

Opportunities and Challenges of E-Commerce in India

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Abstract:

The goal of the study is to explore the status of E-Commerce in India. It also explores the challenges and opportunities of E-Commerce in India in the perspective of the global economy. This study is analysis is employed in this study to determine the objectives. This article has used the secondary materials extensively. This article mainly reveals that the speed of growth of E Commerce in India is satisfactory but lower than the developed nations like USA and China. This article find out some opportunities in India already adopted modern ICT's 5G technologies, available in broadband and so many local e-commerce businesses. But it still faces some problems like poor telecom infrastructure, no strict legal bans, lack of good attitude towards technologies and poor academic syllabus regarding e commerce. The article suggests that a proper step should be taken by the government and private agencies to implement ICT based academic syllabus, update legal frameworks, developing ICT infrastructure and creating awareness of the many people for effective implementation of e commerce for sustainable economic growth.

Keywords: E-Commerce, Internet, Opportunities, Challenges, Electronic Commerce.

Introduction

In recent years India has experienced a boom in internet and smartphone penetration. As of June 2023, the number of internet connections in India significantly increased to 895 million, driven by the 'Digital India' program. Out of the total internet connections, ~55% of connections were in urban areas, of which 97% of connections were wireless. The smartphone base has also increased

significantly and is expected to reach 1.1 billion by 2025. This has helped India's digital sector, and it is expected to reach US\$ 1 trillion by 2030. This rapid rise in internet users and smartphone penetration coupled with rising incomes has assisted the growth of India's e-commerce sector. India's e-commerce sector has transformed the way business is done in India and has opened various segments of

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commerce ranging from business-to-business (B2B), direct-to-consumer (D2C), consumer-to-consumer (C2C) and consumer-to-business (C2B). Major segments such as D2C and B2B have experienced immense growth in recent years. India's D2C market is expected to reach US\$ 60 billion by FY27. The overall e-commerce market is also expected to reach US\$ 350 billion by 2030 and will experience 21.5% growth in 2022 and reach US\$ 74.8 billion.

Indian E Commerce Market

The Indian online grocery market is estimated to reach US\$ 26.93 billion in 2027 from US\$ 3.95 billion in FY21, expanding at a CAGR of 33%. India's consumer digital economy is expected to become a US\$ 1 trillion market by 2030, growing from US\$ 537.5 billion in 2020, driven by the strong adoption of online services such as e-commerce and edtech in the country.

The Indian e-commerce industry is projected to reach US\$ 300 billion by 2030, experiencing significant growth. Third-party logistics providers are anticipated to manage approximately 17 billion shipments within the next seven years. The e-retail market in India is projected to surpass US\$ 160 billion by 2028. In 2023, the market is estimated to be valued between US\$ 57-60 billion, marking a significant increase from previous years. This growth equates to an annual addition of US\$ 8-12 billion since 2020.

The India Quick E-Commerce (Quick Commerce) market is poised for exponential growth, projected to reach US\$ 19,932.5 million driven by rising internet and smartphone penetration, convenience of quick delivery, and accelerated adoption during COVID-19, with diverse product categories and order value segments catering to evolving consumer preferences, and the domination of metropolitan cities presenting significant opportunities for retailers and key players to capitalize on the rapidly expanding market.

In FY23, the Gross Merchandise Value (GMV) of e-commerce reached US\$ 60 billion, increasing 22% over the previous year. In FY22, the GMV of e-commerce stood at US\$ 49 billion.

