



Role and challenges of e-commerce in the economic development of India

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Abstract

E-commerce plays a significant role in the marketplace, both nationally and internationally. With more people making purchases online rather than at traditional retail stores, it is becoming a fast-growing area of business and one to strongly consider as you plan your own career. E-commerce is a huge part of the economy and is dynamic to businesses that sell their products or services online. Ecommerce gives businesses the ability to reach more customers than traditional retail reaches. The Indian e-commerce industry has been on an upward growth trajectory and is expected to beat the US to become the second-largest e-commerce market in the world by 2034. In this paper examines the growth and Role of electronic commerce in India, as well as the various Benefits, limitations, types of e-commerce, E-commerce opportunities and challenges for Industries.

Keywords: e-commerce, B2B, B2C, C2C, C2A, B2A, C2A, CAGR, GDP, ONDC

Introduction

Today, online shopping is a reality in India. The market place is flooded with several e-commerce options for shoppers to choose from. In the recent past, the growth of e-commerce industry in India has been phenomenal as more shoppers have started discovering the benefits of using this platform. WE are living in e-century. The Internet and information and communications technologies (ICT) are central to economic growth and productivity. Internet-based technologies and networks can increase productivity, decrease costs and open new market opportunities.

Now-a-days, using the Internet and email to conduct business is not uncommon. However, lack of technical and management skills in Information and Communications Technology is a barrier. There are a wide variety of resources available to help you to improve your e-commerce skills. Simply, decide what skills you need and identify the appropriate resources to help you to build those skills. The skills that may be required range from basic abilities, like word processing and Internet navigation, to more complex capabilities such as designing and building websites and database management.

Current estimates indicate that India has more than 90 million online shoppers. They are more likely to be male than female, though this imbalance is changing and expected to change further. In some traditional families, women can be discouraged from accessing the internet as it may be seen as a source of “negative influences”.

While current internet users are generally younger (aged 25 to 34), and found in metropolitan and tier1 cities, this too is changing. A consumer market of women in Tier 2 and 3 cities is emerging as they discover a range of products that had previously been unavailable in their area. Nykaa, the beauty and cosmetics retailer, has attracted a large number of women to its online platform on this basis.

The online shopper in India continues to be more urban, better educated and more modern in their tastes than the average consumer. They are part of India’s rapidly growing

middle class. These factors can be seen influencing the growing appetite for international brands and better-quality foreign and imported products among digitally connected shoppers.

While consumer electronics and fashion apparel are the major e-commerce retail categories in the market, food and grocery, baby products, personal care and home furnishings are significant categories that are also growing quickly.

Review of Literature

Mallikarjun Rao (2006) ^[10] while studying the “Factors affecting growth of e-commerce in India” concluded that there was a close association between online purchase and availability of information about the vendors, hence, suggested that more information will increase respondents comfort level for online trade. Gnana (2006) ^[5] concluded that today e-commerce as an alternative/additional mode is being accepted by many businesses, but the rate of adoption of ecommerce is varying in different industries, for instance, a traditional industry like automotive industry in India is yet to adopt e-commerce in a big way.

Ming-Hsien, Chandrees, Binshan, Hung-Yi (2009) ^[11] opined that consumers will trust the website if they feel the site keeps a good ecommerce ethical performance, such as, practicing the privacy policies and stating it explicitly, describing products or services in an appropriate way. While analysing the Trends in e-commerce, Rekha (2010) ^[18] stated that e-buyers need to adapt to a safe mode of on-line payment and use alternative modes of payments, such as, virtual credit cards that involve less risk in diversifying the information for payment.

