

Impact of E-Commerce on Local Businesses with Special Reference to Patna District

Kriti Ranjan¹, Udit Kumar², Sakshi Singh³, Anshu Raj⁴, Aditi Kumari⁵, Dr. Shilpi Kavita⁶
^{1,2,3,4,5,6}Department of Economics, St. Xavier's College of Management and Technology, Patna, India.
Email ID: kritiranjn.06@gmail.com¹, udity1243@gmail.com², sakshiiisingh@gmail.com³,
rajanshu982@gmail.com⁴, mishraaditi059@gmail.com⁵, shilpi.kavita@sxcpatna.edu.in⁶

Abstract

The rapid growth of e-commerce in India has transformed the retail sector, while influencing consumer behavior and affecting local businesses. Increased internet penetration, smartphone usage and digital payment systems have made online shopping more convenient and accessible, leading to a shift from traditional retail stores to online platforms. This study examines the impact of e-commerce on small retailers and Kirana stores, focusing on changing consumer preferences, competition, and business sustainability. The research is based on both primary data, collected through questionnaires, and secondary data, collected from reports and academic sources. The findings indicate that while e-commerce offers benefits such as convenience, variety, and competitive pricing, it has reduced customer footfall and sales for many local businesses. However, adopting digital tools and hybrid models can help them remain competitive in the evolving market.

Keywords: Consumer Behavior; E-Commerce; Local Businesses; Retail Sector.

1. Introduction

Due to the rapid growth of e-commerce and digital technologies, the retail sector in India has undergone a significant transformation over the past decade. India has emerged as one of the fastest growing digital markets globally, with over 880 million internet users and increasing smartphone penetration (Internet and Mobile Association of India [IAMAI], 2023). The widespread adoption of digital payment systems such as Unified Payments Interface (UPI), has further accelerated the shift from traditional money to online transactions, which enhances convenience and accessibility for consumers (Reserve Bank of India [RBI], 2023). As show in Table 1. [1]



Figure 1 Growth of E-commerce Market in India (2018–2026) (Source: Statista, 2024)

India's e-commerce market has expanded rapidly, reaching over USD 75 billion in 2023 and projected to surpass USD 150 billion by 2026, with an annual growth rate of approximately 18–20% (Statista, 2024). This growth is mainly due to the increasing income, urbanization and the expansion of logistics networks into Tier-2 and Tier-3 cities. [2] A significant share of online orders is now generated from smaller cities, that indicates that e-commerce is no longer limited to metropolitan areas but is increasingly penetrating to semi-urban regions (Forbes India, 2024). Major platforms such as Amazon, Flipkart, and Meesho have reshaped consumer expectations by offering competitive pricing, wider product variety, and doorstep delivery (Kumar & Singh, 2022). Local businesses, especially small retailers and Kirana stores, continues to play a vital role in India's economy, accounting for nearly 85–90% of total retail trade (India Brand Equity Foundation [IBEF], 2023). However, the growing preference for online shopping has led to concerns regarding declining footfall, reduced sales and long-term sustainability challenges (Deloitte, 2022). At the same time, initiatives such as the Open Network for Digital Commerce (ONDC) and increasing digital



adoption offers new opportunities to the local businesses for the integration of their businesses into the evolving retail ecosystem (Government of India, 2023). [2] In this context, the impact of e-commerce is particularly significant in emerging urban areas such as Patna, where traditional retail markets coexist with growing digital adoption. As a major commercial hub of Bihar, Patna has witnessed increased internet usage and changing consumer preferences toward online platforms, influencing local retail dynamics. Despite the growing importance of this issue, there is limited empirical research focusing specifically on the impact of e-commerce on local businesses in districts like Patna. Most existing studies focus on metropolitan areas, creating a gap in understanding the dynamics of smaller urban centers. Therefore, this study aims to examine the impact of e-commerce on local businesses with special reference to Patna district by examining both the consumer behavior and the experiences of the local shopkeepers. It focuses on analyzing consumer preferences, assessing challenges faced by small retailers and identifying strategies for their adaptation and growth using both primary and secondary data.

