platforms assume the position of "operators" in the market, depriving small and medium- sized businesses of the freedom to engage however they see fit.

This also raises the crucial issue of trust's mobility. Through the transactions made possible by their systems, the platforms give providers and customers the ability to establish a reputation that has enormous value.

A vendor cannot move his or her hard-earned reputation or credibility (trust) to another platform or their own applications independent of the original platform, even when it is his or her own data and credentials. Because of the misaligned incentives, users

who choose to leave the current platform must forfeit the values they have accumulated there. Numerous challenges could arise with this market structure. To sell across several platforms, the platforms require merchants to maintain their accounts.

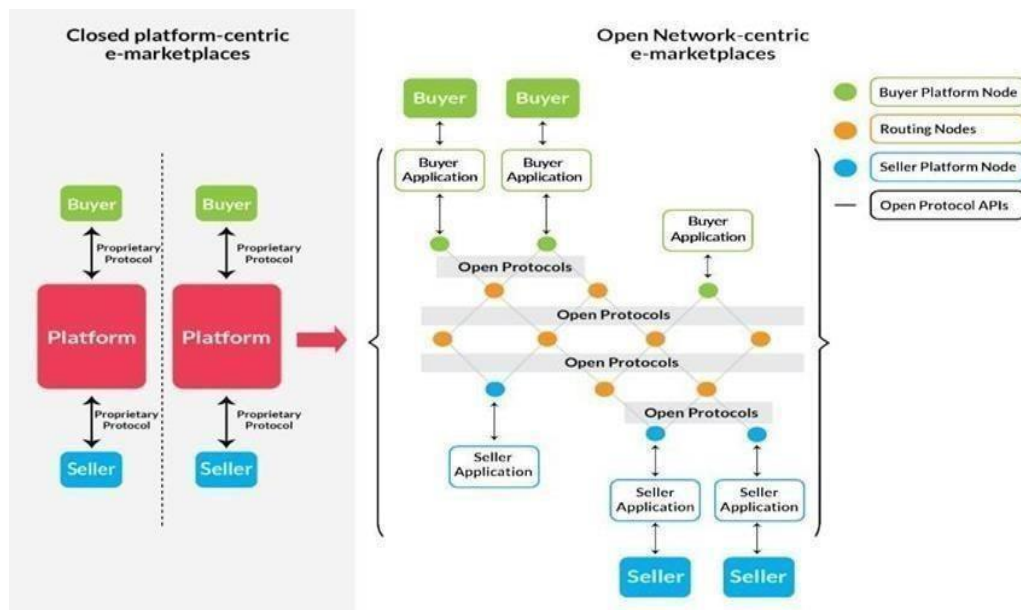
Separate processes and infrastructure raise their cost, which also restricts participation. The flexibility of the sellers is restricted by the terms and conditions that each platform has, which may limit the scope and diversity of participation. Additionally, in order to find each other, the buyer and vendor must be on the same platform. Such gaps restrict choice and discoverability among the dispersed array of platforms. Purchasing from a "near and now" inventory online in the neighborhood Kirana store and the neighborhood Kirana store learning that someone is looking for something from the store remain digital vacuums despite the apparent rapid advancement of many digital platforms, the pervasiveness of the phone, and the internet. The epidemic just made this problem worse.

The nascent digital commerce environment in India is not an exception to the aforementioned difficulties. In fact, the issue is exacerbated in the nation's environment due to its immense size and diversity. Several market players are engaging in initiatives aimed at digitalization and the onboarding of small sellers & MSMEs in an effort to address these difficulties. To address these issues on a population basis, though, these could benefit from a coordinated approach. A new approach of "what works at scale" must be adopted in place of the current strategy of "growing what works" in digital commerce. India has led the world and shown that it can innovate such population- scale initiatives with the power to fundamentally disrupt and democratize markets, whether it was the Unified Payment Interface (UPI), the Goods and Services Tax Network (GSTN), or more recently the Ayushman Bharat Digital Mission. All Indian citizens must have equal access to digital commerce for goods and services, just to how UPI revolutionized India's payment system.

Digital Commerce built on Open Network for Digital Commerce

In order for the general expansion of the digital commerce sector to take place with substantial client and seller engagement, the current market structure must be modified. At this point, if we want to reimagine the mechanism to bring the players together with a focus on trust, we simply cannot change it into a store of value. Even while the concept of a "platform of platforms" can appear rather sensible, it still won't be able to address the problems with storage, universality, or trust.

To overcome a problem of this magnitude, a paradigm shift from an operator-driven, monolithic platform-centric strategy to a facilitator-driven, interoperable, decentralized network is necessary.



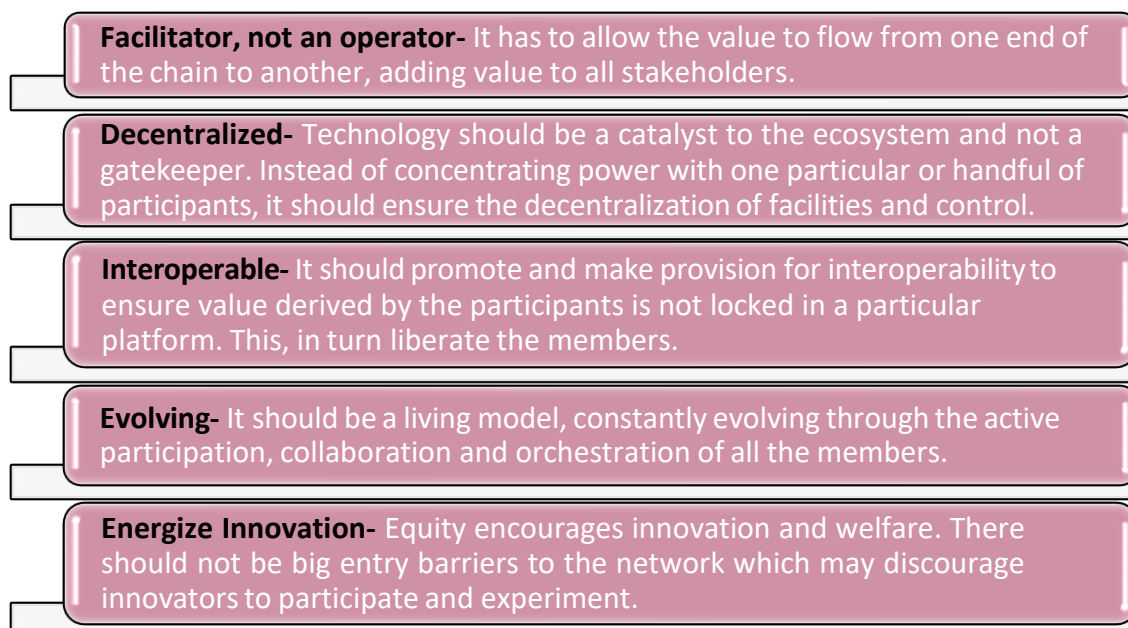
This paradigm change from a facilitator-driven, interoperable, decentralized network to an operator-driven, monolithic platform-centric architecture justifies:

- Encouragement for wider participation, especially from small and medium-sized businesses and hyperlocal (Kirana) retailers nationwide.
- Facilitating value flow more than value storage, or moving away from "central platforms storing and exchanging value" and towards a "decentralized network of interconnected ecosystem actors orchestrating the flow of value."
- addressing trust and discoverability, irrespective of platform, across platforms
- Unification of the siloed platforms to overcome the challenges inherent in the platform model instead of pursuing the notion of one universal platform or platform of platforms.
- promoting the independence of consumers and sellers.
- Align incentives of the network, platform, and end-users so that the collective succeeds only through the success of the end-use.

The Government of India (GoI) is encouraging such an open network for commerce with the help of new technology models¹¹. With the use of digital commons in the form of an open protocol which is merely a non-code open specification, GoI is enabling the establishment of an interoperable open network (Open Network for Digital Commerce - ONDC) to unlock the value trapped within the ecosystem.

Principles of building an alternative approach

Solutions should be inclusive at their heart if they are to support the massive expansion of digital markets across industries and regions. A solid basis should be used to create the plan for such a population-scale endeavor, as seen in figure 3 below:



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Concept of Open Network

The existing platform centric approach, in which a transaction between a buyer and a seller requires that both parties be users of the same platform or application, is superseded by Open Network.

- An open network based on the open protocol will enable any network- enabled application to locate and partake in location-aware, local commerce across industries. Internet Message Access Protocol is what it's called.