India's Business-to-Business (B2B) online marketplace would be a US\$ 200 billion opportunity by 2030. With over 821 million users, India was the second-largest internet market in the world with 117.6 billion UPI transactions in 2023. According to a Deloitte India Report, as India is moving towards becoming the third-largest consumer market, the country's online retail market size is expected to reach US\$ 325 billion by 2030, up from US\$ 70 billion in 2022, largely due to the rapid expansion of e-commerce in tier-2 and tier-3 cities. The e-commerce industry in India demonstrated remarkable resilience and diversification in fiscal year 2023 (FY23), recording a robust 26.2% jump in order volumes. This growth was primarily driven by a 31.1%

surge in demand from tier-1 cities, as work-from-office arrangements resumed following the pandemic-induced disruptions. The e-commerce market's share of Tier-3 cities grew from 34.2% in 2021 to 41.5% in 2022, shows data. The B2C E-commerce is expected to grow steadily over the forecast period, recording a CAGR of 8.68% during 2023-27. According to a recent report by RedSeer, India's e-B2B market is projected to reach a GMV of US\$ 100 billion by 2030.

According to Grant Thornton, e-commerce in India is expected to be worth US\$ 188 billion by 2025. Propelled by rising smartphone penetration, the launch of the 4G network and increasing consumer wealth, the Indian E-commerce market is expected to grow to US\$ 200 billion by 2026 from US\$ 38.5 billion in 2017. After China and the US, India had the third-largest online shopper base of 150 million in FY21 and is expected to be 350 million by FY26.

Indian consumers are increasingly adopting 5G smartphones even before the rollout of the next-gen mobile broadband technology in the country. Smartphone shipments reached 169 million in 2021 with 5G shipments registering a growth of 555% year-on-year over 2020. Indian consumers are increasingly adopting 5G smartphones even before the rollout of the next-gen mobile broadband technology in the country. Smartphone shipments reached 150 million units and 5G smartphone shipments crossed four million in 2020, driven by high consumer demand post-lockdown. According to a report published by IMAI and Kantar Research, India's internet users are expected to reach 900 million by 2025 from ~622 million internet users in 2020, increasing at a CAGR of 45% until 2025. For the first week of 2023 festive season, Indian e-commerce platforms generated sales worth US\$ 5.67 billion Gross Merchandise Value (GMV).

Chart 1: India E-Commerce Market (US\$ billion)

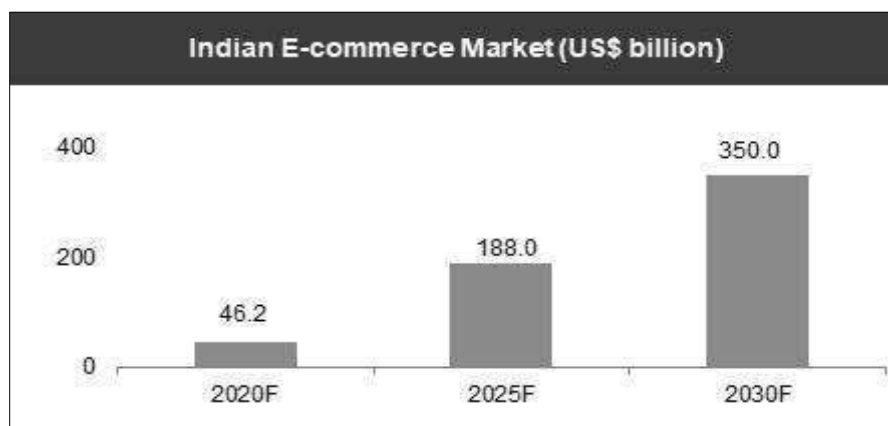


Chart 2: E-Commerce Business Model



Chart-3: India E-Commerce Market



Review of Literature

Diana Oblinger (2001) highlighted the increasing importance of education and lifelong learning in modern societies. She emphasized that this growing emphasis on learning has created a surge in demand for distance and open learning platforms. This trend is supported by advancements in technology, including the expanding availability of the Internet and the affordability of computing devices. Moreover, as energy requirements decrease and devices become more compact and efficient, the convenience and accessibility of e-learning are expected to make it even more popular in the coming years. This reflects a broader shift toward integrating technology into educational frameworks, making learning more accessible to a global audience.