2. Literature Review

Verhoef, Kannan, and Inman (2015), in their study “*From Multi-Channel Retailing to Omni-Channel Retailing*”, discuss how the integration of online and offline retail channels has reshaped consumer purchasing behavior. [3] The study emphasizes that consumers now expect seamless shopping experiences across multiple platforms, leading to a decline in dependence on physical stores. The authors conclude that digital transformation is not merely an addition to retail but a fundamental structural shift that compels businesses to adapt to evolving consumer expectations. In the Indian context, the growth of e-commerce has been strongly supported by rising internet usage and digital infrastructure development. Reports by the Internet and Mobile Association of India (IAMAI, 2023) and the India Brand Equity Foundation (IBEF, 2023) indicate that the increasing number of internet users and the expansion of digital payment systems have facilitated widespread adoption of online shopping across urban

and rural areas. Additionally, the penetration of major e-commerce platforms such as Amazon and Flipkart into Tier-2 and Tier-3 cities has further expanded the reach of online retail, making it accessible to a broader population segment. However, several studies highlight the adverse impact of e-commerce on traditional retail businesses. Kumar, R., and Singh, A. (2022), in their study “*Impact of E-commerce on Traditional Retail*”, finds that small retailers and Kirana stores face intense competition from online platforms due to factors such as deep discounting, wider product availability, and aggressive promotional strategies. The study concludes that these competitive pressures have led to declining sales and reduced customer footfall for many local businesses and must adopt digital strategies to remain relevant. Similarly, Deloitte (2022), in its report “*Future of Retail in India*”, analyzes the changing retail environment due to digital transformation. The report highlights that the growth of e-commerce has resulted in a decline in customer visits to physical stores, while increasing expectations for faster delivery and competitive pricing. The study concludes that retailers who adopt an Omni channel approach (both online and offline) are more likely to succeed in the evolving market. [4] On the other hand, emerging literature suggests that e-commerce can also create opportunities for local businesses if it is leveraged effectively. Bansal and Kumar (2021) argue that digital adoption, including online delivery services and digital payment systems, can enhance the competitiveness of small retailers. The study concludes that businesses adopting a hybrid model (combining offline presence with online capabilities) are more likely to sustain and grow in the evolving market environment. Recent policy-oriented studies further highlight the role of government initiatives in supporting small retailers. Agarwal and Shweta (2025), in their study on “*The impact of the Open Network for Digital Commerce (ONDC)*”, evaluate the role of the Open Network for Digital Commerce (ONDC) a government initiative aimed at supporting small retailers. The study finds that ONDC helps to reduce the commission costs as low as 8–10% compared to 25–30% on major platforms and provides wider market access to small businesses.



However, it also highlights challenges such as limited awareness and infrastructural constraints which may hinder widespread adoption. [5] The study concludes that ONDC has the potential to create a more inclusive and competitive digital ecosystem. The Economic Survey of India (2024) reinforces this perspective by highlighting the role of digital public infrastructure in democratizing e-commerce. The report notes that a significant proportion of sellers onboarded onto digital platforms are small businesses, indicating increasing participation in the online marketplace. It concludes that initiatives like ONDC have the potential to level the playing field between large e-commerce firms and small retailers. Furthermore, recent industry reports such as Fortune India (2024) emphasize the evolving nature of consumer behavior in India's e-commerce sector. The report indicates that factors such as convenience, competitive pricing, and product variety continue to drive online shopping growth. However, it also points out emerging challenges, including profitability concerns for platforms and increased competition, which indirectly affect local businesses. Most existing studies focus on national-level trends or metropolitan areas, while limited research has been conducted at the district level, particularly in cities like Patna. This study aims to bridge this gap by providing a localized analysis.

3. Method

3.1. Research Methodology

This study adopts a descriptive and analytical research design to examine the impact of e-commerce on local businesses with special reference to Patna. The research aims to analyze the changes in consumer behavior, assess the challenges faced by the local retailers while also evaluating the overall impact of online shopping on small retailers and Kirana stores in a structured manner. [6]

3.2. Sources of Data

The study is based on both primary and secondary data.

- **Primary Data:** Primary data for the study was collected through a structured questionnaire (Google Forms) and informal interviews conducted with both the consumers and local shopkeepers in Patna.

The questionnaire included both close-ended and multiple-choice questions to ensure ease of response and effective data analysis. It was aimed to understand shopping preferences, purchasing habits, frequency of online purchases and attitudes toward online and offline shopping. Additionally, informal interviews with shopkeepers provided valuable insights into changes in sales, customer footfall, and the challenges faced due to the growing influence of e-commerce.