The Open Network idea was developed to transform digital trade in India. Emails are sent using (IMAP)/Simple Mail Transfer Protocol (SMTP), the World Wide Web uses HTTP, and payment systems use UPI.

- The open network is built on the essential principles of decentralization, openness, and improved user utility. Based on these concepts, the network will support and encourage each node's creativity and experimentation in order to hasten the adoption of technology stacks and tools like blockchain, artificial intelligence, machine learning, etc.
- The open network protocol is anticipated to act as a force multiplier for a variety of segments, including businesses, consumers, application developers, governments, and other relevant players, by creating an interoperable and open playground for varied segments to operate and compete. This open network will unbundle the supply chain, giving consumers, retailers, and service providers—rather than middlemen—more sway. The most affected parties will be small businesses looking to expand through online sales.

- The open network concept can be used in any digital transaction between a buyer and a supplier of goods or services, including wholesale, mobility, food delivery, logistics, travel, urban services, etc. The open network idea is not just relevant to the retail sector. It has the potential to change both B2C and B2B transactions.

Constituents of an Open Network

- In order to set up an open network, one needs to reevaluate how technological infrastructure allows for the transfer of wealth. Currently, the marketplace is set up as a "one box-system," where participants (both suppliers and clients) are requested to execute transactions in compliance with the rules laid out by the box. It is necessary to "unbundle" the existing framework in order to establish a free-standing system where each participant is free to exercise their own discretion.
- The process of unbundling involves breaking down a complicated system into smaller parts, or "microservices," which can then be independently managed to coordinate a bigger transaction. After the individual objects have been federated, several actors can take on these distinct tasks. Any actor may select one or more activities to engage in, and the design even enables actors to engage in all activities at once. The elements can be performed by multiple performers because they are not mutually exclusive. The market and users will determine the best possible combination(s). For instance, several companies may segregate and manage the logistics, seller, and buyer side aspects of a transaction.

Unbundling will open up opportunities for innovation and the introduction of new enterprises in the domains of logistics, storage, etc.

Additionally, it will encourage participants who have previously provided buyers and sellers with particular specialized services (for instance, entities providing accounting software solutions to manufacturers and traders or entities providing payment platforms, digital wallets, or even mobile services) to increase digital commerce interfaces to sellers or buyers, taking advantage of their current strength without worrying about establishing comprehensive and integrated digital commerce systems.

- A method of trading between these distinct entities must be devised in order to guarantee that each actor will have to make an independent attempt to communicate with each consumer-provider pair after being unbundled.
- Re-bundling the distributed network components as required requires a common language, referred to as "open protocol" hereafter¹².

Thanks to the open protocol, the provider and the client are not required to utilize the same platform to conduct discovery, ordering, execution, fulfillment, and post-fulfillment. Through this interoperability, not as a technological feature but rather as a commercial notion, digital markets might be reinvented to survive.

Genesis of an Open Network Digital Network

- The COVID-19 pandemic's effects on regional small companies and the operation of hyperlocal supply chains were made public through a large outreach effort by the Ministry of Commerce and Industries' Directorate for Promotion of Industry and Internal Trade (DPIIT). These interactions made it clear that there is a substantial gap between the amount of online demand and the capacity of the local retail ecosystem to participate.
- Then, meetings were organized to discuss potential solutions for the problems in India's digital commerce ecosystem with a variety of ministries and business experts. By taking cues from population-scale solutions like the UPI, IMAP/SMTP (email protocols), HTTP (protocols for data communication and browsing), etc., the "Open Network for Digital Commerce (ONDC)" was created with the intention of revolutionizing digital commerce in India.
- A steering group of experts was established by the DPIIT Government of India to study the potential of ONDC as a concept and its possible consequences in light of the inherent challenges of the commerce environment. On the recommendation of the Steering Committee, a Project Management Unit (PMU) was set up under the aegis of the Quality Council of India (QCI) to actualize the ONDC idea.
- Following the initial success, an Advisory Council was formed with the members of the Steering Committee and leaders engaged in population-scale initiatives in India to hasten the implementation process.

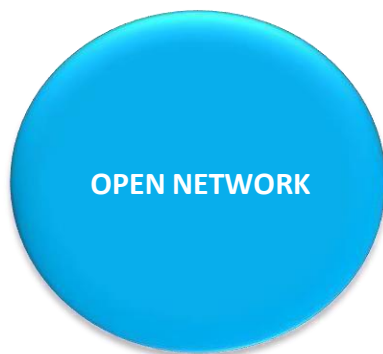
Conceptualization of ONDC

In a first-of-its-kind global initiative, ONDC is being established to lay the groundwork for reimagining digital commerce in India and developing a globally replicable model for it. With established registries and an open network built on open protocols based on open-source standards, Indian enterprises would be able to participate heavily in the digital commerce ecosystem through a variety of gateways.

The ONDC is being established with the following goals in mind:

- Be an enabler with little public digital infrastructure.
- Support interoperability to promote an open, inclusive, and competitive marketplace.
Build with scale efficiency and adoption in mind
- Make online shopping convenient for small businesses.
- Provide a path for innovation to emerge so that digital commerce can be reimagined.
- Make sure MSMEs and customers quickly adopt digital technology.

ONDC is based on three foundational pillars



Scaling and innovating on Open Protocols that have already been tested and have established a proof of concept.

Using Open-Source APIs to spur community-based engagement for faster innovation and adoption.



A decentralized innovative model that encourages open collaboration and interoperability

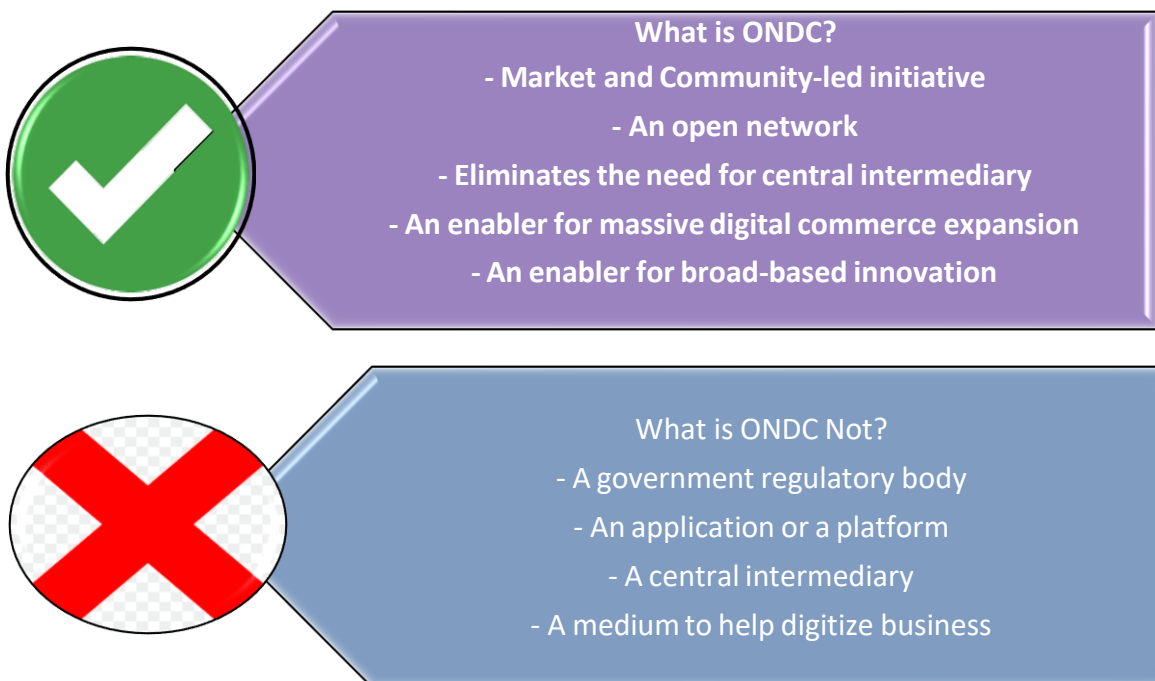


Low-cost digital infrastructure which is scale ready for billions. A public good by design where buyers and sellers are mutually discoverable for digital commerce transactions.

Integrated community of innovators that share knowledge to create new resources and opportunities for the benefit of all.

Understanding ONDC better

Any network-enabled application may find and interact with location-aware local digital commerce stores across industries thanks to the ONDC network. It is neither a hosting platform nor a mega aggregator software. All currently used digital commerce platforms and applications have the option to voluntarily adopt the ONDC network and join it. Also, the network-enabled applications will continue to be in charge of managing the full order lifecycle, including the onboarding of vendors and buyers.