Jackie Gilbert and Bette Ann Stead (2001) explored the exponential growth of electronic commerce (e-commerce) and the accompanying ethical challenges. Among these are security concerns related to online transactions, spamming, and websites that fail to disclose their commercial intent through advertising labels. They also discussed issues such as cyber squatting, which involves individuals or entities registering domain names to sell at inflated prices, and the ethical implications of online marketing to vulnerable groups like children. Additionally, they examined conflicts of interest in scenarios where manufacturers

bypass intermediaries by selling directly to consumers online and the challenges traditional businesses face in adapting to a digital marketplace—referred to metaphorically as "dinosaurs" struggling to survive in a rapidly evolving environment.

Andrew D. Mitchell (2001) analyzed the significant implications of e-commerce for global trade, using the General Agreement on Trade in Services (GATS) as a foundation. This agreement, under the purview of the World Trade Organization (WTO), is pivotal for regulating international e-commerce. Mitchell examined how e-commerce challenges traditional trade paradigms by creating new avenues for cross-border transactions, raising questions about governance, regulation, and equitable access in the global digital economy.

Nir B. Kshetri (2001) delved into the dual forces driving the rapid expansion of global e-commerce: globalization and technological revolutions in information and communication technologies (ICT). Globalization has facilitated the interconnection of markets, while ICT advancements have enabled faster and more efficient digital transactions. This synergy has accelerated the adoption and integration of e-commerce across industries and geographic regions, reshaping the global business landscape.

Prithviraj Das Gupta and Kasturi Sengupta (2002) examined the effects of

Internet infrastructure growth and economic reforms on India's insurance sector. They observed that liberalization policies opened the monopolistic market to foreign competition, encouraging innovation and consumer-centric models. While e-commerce initially focused on business-to-consumer (B2C) applications, the insurance industry offers a unique model that blends B2C and business-to-business (B2B) frameworks. This hybrid model demonstrates the versatility of e-commerce in addressing complex industry needs.

Koe and Sakir (2020) defined e-commerce as conducting business transactions digitally or via the Internet. This definition underscores the transformative impact of digital technologies on traditional business operations, enabling firms to expand their market reach, streamline processes, and foster innovation. Additionally, Guo et al. (2020) and Xiao et al. (2021) emphasized the critical role of customer trust in the success of e-commerce. Trust is a determining factor in whether customers choose to engage in online transactions, making it a cornerstone for building sustainable digital businesses. Together, these perspectives highlight the multifaceted nature of e-commerce and its profound influence on the modern economy.

Objectives of the Study

1. To study the problems and prospects of customers in the process of E-Commerce.
2. To create a culture of electronic payments and ecommerce usage that will support economic growth.

Research Methodology

Research methodology of the study is based on the secondary data in journals, books, various articles, websites and research papers have been used to study the eruption, conceptual frame work, key players, present trends, growth prospects, modes of payments, future prospects and challenges of E-Commerce.

Opportunities in E-Commerce

E-Commerce is presently an essential ingredient of India's trade facilitation policy. Since 1991, after economic reforms explicitly took place in India, the need to facilitate international trade both through policy and procedure reforms has become the foundation stone of India's trade And fiscal policies. Resultantly, a technological revolution accompanied by the wide spread use of the Internet, web technologies and their applications took place. E-Commerce Has changed and is still changing the way business is conducted around the world. There is a rising awareness among the businesses in India about the opportunities offered by e-commerce. E-commerce provides a new place for connecting with consumers and conducting transactions. Virtual stores operate round the clock.

Global Trade: E-business is one of the major factors in the globalization of business. Other factors include decreases in trade barriers, globalization of capital markets. Indian business has grown at a The global online trading platform market size was valued at USD 9.55 billion in 2023, and is projected to grow from USD 10.15 billion in 2024 to USD 16.71 billion by 2032, exhibiting a CAGR of 6.4% during the forecast period.