- **Secondary Data:** Secondary data was collected from credible sources such as government publications, academic journals, and industry reports, including those from institutions like the India Brand Equity Foundation.

3.3. Sampling Design

- **Sampling Method:** Convenience sampling method was used for data collection due to ease of access and time constraints.
- **Sample Size:** The study is based on responses collected from approximately 100 consumers and 10 shopkeepers.
- **Study Area:** The research focuses on respondents from **Patna district**, representing an emerging urban market with growing digital adoption.

3.3. Tools and Techniques of Analysis

The collected data was processed and analyzed using **simple statistical and qualitative techniques.**

- **Percentage analysis** was used to interpret the responses.
- **Graphical tools** such as pie charts, bar diagrams, and line graphs were utilized for better visualization of the findings.
- **Tabular representation** of the data to identify trends and relationships between consumer behavior and the performance of local businesses.
- **Qualitative analysis** of the shopkeeper's responses to identify common factors such as decline in sales, competition, pricing challenges and digital adaptation.

3.4. Limitations of the Study

- The study is limited to Patna district and may

not represent other regions.

- The sample size is relatively small, which may affect generalization of results.
- The study relies on respondents' opinions, which may involve some level of bias.
- Time and resource constraints may have limited the depth of the study.

4. Results and Discussion

4.1. Results

The analysis of primary data collected from consumers and shopkeepers in Patna reveals important insights into the growing influence of e-commerce on local businesses. The demographic profile of respondents shows that a majority belong to the younger age group of 18–25 (around 75%), followed by 26–35 years. Most respondents are students (76%) and reside in urban areas (80%) of Patna. This indicates that the findings largely reflect the behavior of digitally active consumers who are more inclined toward online platforms. [7] The findings show that 71% of respondent's shop online frequently or very frequently, indicating high adoption of e-commerce. At the same time, local retail stores continue to hold relevance, as many respondents still visit them occasionally. This indicates that although online shopping is gaining popularity, traditional retail has not been completely replaced. As shown in Figure 1.

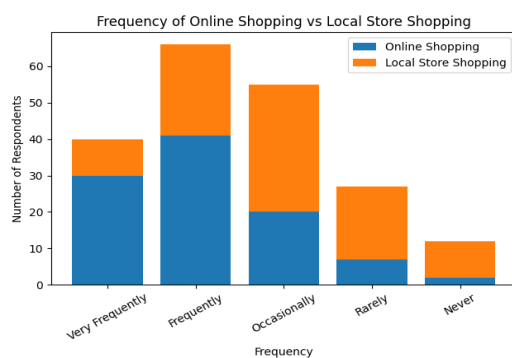


Figure 2 Frequency of Online Shopping and Local Stores Shopping (Source: Primary Data)

In terms of shopping preference, most respondents (57%) prefer a combination of both online and offline modes rather than relying exclusively on one. [14] This reflects the emergence of a hybrid shopping

pattern, where consumers choose between online and offline channels depending on factors such as convenience, urgency, and product type. As shown in Figure 2. [8]

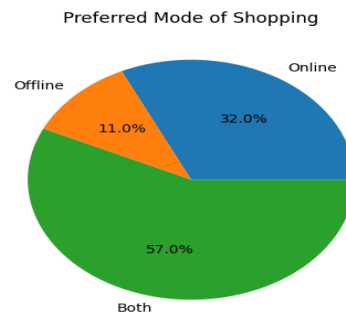


Figure 3 Preferred Mode of Shopping (Source: Primary Data)

The study further identifies key factors influencing the preference for online shopping. The main reasons for choosing online shopping includes convenience, availability of a wide range of products, competitive pricing, discounts, and home delivery services as cited by respondents. These factors have contributed to a shift in consumer behavior, making online platforms more attractive compared to traditional retail stores. As shown in Figure 3. [9]