The broad-scale democratization of digital commerce in India would be made possible by ONDC by allowing both large and small digital commerce applications and platforms the opportunity to be ONDC enabled and make buyers/sellers registered with them accessible and discoverable.

1.2. Problem Statement

Problem Statement 1:

There are several issues with modern digital commerce:

- Few companies, like Amazon, Flipkart, Zomato, MakeMyTrip, etc., dominate the market.
- Consumers are limited to only a subset of the products/services offered on the platforms and must search and explore the desired products/services across many platforms.
- Customers must visit many locations to purchase various goods and services.
- There are pockets of penetration in rural areas and small towns.
- Small firms are unable to participate in and do business in the online marketplace

Problem Statement 2: Investigating the potential of ONDC in the revolution of retail sector and its challenges.

- Taking buyers perspective on the potential of existing ecommerce platforms and ONDC.
- To investigate the opportunities available to both buyers and sellers.
- Investigating the perspective of sellers on existing platforms and awareness of ONDC.

Building Blocks of ONDC



Buyer Side Apps: A buyer-side app is any programmed that will interact with customers, or the demand side of any transaction. Numerous apps, including User Experience (UX)-based applications, voice assistants, chat-bots, etc., can serve as the demand layer for the good or service.

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Seller-Side Apps: any programmed that engages with sellers, or the supply side of any transaction. These can be any programmed that take orders from customers, publish a list of their products and services in response, and then carry out the orders.

1.3. Objective of the Study

Understanding the necessity of addressing the current issue is essential to finding a workable solution. The goals that this project report sought to accomplish are as follows: -

- To look into the possibilities of the Open Network for Digital Commerce (ONDC), which was developed by the federal government with the main goal of promoting local retailers' participation in India's e-commerce revolution and supporting their entrepreneurship at the grassroots level.
- To investigate how customers perceive existing ecommerce platforms.
- Sellers' awareness of the ONDC platform and how it will help them serve more customers.

Objective of Problem Statement 1: The problem statement focuses on the study and reach of existing platforms.

The ONDC platform has provided small business owners the chance to sell their goods on online market with a large customer base and advantageous prices for consumers.

Objective of Problem Statement 2: The problem statement focuses to interpret the buyers and sellers' perception.

- Both buyers and sellers will profit from the ONDC platform. Analysis of their perceptions of current and future platforms is therefore crucial.

1.4. Scope of the Study:

This research covers have predefined scope, the extent to which topics that will be explored are as follows:

- This research provides an advantage for choosing the appropriate government initiatives, thanks to the insights supplied by the users of the current ecommerce platform.
- A clear picture of the vision and purpose provided is created via the interpretation of buyers' and sellers' perceptions.
- Local business owners were given the chance to conduct business.
- A thorough exploratory study was carried out using surveys, in-person interviews, and news articles. This research can be used to analyses the information acquired and express it in the simplest possible way.
- All the analysis is related to the two perceptions that is buyers and sellers. Further there is a lot of scope to understand different perception, market reaction, public at large, effect on products.

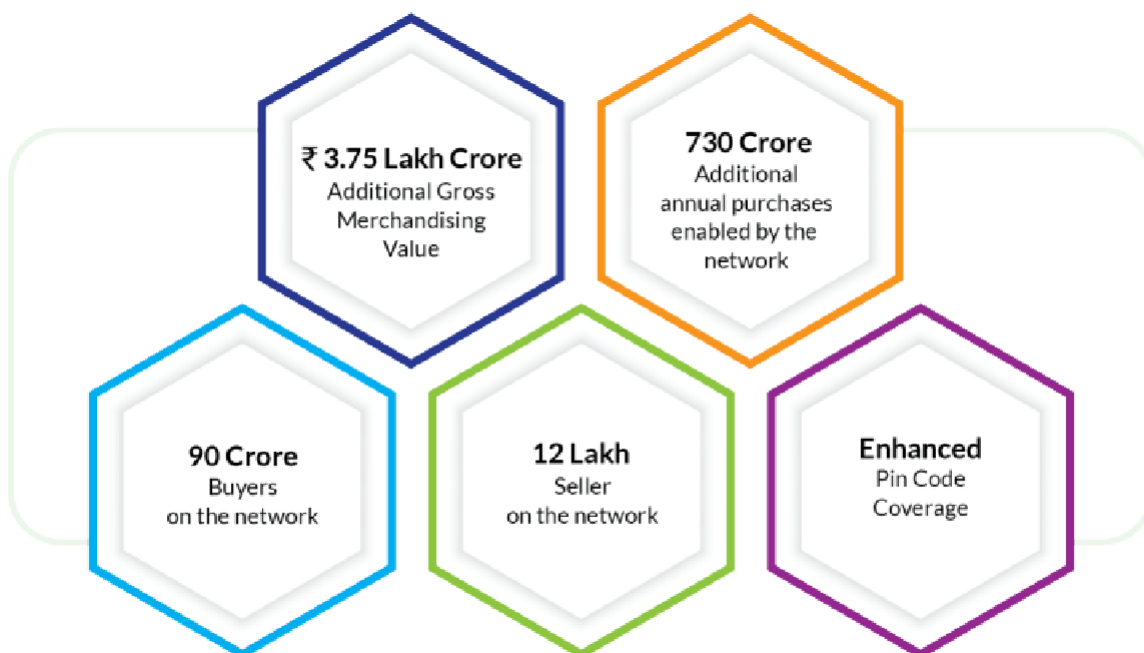


Fig: Within the next five years, ONDC may present an opportunity for a market transformation.

CHAPTER-2
LITERATURE REVIEW

2.1. Theoretical Background

The open network for digital commerce (ONDC) and its potential to upend the ecommerce Industry will be discussed in this literature review along with the revolution that has taken in the Indian retail industry.

This will be an exploratory study to learn how buyers and sellers view the possibilities of open for digital commerce (ONDC) in India's retail revolution.

Current Scenario of India's Retail

Navigating the Covid-19 epidemic and the ensuing strange events was and is still a tremendous undertaking. Global supply and demand constraints have forced retailers and customers alike to adjust, resulting in widespread store closings, strict occupancy limits, demand concerns, and worldwide supply restraints.

Beginning in 2022, mall traffic has returned to pre-pandemic levels as the world's attention has shifted to new growth engines, which has been boosted by already-growing trends and the retail industry's digital revolution.

Retail sales in March 2022 grew by 12% over pre-pandemic levels in March 2019 and by 28% over the same month the previous year, according to the Retailers Association of India (RAI). The all-time low number of Covid-19 cases, the elimination of all pandemic-related restrictions, and improved consumer mobility are all responsible for this change in consumer mood. There was mappable growth in the last quarter of FY 21 as a consequence of strong demand brought on by the opening of workplaces, schools, and increasing demand as a result of weddings.

Due to the fact that malls continue to uphold higher standards of safety for adults, children, and senior citizens, more people are turning to them. Also, malls have a controlled atmosphere in terms of air conditioning, which helps people escape the oppressive summer heat. The ideal venues for people to unwind and enjoy themselves are malls, which not only provide excellent shopping experiences but also a large variety of F&B and entertainment options. The primary contrasts that merchants are observing with the Covid-19 epidemic are many modern technologies and facilities delivered to the fingertips, together with the customer eagerness to return to the retail buying experience.

Government Initiatives

In an effort to boost the country's adoption of digital payments, the RBI announced plans for a new framework for retail digital payments in offline mode in October 2021. In order to enable E-commerce companies and international merchants to sell consumer goods made in India, the government may relax FDI regulations in the food processing industry.

The Government of India has approved 100% FDI in automated online retail of goods and services, bringing clarity to the activities of Indian e-commerce businesses.

Omnichannel

Omnichannel marketing's primary objective is to provide clients with a seamless, customized experience across all channels and devices. Since omnichannel marketing is built on the idea that it should be shopper-centered rather than channel-based, the developing trends that are growing quickly include personalized shoppers' assistants or click-and-block models. Due to urbanization, income growth, and an increase in nuclear families, it is predicted that the Indian retail industry would reach \$2 trillion by 2032 and the Indian e-commerce market will reach \$350 billion by 2030, with a CAGR of 23%. These increasing figures, in the opinion of Mr. Sandeep Raheja, Chairman of K Raheja Realty, are a clear indication of the upward trend that the Indian retail real estate market is expected to see and are far better than the losses that the industry has experienced over the past two years.