Rashad, Abhinav, Wan, Mahan & Shahriar, (2011) ^[16] studied the “Factors influencing perception of consumers in e-business, Gaining trust in e-commerce: With reference to the Technology Acceptance Model (TAM)” and found that the perception of the consumers influencing their decisions have been addressed in order to understand why the people want to use an online service for perception or discard their

purchase. Mustafa (2011) studied the determinants of e-commerce customer satisfaction, trust and loyalty in Saudi Arabia and found that in B2C E-commerce customer loyalty in Saudi Arabia is strongly influenced by customer satisfaction but weakly influenced by customer trust. Khushbu (2012) ^[9] found that social media platforms do have an impact on business and marketing. In a study on "Perceptions towards Online Shopping": An Empirical Study of Indian Consumers", Zia (2012) ^[24] opined that the perception of online shoppers is independent of their age and gender. In a study on "Perceptions towards Online Shopping": An Empirical Study of Indian Consumers, Muhammed (2013) ^[12] concluded that very poor positive perceptions about Bosnian companies' web presences and their online activities. Namita and Preeti (2013) ^[14] concluded that online consumer behaviour using factor analysis and the reasons for using online shopping like, trust, information about the product and services, convenience, effortless shopping. You-Qinghe (2014) ^[23] inferred that online marketers and retailers have to develop appropriate market strategies, make technological advancements and make the correct marketing decisions in order to retain current customers and attract new customers. While studying "Effectiveness of Digital Marketing in the Challenging Age: An Empirical Study", Afrina (2015) ^[1] concluded that companies should create innovative customer experiences and specific strategies for media to identify the best path for driving up digital marketing performance. Sumanjeet (2010) ^[21] examined the state of e-commerce laws in India: A review of Information Technology Act and expressed that there are many prominent issues which are critical for the success of e-commerce that the present IT Act is weak on several fronts and in the absence of sound legal framework of e-commerce cannot create a success story in India. Indian Government must increase the safe and secure business environment on cyberspace and must protect the interests of Indian software industries, BPO sector and other stakeholders. In a study on "Antecedents of Online Shopping Behavior in India": An Examination, Rakesh and Khare (2011) ^[8] examined that a survey of 325 students studying in Indian universities was conducted. The results indicate that Indian students' intention to buying online is influenced by utilitarian value, attitude toward online shopping, availability of information and hedonic values. Male students have a more positive attitude toward online shopping compared to female students. Gehrt, Rajan, Shainesh, Czerwinski & O'Brien, (2012) ^[4] studied the "Emergence of online shopping in India: Shopping orientation segments" and surveys were collected from 536 consumer panel members. Three segments were identified: Value singularity, quality at any price and reputation/recreation. The quality at any price and reputation/recreation segments was playing the major role in online purchase decision in India. Rakesh & Khare, (2012) ^[15] analysed the "Impact of promotions and value consciousness in online shopping behaviour in India" and the study observed that online shopping continues to attract investment from retailers and offers or other promotional methods of e-retailers are not influenced by Indian consumers. Promotions may not be essentially viewed by consumers as an important attribute while purchasing products or services online.

Objective of the research

The main objective of this study is to identify big challenges in E-commerce in India. The present study specific objectives as:

1. To understand the concept and definition of E-commerce.
2. To understand the Differences between E-Commerce and Traditional Commerce.
3. To study the Benefits and limitations of E-commerce.
4. To examine the Growth and Role of E-commerce in Indian economy.
5. To analyses various E-commerce Strategies, opportunities and challenges for Industries.

Research Methodology

This study is completely based on secondary data. This study refers to the secondary data because the secondary data is descriptive in nature and it is the suitable ways to collect the data. This is a macro study; therefore the primary data was not possible to collect from all over India. It is also one of the biggest reasons to choose the secondary data. I have collected data from various sources like economy survey, National survey office (NSSO), Media Reports, Press Releases, DPIIT publication, Press Information Bureau as well as from various articles related to E-commerce.

What is e-commerce?

E-Commerce or Electronics Commerce is a methodology of modern business which addresses the need of business organizations, vendors and customers to reduce cost and improve the quality of goods and services while increasing the speed of delivery. E-commerce refers to paperless exchange of business information using following ways.

- Electronic Data Exchange (EDI)
- Electronic Mail (e-mail)
- Electronic Bulletin Boards
- Electronic Fund Transfer (EFT)
- Other Network-based technologies

The concept of e-commerce is all about using the internet to do business better and faster.

E-commerce is the process of buying and selling over the Internet, or conducting any transaction involving the transfer of ownership or rights to use goods or services through a computer-mediated network without using any paper document.