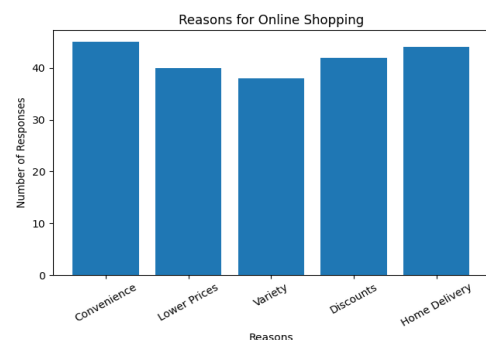


Figure 4 Reasons for Online Shopping (Source: Primary Data)

The impact of this shift is reflected in the reduction of customer footfall in local shops, as reported by the respondents. Many participants believe that e-commerce has reduced footfall in physical stores and increased competition for small retailers. This perception is supported by responses from



shopkeepers, who reported a noticeable decline in sales and customer visits over recent years. However, the findings also reveal that the impact of e-commerce varies across different types of businesses. For example, shopkeepers dealing in products that require physical inspection reported minimal impact, as customers still prefer to see and evaluate such products before making a purchase. [13] This suggests that the nature of goods plays a crucial role in determining the extent of e-commerce influence. In response to increasing competition, some local businesses have begun adopting digital practices such as accepting payments through Unified Payments Interface (UPI), Paytm, and card systems. A few have also introduced services like WhatsApp orders and home delivery to retain customers. However, not all retailers have adapted to these changes, with some continuing to rely solely on traditional methods. Secondary data supports the findings of this study by showing that e-commerce in India is growing rapidly due to increased internet usage and digital payments. Reports indicate that online shopping is expanding even in smaller cities like Patna. At the same time, government initiatives such as the Open Network for Digital Commerce (ONDC) are helping small retailers connect with online platforms and compete more effectively in the digital market. Overall, the results indicate that while e-commerce has significantly influenced consumer behavior and posed challenges for local businesses, it has not completely replaced traditional retail. Instead, it has changed the way consumers and retailers function, while highlighting the need for adaptation in a rapidly evolving digital marketplace. [10]

4.2. Discussion

The findings of this study indicate that e-commerce has brought a significant shift in consumer behavior and has influenced the functioning of local businesses in Patna. The growing use of online shopping indicates a wider shift toward digital consumption trends, particularly among younger and urban consumers. This shift is primarily driven by factors such as convenience, accessibility, and competitive pricing. One of the key observations of the study is that consumers are not completely abandoning local stores but instead they are adopting a hybrid shopping

behavior. This means that while e-commerce platforms are gaining popularity, traditional retail still holds relevance in Indian markets, particularly for immediate purchases and products that require physical inspection. Therefore, the relationship between online and offline retail is evolving into a complementary rather than purely competitive one. The study also highlights that the impact of e-commerce is not uniform across all types of businesses. Local retailers who are dealing in products that require visual inspection or personalized service are relatively less affected compared to those selling standardized goods. This indicates that the nature of the product plays a crucial role in determining the level of impact experienced by local businesses. From the perspective of shopkeepers, the major challenges that they faced due to e-commerce includes pricing pressure, increased competition and changing customer expectations. Online platforms often provide heavy discounts and a wider variety of products, making it difficult for small retailers to compete on price. As a result, many shopkeepers have experienced a decline in customer footfall and sales over time. At the same time, the study shows signs of gradual adaptation of digital tools among local businesses. The increasing use of digital payment systems such as Unified Payments Interface (UPI), along with the adoption of informal digital strategies like WhatsApp orders and home delivery. This indicates that some retailers are attempting to integrate technology into their business models. However, the extent of this adaptation varies depending on factors such as awareness, resources, and willingness to change. To strengthen this analysis, a comparative interpretation of shopkeeper responses can be visualized that indicates that the impact of e-commerce varies across businesses. The following graph shows that the nature of the product is a key factor in determining the extent of impact of e-commerce on local businesses. As shown in Figure 5. Additionally, the findings align with secondary data, which shows continuous growth of the e-commerce sector and increasing digital penetration across smaller cities. Government initiatives such as the Open Network for Digital Commerce aim to create a more inclusive digital ecosystem for small

retailers. However, challenges such as lack of awareness, limited technical knowledge, and pricing disadvantages continue to restrict the full participation of local businesses in the digital economy. Overall, the discussion highlights that e-commerce has a dual impact on local businesses. While it enhances consumer convenience and choice, it also creates competitive pressures for traditional retailers. The future sustainability of local businesses will depend on their ability to adapt to changing market conditions, adopt digital tools, and leverage their strengths such as personalized customer relationships and trust. [11]