On the other hand, the industry's long-term prospects appear optimistic given the rising incomes, favorable demographics, the arrival of foreign competitors, and increasing urbanization.

Game Changer Open Network for Digital Commerce

The fundamental goal of ONDC is to level the playing field for small and medium-sized businesses that are now dominated by some of India's largest e-commerce giants. In order to reach a bigger market and provide a seamless shopping experience, ONDC will systematically endeavor to integrate small and medium-sized businesses into the digital network. These businesses would not otherwise be able to take use of digital commerce's advantages.

Imagine that you are in charge of a 500-square-foot shop that sells sustainable bamboo crafts and averages 7,000 Indian rupees a day in sales. Your circumstance, however, was altered when customers started acquiring comparable goods online due to a change in consumer preferences. For millions of little mom-and-pop shops or small shopkeepers in India, the emergence of e-commerce has been the hardest challenge. Once ONDC is in place, it might be transformative for these small retailers and traders since they will have access to digital commerce networks that will provide them broad reach and a standardized protocol for vendor matching, pricing discovery, and cataloguing that is open-source.

What is expected from ONDC is to drive digitalization and standardization of the entire value chain, including operations, driving logistical efficiency, and democratization of technology. ONDC, with its network-centric model, will provide equal opportunities for small retailers, follow transparent practices, and low-cost offering.

Complete end-to-end e-commerce solution

The main benefit of ONDC's network-centric model is that small retailers and traders will be able to interact with other players in the country's other segments, such as logistics, warehousing, payment providers, enterprise resource planners, etc. using open APIs once their catalogues are digitally live. ONDC is a wise alternative for new retailers to start selling on the platform due to its reduced cost of operations and acquisition, more flexibility with a variety of payment options, cheaper transaction costs, and absence of a registration fee.

Vast array of choices for consumers

In contrast to today's proprietary platforms, the ONDC platform will be open to all and without limits, thus merchants who register on ONDC won't be required to pay a commission to the enabling platform. An unbiased marketplace like ONDC can enable retailers to give customers a wide range of products to pick from.

A digital marketplace accessible to all

By offering the same advantages and visibility as any other significant e-commerce site, ONDC is establishing a virtual marketplace for businesses and shoppers. Discoverability, interoperability, and inclusiveness are the three primary variables that will influence market acceptance and visibility. Over a safe, decentralized network, shops can connect and exchange information under ONDC. They will be able to monitor inventory levels, gauge customer demand, and plan promotions thanks to it. Retailers are now able to offer a seamless customer experience across all channels thanks to next-generation retail technologies.

ONDC can be the enforcer

The ONDC may act as the driving force behind the digitization of small retailers. But, after the whole roll-out phase is finished, flexibility and overcoming obstacles will be crucial. Our economy is based on small and medium-sized businesses. In the upcoming years, ONDC is ideally positioned to digitize the whole supply chain. All businesses will operate on an even playing field thanks to this, which will strengthen India's digital infrastructure and connections and make it simpler for companies to conduct business online.

Many problems could arise as a result of this market arrangement. In order to participate on various platforms, merchants must maintain separate infrastructure and business procedures, which increases their costs and restricts participation. Each platform will have its own rules and regulations that restrict merchants' freedom of action, which may limit the scope and diversity of participation. The buyer and seller also need to be on the same platform in order to find one another. These gaps restrict choice and discoverability within the disjointed array of platforms.

CHAPTER-3
RESEARCH METHODOLOGY

Brief

I have identified various change points when analyzing the historical data made available through news stories, and these change points are thoroughly explained in the study of this report. This research is conducted via questionnaire and in-person interviews. The many approaches used to conduct the research for this dissertation are covered in this section. The predominant research methodology is the mixed research methodology, which combines a synthesis of the qualitative and quantitative research paradigms.

By assembling a variety of viewpoints and data types, the use of this research methodology broadens the scope of the central issue. Hence, it raises the overall level of quality. So, by providing a balance of contrasting strengths and non-repetitive weaknesses, it improves the overall quality of the research. As when you proceed for exploratory research, the research has to include identifying what went wrong for existing parties and future prospect of the present research.

3.1. Research approach

This study has adopted an inductive method to its research because it demonstrates how three different factors can be combined to produce a new research direction. An inductive strategy is more adaptable.

Exploratory research was conducted to learn more about how the ONDC platform and how it will transform the Indian retail industry. In light of this, the exploratory investigations of qualitative data were conducted. The use of qualitative research was justified on the grounds that it made it possible to collect richer, more in-depth information regarding how the ONDC platform will benefit both parties. The interview questions for the researched traits are included in the appendix section. The disadvantage of qualitative research is that it is frequently influenced by researcher prejudice.

3.2. Sample

Forty buyers and 20 sellers in India made up the sample that was taken into consideration for the study. Online shoppers from different parts of the country with different ages is considered. This exploratory research is categorized into two broad categories of perceptions:

1. Buyers
2. Sellers

In essence, qualitative interviews are conducted to explain and explore phenomena in-depth to discover new constructs, themes and relationship. This sample size was considerable since the study was exploratory where interviews are conducted. The above study includes 50 buyer's data and 20 seller's data collected through online surveys and personal interviews respectively.

1. QUESTIONNAIRE
2. PERSONAL INTERVIEW

The demographic of seller's (local store seller's) data samples is indicated in the table

Interviewees	Gender	Age	Income (monthly)	Type Of Store	Awareness about ONDC platform
Interviewee 1	Male	45	30000	Grocery Store	Yes
Interviewee 2	Female	32	20000	Cosmetics Store	NO
Interviewee 3	Male	42	15000	Grocery Store	YES
Interviewee 4	Male	30	20000	Grocery Store	YES
Interviewee 5	Male	47	40000	Clothing Store	NO
Interviewee 6	Female	24	45000	Clothing Store	YES
Interviewee 7	Male	55	30000	Clothing Store	NO
Interviewee 8	Male	53	25000	Cosmetics Store	YES
Interviewee 9	Female	36	22000	Cosmetics Store	NO
Interviewee 10	Male	47	18000	Grocery Store	NO
Interviewee 11	Male	24	15000	Grocery Store	NO
Interviewee 12	Male	32	20000	Grocery Store	YES
Interviewee 13	Female	44	25000	Clothing Store	NO
Interviewee 14	Male	50	30000	Clothing Store	YES
Interviewee 15	Female	42	35000	Medical Store	NO
Interviewee 16	Female	38	40000	Medical Store	YES
Interviewee 17	Male	31	45000	Medical Store	NO
Interviewee 18	Male	37	30000	Cosmetics Store	NO
Interviewee 19	Male	41	20000	Grocery Store	NO
Interviewee 20	Male	52	25000	Grocery Store	NO

3.3. Data Collection

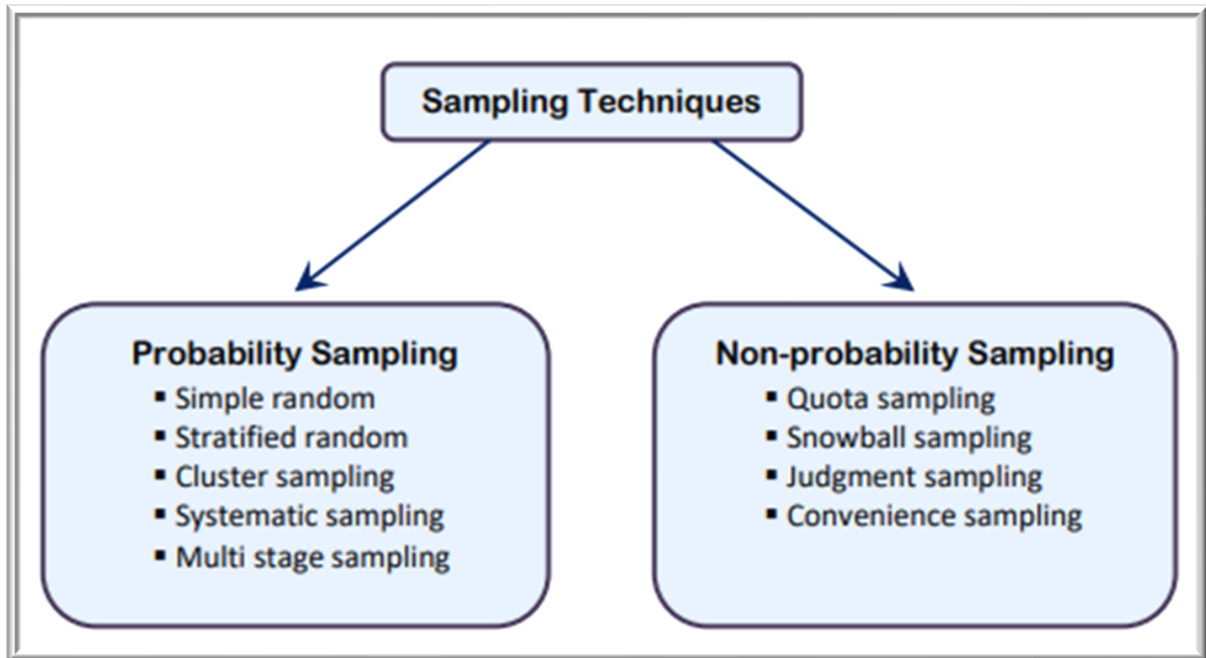
Interviews and online surveys were employed as the data collection method because this study is exploratory research. The study aims to understand more about the participant's experiences. Enough time is given for both medium of data collection whether surveys or personal interviews. There was plenty of opportunity for each participant to react to the questions during the interview, which lasted between 20 and 30 minutes. The interviewer played a key role in gathering the relevant information required to provide answers to the study's questions by questioning and asking the interviewees to defend their responses or support their statements. In this regard, the collected comments provided comprehension and in-depth knowledge regarding the revolution of the ONDC platform and the current ecommerce landscape in India. The purpose of the interview questions was to obtain trustworthy and correct information. The fact that the respondents sought clarification and raised queries during the interviews demonstrates that they gave accurate answers and dependable data. To acquire more exact statistics and understand the interview subjects' perceptions, questions were asked of them and further explanations were sought.