Electronic commerce or e-commerce refers to a wide range of online business activities for products and services. It also pertains to "any form of business transaction in which the parties interact electronically rather than by physical exchanges or direct physical contact."

Business transacted through the use of computers, telephones, fax machines, barcode readers, credit cards, automated teller machines (ATM) or other electronic appliances without the exchange of paper-based documents. It includes procurement, order entry, transaction processing, payment authentication, inventory control, and customer support.

E-commerce is subdivided into three categories: business to business or B2B (Cisco), business to consumer or B2C (Amazon), and consumer to consumer or C2C (eBay) also called electronic commerce.

E-commerce the phrase is used to describe business that is

conducted over the Internet using any of the applications that rely on the Internet, such as e-mail, instant messaging, shopping carts, Web services, UDDI, FTP, and EDI, among others. E-commerce, also known as electronic commerce, is the buying and selling of goods or services electronically by the internet. It can also refer to other online activities like online auctions, ticketing and banking. E-commerce is an essential part of many businesses that rely on the sale of physical products or services online.

E-Commerce Definitions

The definition of e-commerce includes business activities that are business-to-business (B2B), business-to-consumer (B2C), extended enterprise computing (also known as "newly emerging value chains"), d-commerce, and m-commerce. Ecommerce is simply a part e-business, more specifically, the trading aspect of ebusiness. Although there are many definitions and explanations of e-commerce, the following definition provides a clear distinction. There are many definitions and understanding about E-Commerce. They are as follows:

1. **According to the editor-in-chief of International Journal of Electronic Commerce, Vladimir Zwass,** ‘Electronic commerce is sharing business information, maintaining business relationships and conducting business transactions by means of telecommunications networks’.

2. Electronic Commerce is where business transactions take place via telecommunications networks, especially the Internet – E. Turban, J. Lee, D. King and H.M. Chung,
3. Electronic commerce is about doing business electronically – P. Timmers
4. Electronic commerce or e-commerce refers to a wide range of online business activities for products and services – Anita Rosen
5. It pertains to “any form of business transaction in which the parties interact electronically rather than by physical exchanges or direct physical contact.” – MK, Euro Info Correspondence Centre (Belgrade, Serbia),
6. E-commerce is usually associated with buying and selling over the Internet, or conducting any transaction involving the transfer of ownership or rights to use goods or services through a computer-mediated network. – Thomas L. Mesenbourg
7. A more complete definition is: E-commerce is the use of electronic communications and digital information processing technology in business transactions to create, transform, and redefine relationships for value creation between or among organizations, and between organizations and individuals. – Emmanuel Lallana, Rudy Quimbo, Zorayda Ruth Andam, ePrimer

Table 1: Differences between E-Commerce and Traditional Commerce

Point of Difference	E-commerce	Traditional Commerce
Cost Effective	E-commerce is cost effective. The cost incurred on middlemen is eliminated as there is direct link between the business and the customers. The total overhead cost required to run e-business is comparatively less. Running an e-business require only a head office. Overhead cost can be eliminated by hosting a website	Cost has to be incurred for the role of middlemen to sell the company’s products. The total overhead cost is more. Running a traditional business require a head office with several branches to cater to the needs of customers situated in different places.
Time	A lot of valuable time for both the consumers and business is saved. A product can be ordered and the transaction can be completed in few minutes through internet.	It takes a lot of time to complete a transaction.
Convenience	It provides convenience to both customers and business. It provides better connectivity for its prospective and potential customers as the website can be accessed virtually from anywhere, anytime through internet. It is not necessary to move away from their work place or home to locate and purchase a desired product.	It is not so convenient method as that of E-commerce. Customers have to move away from their home or work place to locate and purchase a desired product.
Accessibility	It is easy to expand the size of the market from regional to international level. By hosting a website, a business can penetrate into global market. It is quite easy to attract customers from global markets at a marginal cost.	It may not be easy to expand the size of the market from regional to national level. Business organizations have to incur a lot of expenses to enter international market.
Introduction of new product	It is easy to introduce a product on the website and get the immediate feedback of the customers. Based on the response, the products can be redefined and modified for a successful launch	It takes a lot of time and money to introduce a new product and analyse the response of the customers. Initially, cost has to be incurred to carry out pilot surveys to understand the taste of the customers.
Profit	It helps the organization to enjoy greater profits by increasing sales, cutting cost and streamlining operating processes	The cost incurred on the middlemen, overhead, inventory and limited sales pulls down the profit in traditional commerce.
Physical Inspection	It does not allow physical inspection of goods.	It is possible to physically inspect goods before the purchase.
Product suitability	It not suitable for perishable goods and high value items such as jewellery and antiques. It is mostly suitable for purchasing tickets, books, music and software	It is suitable for perishables and ‘touch and feel’ items.
Human resources	It requires technically qualified staff with an aptitude to update themselves in the ever changing world. It has difficulty in recruiting and retaining talented people.	It does not have such problems associated with human resources
Customer interaction	The interaction between the business and the customer is screen-to-face.	The interaction between the business and the consumer is a face-to-face.
Fraud	Lot of cyber frauds take place in ecommerce transaction. People generally fear to give credit card information. Lack of physical	Fraud in traditional commerce is comparatively less as there is personal interaction between the