Virtual Businesses: Business firms now have the ability to become virtual E-Business. Virtual business uses electronic means to transact business as opposed to the traditional means of face to face transaction.

Lower search costs: The Internet brings low search costs and high price lucidity. E-business has proved to be highly cost effective for business concerns as it cuts down the cost of marketing, processing, inventory management, customer care, etc.

Round the Clock: Customers can do transactions for the product or enquiry about any product/services provided by a company anytime, anywhere from any location.

Economic Efficiency: Greater economic efficiency (lower cost) and more rapid exchange (high speed, accelerated, or real-time interaction) are achieved with the help of electronic business. The e-commerce market in India has grown by 34 percent in the last decade, was about

USD 600 Million in 2011-12 and is expected to touch USD 9 billion.

Challenges in E-Commerce

E-commerce faces a variety of challenges that hinder its growth and profitability, particularly in markets like India where infrastructural and behavioral issues remain prevalent.

- 1. High Return Rates:** One of the major challenges for e-commerce businesses is managing high product return rates. Despite improvements in customer satisfaction and product quality, reverse logistics—the process of handling product returns—continues to be a significant burden. This results in substantial financial losses for businesses due to the cost of shipping, handling, and restocking returned items. Additionally, frequent returns disrupt inventory management and can lead to customer dissatisfaction if not handled efficiently.
- 2. Consumer Preference for Cash on Delivery (COD):** Many consumers prefer cash on delivery (COD) over online payment methods such as credit/debit cards or internet banking due to a lack of trust in online transactions. While COD provides convenience, it poses risks for businesses, such as failed deliveries and lower profit margins due to increased logistics costs. COD also impacts cash flow management, creating operational inefficiencies.

3. Inefficiency of Payment Gateways:

Payment gateway failures are another pressing issue in e-commerce. Consumers often face transaction failures during the payment process, leading to frustration. Research shows that customers are less likely to reattempt a purchase after experiencing a payment failure, resulting in revenue loss for businesses. This inefficiency undermines consumer confidence in online shopping.

4. Poor Quality of Internet Connectivity:

India's internet penetration stands at approximately 19%, significantly lower than developed nations like the US and UK, where penetration rates exceed 90%. However, the main concern for e-commerce is not just access but the quality of connectivity. Slow internet speeds and frequent drops in connection deter users from engaging in e-commerce activities, particularly in rural and semi-urban areas where connectivity issues are more pronounced.

5. Prevalence of Feature Phones:

While smartphone usage is on the rise, a significant portion of India's population, especially in rural areas, still relies on feature phones. The limited functionality of these devices restricts users from accessing and engaging with e-commerce platforms, which are often optimized for smartphones. Although the transition

to smartphones is progressing steadily, the existing digital divide remains a challenge for widespread adoption.

6. Logistics and Supply Chain Challenges:

India's vast geography and diverse topography present logistical hurdles for e-commerce businesses. While urban centers and metropolitan areas have well-established supply chains, reaching remote and inaccessible regions is challenging. Consumers not only expect efficient purchasing processes but also demand swift delivery services, often within a few days. Meeting these expectations in rural and less accessible areas requires significant investment in infrastructure and logistics networks.

7. Digital Literacy and Accessibility:

India's personal computer (PC) penetration is extremely low, with only 3.5 PCs per 1,000 people, compared to 500 per 1,000 in the US. This disparity is compounded by poor internet literacy and limited access to high-quality infrastructure. A significant portion of the population still relies on PCs connected via telephone lines for internet access, with telephone penetration at just 2.1% of the population. Reaching over a billion people across 37 million households in rural and urban India remains a daunting task for e-commerce companies. Moreover, the high costs of PCs and internet

services act as barriers for many potential users.

8. Complex Tax Norms and Compliance Issues: India's tax system poses another challenge for e-commerce businesses, with varying rates and compliance requirements across different states. The complexity of navigating these regulations creates additional administrative burdens and increases costs for companies. Although steps have been taken to streamline tax processes, such as the introduction of the Goods and Services Tax (GST), further reforms are needed to simplify compliance and support the growth of the e-commerce sector.