Sampling Technique: In order to fully address the research questions, it is doubtful that the researcher will be able to gather data from every scenario. Therefore, choosing a sample is necessary. The whole group of cases from which the researcher's sample is drawn is referred to as the population.

Since they lack the time or resources to study the entire population, researchers utilize sampling procedures to cut down on the number of examples.

There are primarily two categories of sampling methods:

- Probability or random sampling
- Sampling that is not random or likely to happen



I chose against employing a random sample because it would have been difficult to assemble a list of every online shopper for this study. In order to accomplish our research objective, convenience sampling seemed appropriate. I made the decision to give our form to the buyers and conduct in-person interviews with the sellers in the case of sellers in order to make it easier for the authors to approach respondents and obtain information quickly and to reduce low response rates.

1. **Sample Size:** The study's target audience is online & offline shoppers, so we selected a sample of 50 and 10 sellers' personal interviews of them due to time and resource limitations. We were able to provide respondents enough time (a maximum of one week) to complete the survey by distributing the questionnaires online (via LinkedIn and WhatsApp), which decreased sampling error. The questionnaire is written in clear English to reduce the possibility of ambiguity.
2. **Questionnaire:** The questionnaire was created specifically to meet the requirements of the study. This questionnaire was formed to take buyer's perception on the existing ecommerce site they have used and sellers' perception through personal interviews.
3. **Personal Interviews** – Personal interviews with 10 sellers from various department store brands are conducted.

CHAPTER-4
ANALYSIS, DISCUSSION AND
RECOMMENDATION

Data Analysis Methods

The majority of the information used in this study is qualitative. Hence, I have decided to interpret the study in the following ways:

1. By performing **Likert scale representation** to understand the data and draw inferences.
2. By performing **Thematic analysis** to understand the data and draw inferences.
3. By performing **data visualization**, a clear understanding of existing ecommerce platforms and buyer's behavior
4. By performing **2- way ANOVA test** on the suitable matrices.

Interviews give qualitative data, and different techniques are used to analyze them than to analyze quantitative data. In essence, Thematic analysis was used to analyze the qualitative data. The method of analyzing qualitative data known as Thematic/content analysis involves grouping or coding the responses in accordance with emerging themes from the qualitative data or interview transcripts. By grouping responses, content analysis helped to code or cluster the responses, which made it possible to identify and discuss the significant themes that emerged from the responses as the main results.

Consequently, in order to understand the units and group them into different themes and categories based on their shared qualities and traits, the qualitative data was analyzed inductively.

After employing content analysis to identify the themes or categories, the investigator considered how the developed categories related to the potential for Open Network for Digital Commerce to revolutionize the retail industry. In this research for the discussion of the results to be more focused, it is crucial to categories qualitative data. Using the ANOVA test, you can compare more than two groups at once to see if there is a correlation between them. Two independent factors are tested for their effects on one dependent variable using a two-way ANOVA.

1.DATA ANALYSIS (through Likert Scale): Our data may be analyzed using a five-point Likert scale (1=Strongly Disagree, 2=Disagree, 3=Uncertain / Not relevant, 4=Agree, and 5=Strongly Agree). A rating system that is frequently used in surveys and survey research is the Likert scale. In the provided google form three questions are analyzed with the help of likert scale. Following are the questions:

1. I believe that shopping online saves time on product evaluation and selection.
2. I get good quality products online?
3. It is convenient to pay my orders by credit card or net banking?

Modules	Strongly Disagree	Disagree	Uncertain	Agree	Strongly Agree
Question	Frequency				
I believe that shopping online saves time on product evaluation and selection.	0	1	0	24	25
I get good quality products online?	8	6	11	10	15
It is convenient to pay my orders by credit card or net banking?	2	1	3	21	23

On the other hand, personal interview questions are examined based on seller awareness of Open Network for Digital Commerce projects and how such initiatives would benefit them.

1. I believe that shopping online saves time on product evaluation and selection.

Reason- 71.4% customers strongly agree that online shopping saves their time on product evaluation and selection as the same survey reveals that people prefer online shopping as it saves their time and is convenient.

2. I get good quality products online?

Reason- The responses to this question is neutral to agreeing stage as there are still issues with the quality of the products offered.

3. It is convenient to pay my orders by credit card or net banking?

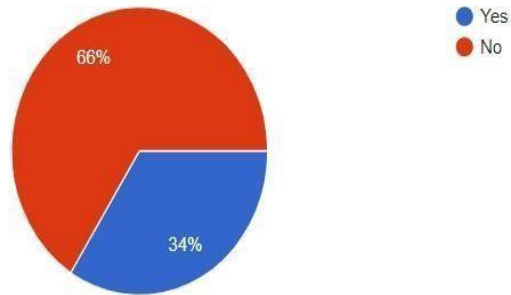
Reason- Customers believe that it is convenient to pay online via credit card or net banking but some people have shown neutral response due to cases of data breach.

Supported by this figure: -

Have you ever encountered a data breach on any e-commerce platform?

 Copy

50 responses



2. DATA ANALYSIS (through Thematic Analysis): A technique for analyzing qualitative data called thematic analysis involves finding patterns, themes, and meanings within the data. It is frequently used to investigate the experiences, convictions, and attitudes of individuals or communities in fields including psychology, sociology, and anthropology. Thematic analysis often entails a number of processes. To get a general comprehension of the data, researchers must become familiar with it by reading and rereading it. They then create initial codes that identify important aspects or concepts in the data. Following sorting and grouping into prospective themes, these codes are examined and improved through an iterative data analysis process. The frequency or prominence of themes in the data, as well as their applicability to the study question or aims, can all be used to identify them. The development of a narrative or explanation that connects the themes and sheds light on the underlying meanings and interpretations of the data is possible after the themes have been decided upon.

A variety of qualitative data sources, including as interviews, focus groups, surveys, and observations, can be used with thematic analysis. Both exploratory and hypothesis-driven research can use this method because it is versatile and adaptable.