	presence in markets and unclear legal issues give loopholes for frauds to take place in e-business transactions.	buyer and the seller.
Method of Communication	Communication can be done in asynchronous way. Electronics system automatically handles when to pass communication to required person or do the transactions.	Communication is done in synchronous way. Manual intervention is required for each communication or transaction.

Types of e-commerce

There are six different kinds of e-commerce. These include:

1. **Business-to-consumer (B2C):** This is the most common kind of e-commerce. When shoppers get online and buy something from an online store, they are involved in business-to-consumer e-commerce.
2. **Business-to-business (B2B):** Many businesses sell raw goods or parts through e-commerce to other companies that will then use those materials to create their products.
3. **Consumer-to-consumer (C2C):** This kind of e-commerce refers to when consumers sell to other consumers. Sites like eBay and Craigslist are examples of this kind of e-commerce.
4. **Consumer-to-business (C2B):** This type of e-commerce is when consumers sell their products or services to businesses.
5. **Business-to-administration (B2A):** This category of e-commerce refers to transactions between businesses and public administration, which includes areas such as social security, employment and legal.
6. **Consumer-to-administration (C2A):** This includes transactions between consumers and public administration, where consumers pay for services like taxes and legal document preparation.

Benefits of e-commerce

There are many advantages of e-commerce. Some of these advantages are:

1. **Increasing reach:** E-commerce allows small businesses to reach a broad range of consumers. It allows all sellers to be a part of a global marketplace.
2. **More jobs:** As these small e-commerce businesses grow, they employ more people.
3. **Lower operational costs:** E-commerce also helps small businesses to grow because it can have fewer operational costs. Without having to pay rent on a shop, many small business owners can afford to run their e-commerce shops.
4. **Easier and more convenient shopping:** One of the major advantages of e-commerce is that it allows customers to quickly find and get what they're looking to buy. It also offers consumers the convenience of not needing to leave their homes to get what they need, which saves time.
5. **Allows comparison shopping.** Consumers also gain power through the experience of online shopping. They can research and compare products and companies easily. Websites can offer things like detailed product descriptions and consumer reviews that can help consumers make decisions wisely.
6. **24 X 7 access:** Enables customers to shop or conduct other transactions 24 hours a day, all year round from almost any location. Businesses can be contacted by or contact customers or suppliers at any time.
7. **Range of products:** Customers not only have a whole range of products that they can choose from and

8. **No physical boundary:** Customers can 'shop' around the world and conduct comparisons either directly by visiting different sites, or by visiting a single site where prices are aggregated from a number of providers and compared. Electronic commerce can also make products and services available in remote areas.
9. **On – line tracking facility:** This can range from the immediate delivery of digitized or electronic goods such as software or audio-visual files by downloading via the Internet, to the on-line tracking of the progress of packages being delivered by mail or courier.
10. **Substantial discounts:** An environment of competition where substantial discounts can be found or value added, as different retailers view for customers. It also allows many individual customers to aggregate their orders together into a single order presented to wholesalers or manufacturers and obtain a more competitive price.
11. **Low handling cost:** A business can reduce the costs of handling sales inquiries, providing price quotes, and determining product availability by using electronic commerce in its sales support and order-taking processes.
12. **Easy audit:** Electronic payments can be easier to audit and monitor than payments made by cheque, providing protection against fraud and theft losses.