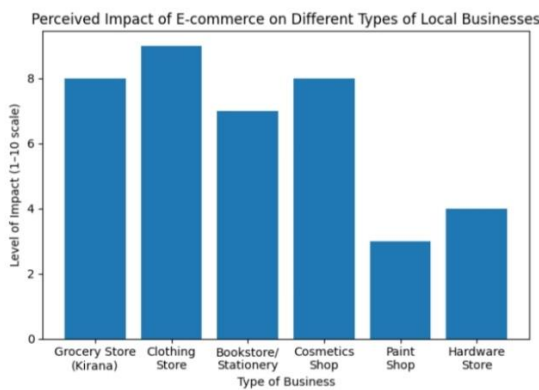


Figure 5 Perceived Impact of E-Commerce on Different Types of Local Businesses (Source: Shopkeeper Interviews, 2026)

Conclusion

The study concludes that e-commerce has become an integral part of today's modern retail system and is significantly influencing consumer buying behavior and the functioning of local businesses in Patna. With the increasing use of smartphones and internet services, consumers are gradually shifting towards online shopping due to its convenience, accessibility, and time-saving nature. This shift has brought a structural change in the retail environment and noticeable changes in traditional shopping patterns. While this transition has created new opportunities for consumers in terms of accessibility and choice, and has encouraged local businesses to improve and modernize their business practices, it has also placed significant pressure on traditional retailers as many retailers are facing challenges such as reduced

customer visits and increased competition from online platforms. However, the study also shows that local businesses continue to play an important role, especially in providing immediate availability of products and personalized customer service. An important observation of the study indicates that local businesses are not being entirely replaced but are undergoing a gradual transformation in response to changing market conditions and are slowly adapting to the changing environment. [12] The adoption of digital payment methods, basic online communication tools and improved customer service strategies indicates a willingness to adjust to new market conditions. This shows that traditional retail still has the potential to coexist with e-commerce. Another important insight from the study is that the impact of e-commerce is uneven and depends on various factors such as the nature of products and the ability of businesses to respond to competition. This suggests that the future of local retail does not lie in resisting change, but in adapting to it. The study also emphasizes that even small steps toward digital integration, such as accepting digital payments or improving customer engagement, can help local businesses remain relevant. At the same time, supportive policy measures and increased awareness can further strengthen their position in the evolving retail ecosystem. In conclusion, e-commerce should not be viewed only as a threat but as a transformative force that is reshaping the retail landscape. The long-term sustainability of local businesses will depend on their adaptability, willingness to innovate, and a balanced approach that combines traditional retail practices with digital elements can help local businesses remain competitive and sustainable in the evolving retail environment.

References

- [1]. Internet and Mobile Association of India (IAMAI). (2023). Digital India report.
- [2]. Reserve Bank of India (RBI). (2023). Report on digital payments in India.
- [3]. Statista. (2024). E-commerce market size in India.
- [4]. Forbes India. (2024). Growth of e-commerce in Tier-2 and Tier-3 cities.
- [5]. Kumar, R., & Singh, A. (2022). Impact of e-



- commerce on traditional retail. *Journal of Retail Studies*, 10(2), 45–60.
- [6]. India Brand Equity Foundation (IBEF). (2023). Retail industry in India.
- [7]. Deloitte. (2022). Future of retail in India.
- [8]. Government of India. (2023). Open Network for Digital Commerce (ONDC) initiative.
- [9]. Verhoef, P. C., Kannan, P. K., & Inman, J. J. (2015). From multi-channel retailing to omni-channel retailing. *Journal of Retailing*, 91(2), 174–181.
- [10]. India Brand Equity Foundation (IBEF). (2023). E-commerce industry report.
- [11]. Bansal, R., & Kumar, S. (2021). Digital adoption and competitiveness of small retailers. *International Journal of Business Studies*, 8(1), 22–30.
- [12]. Agarwal, H., & Shweta. (2025). Impact of ONDC on the competitiveness of small retailers in the Indian e-commerce sector.
- [13]. Government of India. (2024). Economic Survey of India 2023–24.
- [14]. Fortune India. (2024). Trends in India's e-commerce sector.