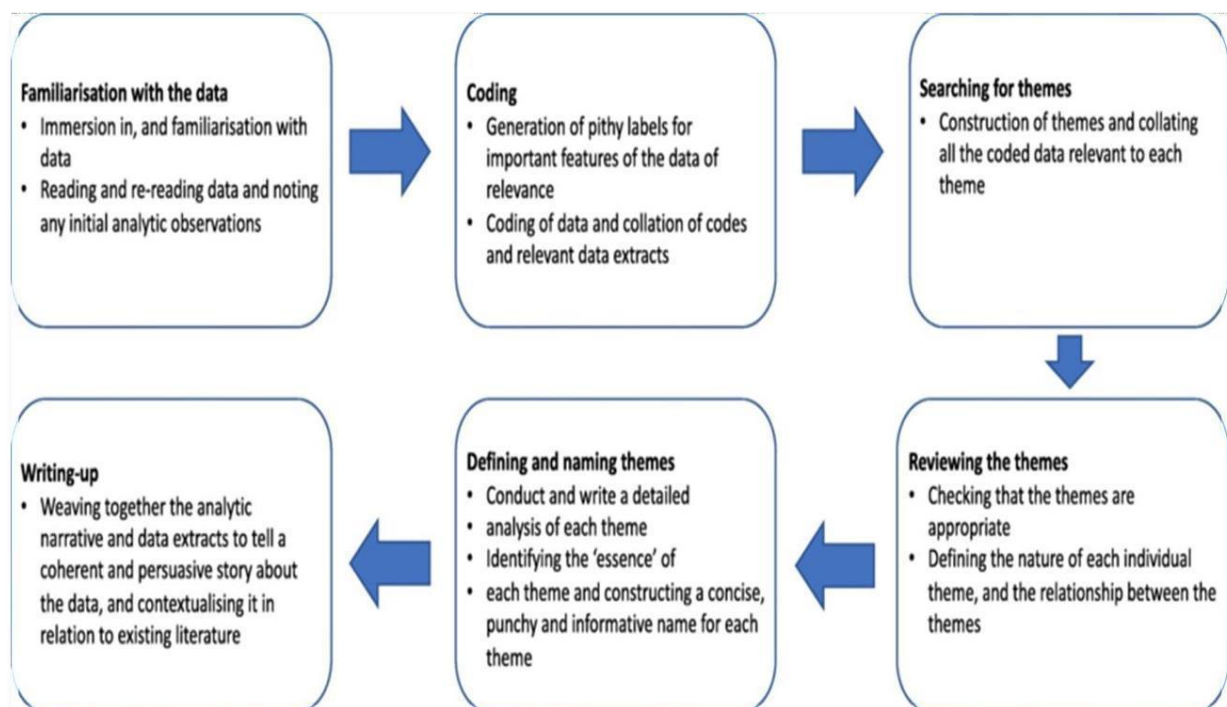


Fig: Thematic Analysis process

- **Thematic Analysis**

Grouped Analysis

Preferred method of shopping		Most liked feature on preferred ecommerce site		What has stopped a buyer in making a purchase		Additional features would a buyer like to have on ONDC platform
Theme	Frequency	Theme	Frequency	Theme	Frequency	Easy Navigation
Online	30	Price	25	Better prices on other platforms	18	Comparison of prices, features, quality
		User Friendly Navigation	16	Change of mind	18	Customer support
Offline	8	Return & Exchanges	31	Missing details	3	Security on payment options
		Quality	27	Additional Charges	4	Detection of fake reviews
Both	12	Offers & Discounts	34	Fake Reviews or missing	3	Comparison of online & offline products
		Customer Support	17	Lack of customer Support	3	Discounts
		Multiple Payment Options	12	Late delivery of product	1	More Varieties

Products reviews	17		Feedback and review section
Data Security	2		

What is the most liked feature of your preferred e-commerce site over the competitor? [Copy](#)

50 responses

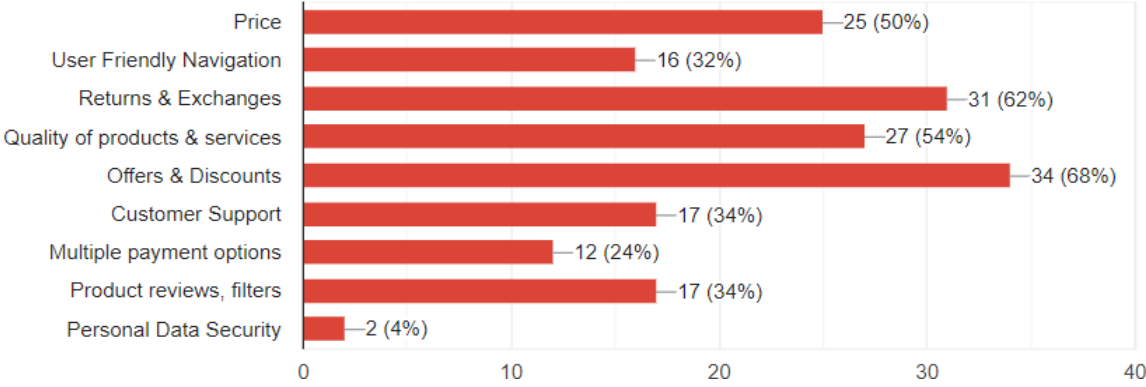


Fig: most liked feature of the preferred ecommerce

Interpretation- Through grouped analysis we can conclude that most buyer's prefer online shopping (frequency 30) as offers and discounts (frequency 34) attract them. This study has also observed that better prices on other platforms (frequency 18) entice the buyers to purchase from other ecommerce platforms which should be kept in mind while introducing ONDC platform and change of mind is to be dealt. I have also observed that buyer's want easy navigation as some platform forget that the platform is used by individuals of all age and literacy level, somebody can be tech savvy or not. More additional features required on the platform is comparison of price feature, quality, customer support, security in payment options, detection of fake reviews, feedback section, more discounts and variety.

The majority of consumers firmly believe that internet shopping enables them to save time on product evaluation and selection, as can be seen from the above table. This conclusion was also supported by data from 30 customers who preferred to shop online. A distinct result was drawn from the distribution of the number of purchases, demonstrating that there is disagreement among customers about the quality of the goods offered on online e-commerce platforms. Only 15 individuals strongly agreed that the products now sold online were of high-quality, showing that much more work has to be done to close this gap. Buyers have different point of views. The majority of individuals, however, concur that it is convenient to pay for orders online, and the report is further confirmed by the pie diagram below, which shows that more than 66% of customers have never had a data breach.

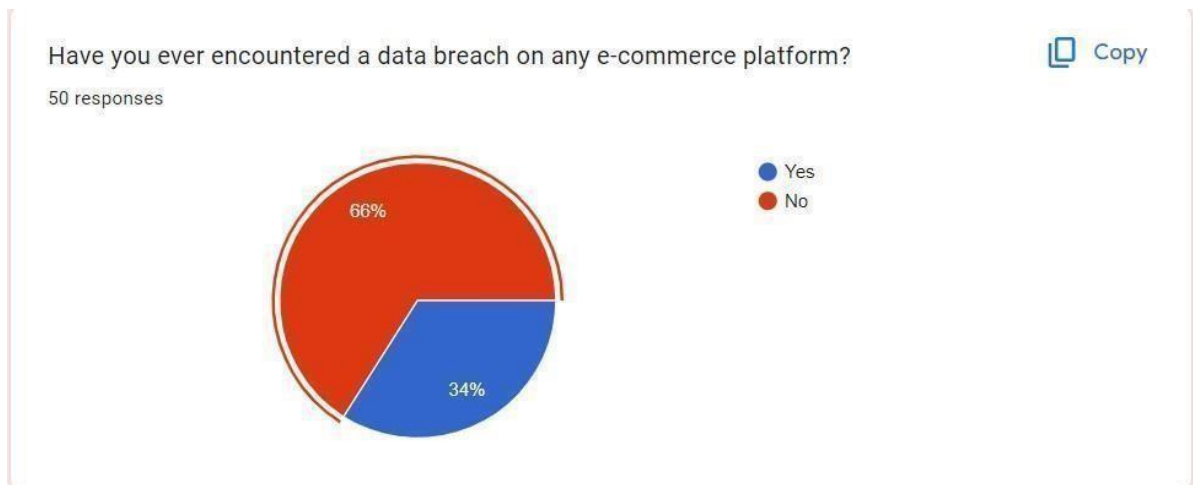


Fig: Chart representation of buyers who have encountered data breach

4. Data Analysis (through Data Visualization)

➤ Most preferred ecommerce platform

The most preferred ecommerce platform is Amazon. The majority of respondents 48% choose Amazon as their preferred ecommerce platform, whereas Flipkart is preferred with just 16% and a surprise entry is Myntra which has gained 20% of respondent's preference, followed by Reliance Ajo, Nykaa and so on others.

What is your most preferred e-commerce platform?

50 responses

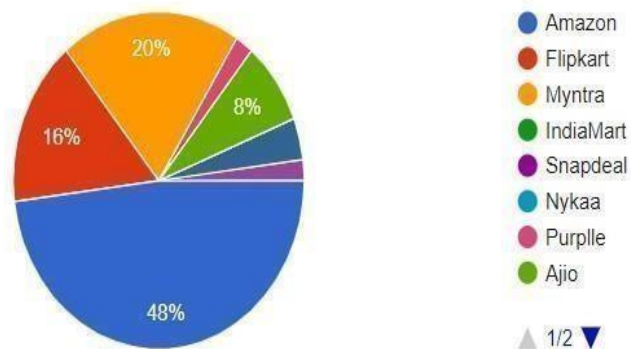


Fig: Preferred ecommerce platform

➤ Demography

Based on the demographic profile, of responses are from women and more are from men. Each 50 replies were received for all of these categories. Women claimed to have less experience with internet buying than men at the time of the poll. The poll results clearly show that men are more interested in internet shopping than women.