Limitations and disadvantages of E-Commerce

E-commerce has become one of the most popular mediums of transactions in recent years. While it does offer quite a lot of benefits to both buyers and sellers, it is not totally free from disadvantages. Most of the disadvantages of e-commerce stem from the newness and rapidly developing pace of the underlying technologies. Some of the key disadvantages of are given below:

1. **Security:** One of the main limitations of E-commerce is security. In most cases, people are hesitant to provide their personal and financial details in spite of advanced data encryption security systems in place. Moreover, there are some websites that do not have the capability and features installed to authenticate transactions. As such, there are instances of fraudulent activities. The fear of providing financial information like credit card details hinders the growth of E-commerce.
2. **Lack of Privacy:** To some extent, the privacy of a customer is compromised in E-commerce. You need to provide your personal details, such as an address, telephone number, and so on to the seller. There are still lots of sites that do not have the advanced technology to protect sensitive information. Moreover, there are also sites that illegally collect consumer statistics without permission. This is one reason why people get skeptical while using E-commerce.
3. **Tax Issue:** In the case of different geographical locations, sales tax becomes an issue. Many a time

sellers have faced problems in the computation of sales tax. Moreover, physical stores have a risk of losing business if online transactions are exempted from taxation.

4. **Fear:** In spite of the popularity, there still resides an element of doubt in the mind of people when it comes to online shopping. This is because the customer cannot physically examine the product and is not sure about the features and attributes. This is why a lot of people prefer shopping from physical stores.
5. **Product Suitability:** As already mentioned, it is not possible for people to physically examine the product in E-commerce. In many cases, the original product may not match the picture or specifications in the E-commerce site. This absence of 'touch and feel' creates a discouraging effect.
6. **Cultural Obstacles:** As the process of E-commerce encompasses customers across the globe, the habits, traditions, and culture differ. There may also be linguistic problems and all these may lead to issues between the seller and buyer.
7. **High Labour Cost:** In order to get the whole E-commerce and delivery process right, a specialized workforce is required. To get all these in the right shape, companies have to shed a good amount of money and employ a talented pool of people.
8. **Legal Issues:** A lot of legal compliances and cyber laws need to be taken care of in an E-commerce business. These regulations may vary from country to country. All these reasons deter businesses from going electronic.
9. **Technical Limitations:** E-commerce requires advanced technology platforms for better performance. Some limitations, such as lack of proper domain, network and software issues, and so on can affect the seamless performance of an E-commerce site.
10. **Huge Technological Cost:** Last but not the least; a lot of money needs to be invested to be built up the technical infrastructure needed to run an E-commerce business. Moreover, they need to be upgraded based to keep abreast with the changing technology.
11. **Delivery Guarantee:** Many people fear that their product might not be shipped or the website might be a fraud. Businesses need to work to build customer trust with reviews, testimonials, etc. to add more value to their website.
12. **Limited face-to-face interaction with customers:** One of the most disadvantages of e-commerce is that business owners have more limited relationships with their clients. Since their clients are typically on the other end of a computer, it can be more difficult to build meaningful relationships, something that is important to many business owners and customers.
13. **Limited bandwidth:** Bandwidth and reliability can vary from country to country, so it can be challenging if you are targeting or wanting to work in a particular region.

Growth of E-commerce in India

According to Niti Aayog CEO Amitabh Kant, E-commerce has revolutionized the retail sector in India and will play a major role in the country's growth story going forward. India is currently growing at over 7% and if the country has to grow at 9%, then e-commerce market will have to play a

major role. The retail trade of India is bound to expand in coming years and its imperative upon traders to adopt technology and digitization. According to a report by Deloitte India and Retail Association of India, India's e-commerce market will touch \$84 billion in 2021 from \$24 billion in 2017 on account of a healthy growth in the organized retail sector.