The growth of e-commerce in India is impeded by a combination of infrastructural challenges, consumer behavior patterns, and regulatory complexities. Addressing these issues requires concerted efforts from businesses, policymakers, and technology providers to create a more conducive environment for digital commerce.

Fact Finding of the Study

1. Lack of consumers' confidence in E-commerce while shopping cross border online.
2. To create a culture of electronic payments and e-commerce usage that will support economic growth.
3. The E-commerce sector is maturity and number of serious players are entering the market.

4. Lack of knowledge and information about rights that provides legal a certainty.

Conclusion

In the present global scenario Emergence of new technologies especially mobile, in India has sparked a social change that's Difficult to quantify. While mobile, internet, and social media penetration and growth can be quantified; describing the changes in social values and lifestyles that have accompanied those trends is far more challenging. Virtual walls help customers scan barcodes for items on an electronic wall using their mobile phones and place orders with retailers. Thanks to rising internet penetration, the gross number of online users in India now exceeds the number of people who have compiled primary education. This shift emphasis the increasing relevance of India's digital economy. With India's GDP growth pegged at 6.4% by the International Monetary fund and the World Bank, it is expected to grow rapidly. The India e-Commerce industry has access to funds from within the country and international investors.

References

- Aghamohammadi, S. A. (2014). Auditing in the e-commerce era. *Advances in Economics and Business Management, 1*, 1–6.
- Bajaj, K. K., & Nag, D. (2012). *E-commerce: The cutting edge of*

- business* (2nd ed.). Tata McGraw-Hill Education Private Limited.
- Broucek, V., & Turner, P. (2004). Intrusion detection: Issues and challenges in evidence acquisition. *International Review of Law, Computers & Technology*, 18(2), 149–164.
 - Choi, Y. J., & Suh, C. S. (2005). The death of physical distance: An economic analysis of the emergence of electronic marketplaces. *Journal of Economic Perspectives*, 19(4), 597–614.
 - Dasgupta, P., & Sengupta, K. (2002). E-commerce in the Indian insurance industry. *Electronic Commerce Research*, 2(1), 43–60.
 - Kaur, E. H., & Kaur, D. (2015). E-commerce in India: Challenges and prospects. *International Journal of Engineering and Technology*, 1(2), 36–40.
 - Kotb, A., & Roberts, C. (2011). The impact of e-business on the audit process: An investigation of the factors leading to change. *International Journal of Auditing*, 15(2), 150–175.
 - Mitchell, A. D. (2001). Towards capability: The future of e-commerce within the global trading system. *Journal of International Economic Law*, 4(3), 683–723.
 - Oblinger, D. (2001). Will e-business shape the future of open and distance learning? *Open Learning*, 16(1), 9–25.
 - Rahman, M., Saha, N. K., Sarker, M. N. I., Sultana, A., & Prodhan, A. S. (2017). Problems and prospects of electronic banking in Bangladesh: A case study on Dutch-Bangla Bank Limited. *American Journal of Operations Management and Information Systems*, 2(1), 42–53.
 - Sorkin, D. E. (2001). Payment methods for consumer-to-consumer online transactions. *Journal of Payment Systems*, 12(1), 45–60.
 - United Nations Conference on Trade and Development. (2004). *E-commerce and development report 2004*. Geneva, Switzerland: United Nations.
 - United Nations Conference on Trade and Development. (2015). *Information economy report 2015: Unlocking the potential of e-commerce for developing countries*. New York and Geneva: United Nations.
 - Wenninger, J. (2000). The emerging role of banks in e-commerce. *Current Issues in Economics and Finance*, 6(3), 1–6.
 - Werthner, H., & Ricci, F. (2004). E-commerce and tourism. *Communications of the ACM*, 47(12), 101–105.