Gender
50 responses

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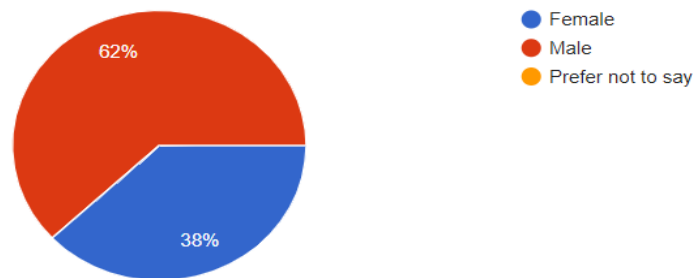


Fig: Demography representation

- **Age:** According to the graph below, 4% are less than 20 years of age, 76% are between 20 and 30 years of age, 8% are between 31 and 40 years of age, 2% are between 41 and 50, and 6% are above 50 years of age. The survey takes the perception of buyers. According to the group of respondents, this has led to the majority of responders being young people. The majority of people who prefer to shop online are adults between the ages of 20 and 30, followed by individuals between the ages of 31 and 40 (76% + 8% = 84%). Also, we discovered that 76% of shoppers between the ages of 20 and 30 love internet shopping.

How old are you?
50 responses

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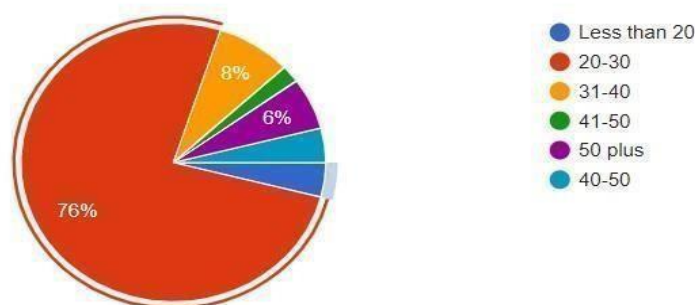


Fig: Age representation

Employment Status: 50 people participated in the poll, of whom 64% were students, 26% were working professionals, 8% were self-employed, and 2% were other respondents (homemakers, etc.). The result shows students (age bracket 21-30) preference towards online ecommerce sites.

What is our employment status?

 Copy

50 responses

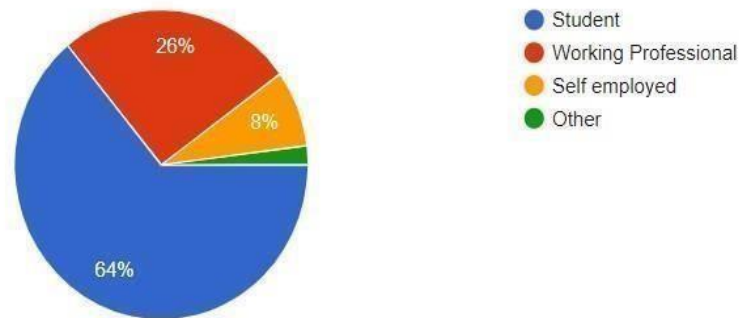


Fig: Representation of employment status

4. Data Analysis (through Two-way Anova Test)- Anova test is performed on the sellers' perspectives. Through two-way anova test I have observed that Age and Awareness do not interact significantly ($p = 0.526$) according to the results of the two-way ANOVA, showing that their association is independent of the levels of the other variable.

The primary effect of Awareness, however, was not statistically significant ($p = 0.748$), indicating that there is no appreciable difference in Age between those with and without Awareness.

The intercept also showed statistical significance ($p = 0.001$), demonstrating a substantial difference in the mean Age of the population as a whole.

Only a little amount of the variance in Age can be explained by Awareness and the interaction between Age and Awareness, according to the low R-squared value (0.006). Overall, these findings imply that Age and Awareness are not significantly correlated with one another, and that neither Awareness nor Age is significantly predicted by Awareness.

The significance values (commonly referred to as p-values) are used in the context of the two-way ANOVA findings to determine if the differences in the data obtained are statistically significant or happened by chance.

The p-value for the age and awareness interaction effect was 0.526, which is higher than the standard alpha level of 0.05. As a result, it appears that the null hypothesis cannot be ruled out, indicating that there is no discernible interaction between Age and Awareness and the mean age of the population.

We cannot rule out the null hypothesis because the p-value for the main effect of Awareness was 0.748, which is also higher than the alpha level of 0.05.

Accordingly, there is little to no variation in mean Age between people with and without awareness.

The null hypothesis that the intercept is equal to zero is rejected, on the other hand, because the intercept had a p-value that was less than 0.001. In other words, there is a big discrepancy in the population's mean age. Smaller p-values (e.g., less than 0.05) generally imply that the observed differences are more likely to be significant and less likely to be the result of chance. In contrast, higher p-values imply that the observed differences are less likely to be significant and more likely to have occurred by chance.

ANOVA TEST

Univariate Analysis of Variance

Between-Subject Factors

		N
Awareness	NO	12
	YES	1
	YES	7

Descriptive Statistics

Dependent variable: Age

Awareness	Mean	Standard Deviation	N
NO	40.6667	9.08879	12
YES	45.0000	.	1
YES	38.4286	10.64358	7
TOTAL	40.1000	9.27872	20

Tests of Between -Subjects Effects

Dependent variable: Age

Source	Type III sum of all squares	df	Mean Square	F	Sig.
Corrected Model	47.419a	2	23.710	.254	.779
Intercept	12558.920	1	12558.920	134.415	<.001
Awareness	47.491	2	23.710	.254	.779
Error	1588.381	17	93.434		
Total	33796.000	20			
Corrected Total	1635.800	19			

a. R squared= 0.29 (Adjusted R Squared = -.085)

Univariate Analysis of Variance

Between-Subject Factors

		N
Awareness	NO	12
	YES	8

Descriptive Statistics

Dependent variable: Age

Awareness	Mean	Standard Deviation	N
NO	40.6667	9.08879	12
YES	45.0000	10.12423	8
TOTAL	40.1000	9.27872	20

Tests of Between-Subjects Effects

Dependent variable: Age

Source	Type III sum of all squares	df	Mean Square	F	Sig.
Corrected Model	9.633a	1	9.633	.107	.748
Intercept	30656.033	1	30656.033	339.331	<.001
Awareness	9.633	1	9.633	.107	.748
Error	1626.167	18	90.343		
Total	33796.000	20			
Corrected Total	1635.800	19			

b. R squared= .006 (Adjusted R Squared = -.049)

Limitation of the Study

Like every study, this research too has its limitations and can operate within its parameters, further this research is very narrow and is limited with few data points.

Following are some of the limitations:

- Fewer survey respondents, which has narrowed the scope of the research, and few data factors.
- Sellers are not friendly when doing in-person interviews
- Both buyers and sellers have a relatively low level of knowledge about the ONDC platform. Few data parameters that have narrow down the research.
- Less number of respondents for the questionnaire.

CHAPTER-5 CONCLUSION

Through the Open Network of Digital Commerce (ONDC), a significant shift in India's digital co Government of India project seeks to "democratize and integrate" digital commerce. The buyer will benefit from this endeavor by having access to all sellers through common apps and merchants with a large customer base without having to spend money on digital marketing.

The main conclusions of the study above on consumers' perceptions of leaving e-commerce websites paved the way for the development of the Open Network for Digital Commerce, which would change the Indian retail industry. In order to create the ONDC platform, which serves every customer requirement, research is being done to understand how buyers see things while making purchases online and what aspects discourage them from choosing an ecommerce site. According to the survey, Amazon and Flipkart continue to command the industry despite the abundance of e-commerce websites. The purpose of this exploratory study is to make improvements to the ONDC platform and advance the goal of supporting local businesses by providing them with a platform. We discovered that majority believes that online shopping saves their time on product evaluation and selection. This interpretation is supported with the observation number of 30 participants who has preferred on line shopping. We have also studied that customers have different point of views on the quality of products received via online shopping and people enjoy convenience of paying through cards or net banking. In order to determine whether age, education, and income were associated, we also looked at the demographics of internet shoppers. We have also performed thematic analysis that suggests improvements in the features of ONDC platform having easy navigation, comparison of prices, features of products, quality, customer support, security of payment, detection of fake reviews, comparison of online and offline products, discounts, variety of products, review -feedback section.