E-commerce made up about 0.76 percent of India's GDP in 2017. This was estimated to reach 0.9 percent in 2018. By being the second largest online market in the world after China, the country's rapid growth in the digital sphere, specifically following demonetization in November 2016 and the rise of the mobile payments market facilitates the opportunity for growth in the years to follow. E-commerce has transformed the way business is done in India. The Indian E-commerce market is expected to grow to US\$ 200 billion by 2026 from US\$ 38.5 billion as of 2017. Much of the growth for the industry has been triggered by an increase in internet and smartphone penetration. As of September 2020, the number of internet connections in India significantly increased to 776.45 million, driven by the 'Digital India' programme. Out of the total internet connections, 61% connections were in urban areas, of which 97% connections were wireless.

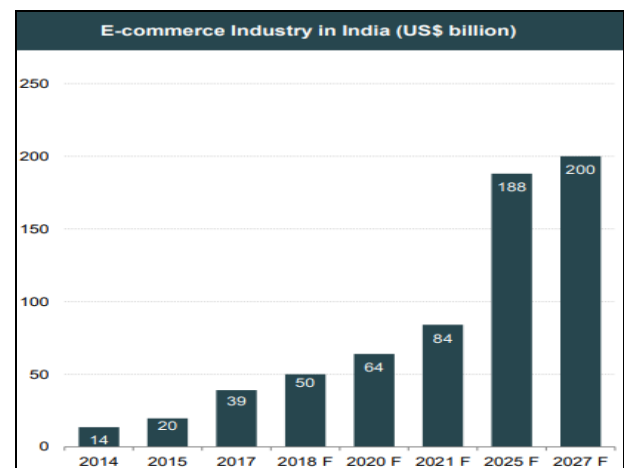


Fig 1

The Indian E-commerce industry has been on an upward growth trajectory and is expected to surpass the US to become the second largest E-commerce market in the world by 2034. India e-commerce sector will reach US\$99 billion by 2024 from US\$ 30 billion in 2019, expanding at a 27% CAGR, with grocery and fashion/apparel likely to be the key drivers of incremental growth. According to Forrester Research, Indian e-commerce sales rose by 7-8% in 2020. The Indian online grocery market is estimated to reach US\$ 18.2 billion in 2024 from US \$1.9 billion in 2019, expanding at a CAGR of 57%.

As most Indians have started shopping online rather than stepping outside their houses, the Indian e-commerce sector witnessed an increase. India's e-commerce festive sale season from October 15 to November 15 in 2020 recorded Rs. 58,000 crore (US\$ 8.3 billion) worth of gross sales for brands and sellers, up 65% from Rs. 35,000 crore (US\$ 5 billion) last year.

According to Bain & Company report, India's social commerce gross merchandise value (GMV) stood at US\$ 2 billion in 2020. By 2025, it is expected to reach US\$ 20 billion, with a potentially monumental jump to US\$ 70

billion by 2030, owing to high mobile usage. Huge investments from global players such as Facebook which is investing in Reliance Jio are being recorded in the e-commerce market. Google also reported its first investment worth US\$ 4.5 billion in Jio Platforms. This deal was followed by the purchase of Future Group by Reliance Retail, expanding the presence of the Ambani Group in the e-commerce space.

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The Government of India's policies and regulatory frameworks such as 100% Foreign Direct Investment (FDI) in B2B E-commerce and 100% FDI under automatic route under the marketplace model of B2C E-commerce are expected to further propel growth in the sector. As per the new FDI policy, online entities through foreign investment cannot offer the products which are sold by retailers in which they hold equity stake.

As of February 15, 2020, the Government eMarketplace (GeM), listed 1,071,747 sellers and service providers across over 13,899 product and 176 service categories. For the financial year 2020-21, government procurement from micro and small enterprises was worth Rs. 23,424 crore (US\$ 3.2 billion).

Through its Digital India campaign, the Government of India is aiming to create a trillion-dollar online economy by 2025. It has formed a new steering committee that will look after the development of a government-based e-commerce platform. The new committee, set up by the Commerce Ministry, will provide oversight on the policy for the Open Network for Digital Commerce (ONDC), which is an e-commerce platform that the government is backing for the development. The ONDC will serve as the infrastructure for setting up the final storefront, which will be similar to Flipkart and Amazon.