Have you ever tried comparing the prices of products by visiting different e-commerce platforms?

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50 responses

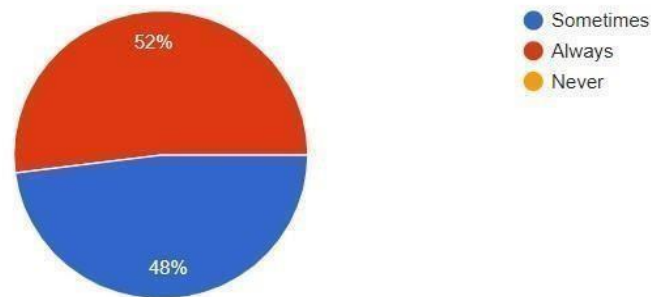



Fig: representation of sample comparing prices on existing platforms

Government of India project seeks to "democratize and integrate" digital commerce. The buyer will benefit from this endeavor by having access to all sellers through common applaud merchants with a large customer base without having to spend money on digital marketing.

The main conclusions of the study above on consumers' perceptions of leaving e-commerce websites paved the way for the development of the Open Network for Digital Commerce, which would change the Indian retail industry. In order to create the ONDC platform, which serves every customer requirement, research is being done to understand how buyers see things while making purchases online and what aspects discourage them from choosing an ecommerce site. According to the survey, Amazon and Flipkart continue to command the industry despite the abundance of e-commerce websites.

The purpose of this exploratory study is to make improvements to the ONDC platform and advance the goal of supporting local businesses by providing them with a platform. We discovered that majority believes that online shopping saves their time on product evaluation and selection. This interpretation is supported with the observation number of 30 participants who has preferred on line shopping. We have also studied that customers have different point of views on the quality of products received via online shopping and people enjoy convenience of paying through cards or net banking. In order to determine whether age, education, and income were associated, we also looked at the demographics of internet shoppers. We have also performed thematic analysis that suggests improvements in the features of ONDC platform having easy navigation, comparison of prices, features of products, quality, customer support, security of payment, detection of fake reviews, comparison of online and offline products, discounts, variety of products, review -feedback section.

Have you ever tried comparing the prices of products by visiting different e-commerce platforms?  Copy

50 responses

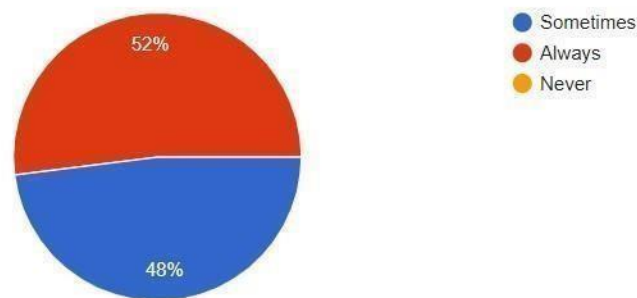


Fig: representation of sample comparing prices on existing platforms

The astounding results of the study demonstrate the need for greater advertising to increase platform awareness and entice vendors to sign up and benefit from the platform. We anticipate that our findings will provide online retailers with a comprehensive understanding of the factors that influence customers to purchase online, enabling them to develop strategies to meet the needs of online shoppers. Despite the study's limited scope due to the small number of participants, it might be regarded as a crucial first step for future research.

What do you think about the pricing of products on e-commerce platforms as compared to local stores considering quality also?

 Copy

50 responses

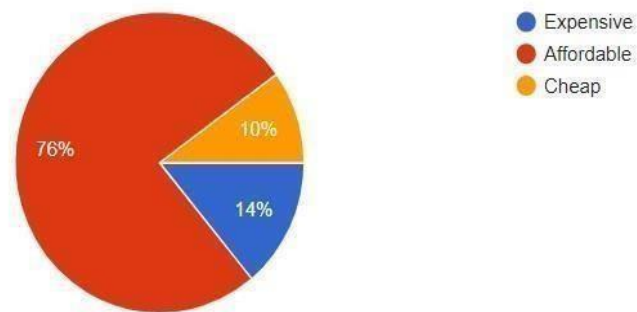


Fig: Representation of price comparison between local stores and ecommerce platforms

5.1. Recommendation

According to the report, the factors that influence those who don't frequently shop online are delivery time and cost. Businesses must have a delivery strategy that involves the client at each step of the purchasing process and ensures that their products are delivered on time if they want to attract online customers. In the shortest amount of time, better prices on other platforms prevent the buyer from completing a purchase, according to our study. The ONDC platform will monitor the seller's capacity to provide clients with competitive rates while avoiding any market monopolies. According to the result analysis, offers and discounts derive more customers and hence strategies are to formulate to use them in the best possible manner and also facilitating the return and exchanges on the ONDC platform will be the most challenging factor that is to be carefully implemented so that it can work wonders for both customers and sellers.

Few recommendations that will have an immediate impact are as follows:

- Technology impact- easy navigation for local retailers and customers
- Facilitating easy return and exchanges
- Providing good customer support in the name of ONDC platform
- ONDC platform acting as a regulator to satisfy needs of both sellers and buyers.

APPENDIX

A Study on the potential of open network for digital commerce(ONDC) to fuel India's retail revolution.

Dear Respondent,

The following questionnaire is intended to elicit your valuable opinion regarding the existing e-commerce and ONDC platforms. I would appreciate it if you spare a few minutes to fill out this form. This survey is part of my MBA Dissertation and hence I assure you that the information so collected will be kept confidential and will be utilized for academic purposes only.

Thanks in advance for your response.

Regards

Saman

Image title

Explainer.ONDC

WHAT IS ONDC?

Often referred to as the UPI of e-commerce, ONDC is a **freely accessible government-backed platform** that aims to democratise e-commerce by moving it from a platform-centric model to an open network for buying and selling of goods and services.

+ Through ONDC, the government aims to **put in place a structure for sellers and logistics service providers to connect with buyers.**

+ One of its objectives is to create a level playing field for e-commerce giants and small traders, and curb the dominance of large, **foreign-owned e-commerce companies such as Amazon.**

amazon

NEWS18 creative

Name *

Short answer text



Gender *

- Female
- Male
- Prefer not to say

How old are you? *

- Less than 20
- 20-30
- 31-40
- 40-50

50 plus

Where do you live? *

Short answer text

What is our employment status? *

Student

Working Professional

Self employed

Other

What method of shopping do you prefer online or offline and why? *

Short answer text

How often do you shop (food, clothes, medicines, etc) online? *

- Daily
- Once a week
- 2-3 times in a week
- Monthly

What is your most preferred e-commerce platform? *

- Amazon
- Flipkart
- Myntra

- IndiaMart
- Snapdeal
- Nykaa
- Purple
- Ajo
- PaytmMall
- Bigbasket
- Other...

I believe that shopping online saves time on product evaluation and selection.

	1	2	3	4	5	
Strongly Disagree	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Strongly Agree

...

I get good quality products online?

	1	2	3	4	5	
Strongly Disagree	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Strongly Agree

...

It is convenient to pay my orders by credit card or net banking?

	1	2	3	4	5	
Strongly Disagree	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Strongly Agree

What is the most liked feature of your preferred e-commerce site over the competitor? *

- Price
- User Friendly Navigation
- Returns & Exchanges
- Quality of products & services
- Offers & Discounts
- Customer Support
- Multiple payment options
- Product reviews, filters
- Personal Data Security

Are you aware of Open Network for Digital Commerce (ONDC) platform? *

- Yes
- No
- Somewhat

Do you have fewer choices available on one e-commerce site? *

- Yes
- No
- Somewhat

On your preferred e-commerce platform what has stopped you from completing your purchase? *

- Better price on other platforms
- Change of mind
- Missing required product information
- Additional Charges
- Missing or fake reviews
- Lack of customer support
- Other...

Have you ever tried comparing the prices of products by visiting different e-commerce platforms? *

- Sometimes
- Always
- Never

...

What do you think about the pricing of products on e-commerce platforms as compared to local stores considering quality also? *

- Expensive
- Affordable
- Cheap

Have you ever encountered a data breach on any e-commerce platform? *

- Yes
- No

What additional features would you like to have on the ONDC platform? (If you are unaware of the ONDC platform, please look at the image provided above) *

Short answer text

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