Factors contributing to the growth of India's e-commerce

There are a number of key factors contributing to the growth of India's e-commerce industry. Internet usage continues to rise. India has the world's lowest overall mobile data costs and 97 per cent of online traffic is from mobile devices. The current average cost of a gigabyte of mobile data in India is around US\$0.26, which may also help to explain why Indians consume more mobile data than any other nationality. This cost is little more than a tenth of the cost in Australia, which is already well below the worldwide average. The entry of telecommunications company Reliance Jio to the market in 2016 is said to have added 100 million new users in its first six months alone. Smartphone penetration is also high, at around 300 million users and growing.

The desire for convenience is also helping create growth in the sector. Indian consumers, particularly high-frequency premium shoppers, are attracted to the ease of shopping from home. Roads can often be congested and retail environments are not always of the highest quality. Furthermore, the range of products available online, both local and imported, is extensive and shows availability.

Low-cost delivery options also help boost the attractiveness of shopping online.

Online retailers are also developing marketing campaigns to attract more price-sensitive shoppers. Shopping festivals such as the Big Billion Days sale from Flipkart and the Great Indian Festival at Amazon are high-profile events that attract a lot of publicity as well as new online consumers.

Strategies for the E-commerce Boom in India

E-commerce in India has practiced rapid growth driven by the millennial' purchasing power, impact of the internet leading to development of diverse mobile applications and websites, and the much-needed infrastructure. Mobile penetration accounts for a vast market in India, making it more convenient for consumers to shop for a wide variety of retail products. Other factors enabling growth of the industry include:

1. **Ease of access:** Growing internet usage at affordable rates and rise of smartphones lead to easier access. This connectivity enables other services like booking train/hotel/cab/movie tickets; mobile and electric bill payments, etc.
2. **Connecting the financial system:** People now use e-banking and other schemes. Soon, digitization of the financial system will become the norm.
3. **Global reach of homegrown companies:** Indian startups in e-commerce industry are utilizing global channels, thereby increasing their customer base and broadening the scope of growth.
4. **Attracting repeaters:** A strong focus on customer service is the prime reason that attracts and retains buyers. Cash on delivery (COD), reasonable pricing, deals & discounts, faster delivery turnarounds with zero prices, and reverse logistics are some of the drivers transforming the industry into a booming sector.
5. **Leveraging technology for innovation:** Information sharing between all stakeholders in the supply chain is very crucial. The integration between various supply chain aspects will help the e-commerce company have an edge over the competition. Some of the initiatives may include the use of bar-coding in logistics systems: EDI for communicating between partners; visibility into the operations; tracking and tracing of the goods at any given point.
6. **Analytics:** Capturing real-time data and understanding purchasing dynamics form the crux of this industry. The buying preferences, tastes, and demographics of a customer can be addressed by gathering customer data. The volume and complexity of data require analytics to derive customer insights, optimize channels, and calculate ROI.

E-commerce Challenges in India

E-commerce shows huge potential; but certain challenges need to be addressed. Some of the pressures that constrain growth include:

1. **Logistics:** Logistics, a key element in providing customer service, is one of the major challenges confronting the e-commerce players. Local logistics firms in India are generally not up to meeting the requirements of e-tailers; hence e-commerce firms have to make huge investments to build their own logistics.
2. **Infrastructure:** E-commerce players also need to address the infrastructure needed to overcome payment

problems, build offline presence, implement more push-marketing, manage price-sensitive customers, and compete on a global turf. The payment gateway infrastructure is still at the nascent stage. The merchants have yet to make amendments on the mobile front. As an example, one of the leading e-commerce players in India could not handle the requests of its customers on Big Billion Days' sale program due to unorganized delivery framework.

3. **Competitive Analysis:** E-commerce companies have to focus on issues pertaining to rapid additions of customer segments and product portfolios. Information should be collected related to market intelligence on growth, size and share, and managing multiple customer engagement platforms in order to expand into new geographies, brands & products; while simultaneously controlling a very competitive pricing environment.
4. **Digitization of Available Networks:** At present, social media plays a significant role in the life of an internet surfer/customer. Thus companies have to provide a rich experience by managing erratic demands and inconsistent brand experience across platforms, in addition to handling time-to-market efforts for new launches, applications, and websites.
5. **Mode of Transactions:** Concerns about security, privacy, and tracking fraudulent purchases are some external forces that impact a business. Other factors like cross-border tax, back-end service tax, and regulatory issues can have serious implications for e-commerce companies.

Conclusion

Doubling the online sales in the last five years, the e-commerce sector in India has started to take shape and is expected to continue the phenomenal growth. Many factors are consistently supporting the growth of E-commerce in the world, and especially in India. The speed of the growth in E-commerce in India is remarkable. Factors such as increased smartphone usage, convenient and economic internet access, and busy schedules of working professionals etc., have led to the growth of E-commerce.

E-commerce in India has practiced rapid growth driven by the millennial' purchasing power, impact of the internet leading to development of diverse mobile applications and websites, and the much-needed infrastructure. Mobile penetration accounts for a vast market in India, making it more convenient for consumers to shop for a wide variety of retail products.

In today's world, e-commerce has acquired importance. India has been experiencing significant growth in e-commerce, with many small companies growing and a few giants motivated to take over the huge Indian e-commerce market. Flipkart, Amazon, Snapdeal, Uber, Ola, etc. are a few examples.

References

1. Afrina Y, Sadia T, Kaniz, F. Effectiveness of digital marketing in the challenging age: An empirical study. *International Journal of Management Science and Business Administration*,2015:1(5):69-80.
2. Arora N, Rahul M. The role of perceived risk in influencing online shopping attitude among women in India. *International Journal of Public Sector Performance Management*,2018:4(1):98-113.
3. Chatterjee S. E-commerce in India: A review on culture and challenges. *International Conference on Soft Computing Techniques and Implementations (ICSCTI)*, art.no.7489547, 2016.
4. Gehrt KC, Rajan MN, Shainesh G, Czerwinski D, O'Brien, M. Emergence of online shopping in India: Shopping orientation segments. *International Journal of Retail & Distribution Management*,2012:40(10):742-758.
5. Gnana CK. E-commerce in Indian corporate sector-A case study of automotive sector. Thesis submitted to department of management, Osmania University Hyderabad, 2006.
6. Kalia P, Arora R, Law P. Information technology act in India: E-commerce value chain analysis. *NTUT Journal of Intellectual Property Law and Management*,2016:5(2):55-97.
7. Kalia P, Kaur N, Singh T. E-commerce in India: Evolution and revolution of online retail. *Mobile Commerce: Concepts, Methodologies, Tools and Applications*,2017:2:736-758.
8. Khare A, Rakesh S. Antecedents of online shopping behaviour in India: An examination. *Journal of Internet Commerce*,2011:10(4):227-244.
9. Khushbu P. Social media marketing in India-creating new groundwork in marketing innovation. *International Journal of Multidisciplinary Management Studies*,2012:2(5):91-99.
10. Mallikarjunrao C. Factors affecting growth of e-commerce in India. Thesis submitted to department of management, Osmania University, Hyderabad, 2006.
11. Ming-Hsien Y, Chandrees N, Binshan L, Hung-Yi, C. The effects of perceived ethical performance of shopping websites on consumer trust. *Journal of Computer Information Systems*,2009:50(1):15-24.
12. Muhammed KÖ. Consumers' perceptions about e-commerce activities of Bosnian companies. *International Journal of Academic Research in Business and Social Sciences*,2013:3(6):134-145.
13. Mustafa IE. Determinants of e-commerce customer satisfaction, trust and loyalty in Saudi Arabia. *Journal of Electronic Commerce Research*,2011:2(1):78-93.
14. Namita B, Preeti K. Online consumer behaviour: An exploratory study. *Global Journal of Commerce and Management Perspective*,2013:2(4):98-107.
15. Rakesh S, Khare A. Impact of promotions and value consciousness in online shopping behaviour in India. *Journal of Database Marketing and Customer Strategy Management*,2012:19(4):311-320.
16. Rashad Y, Abhinav GJ, Wan FY, Mahan P, Shahriar M. Factors influencing perception of consumers in e-business: Gaining trust in e-commerce. *International Conference on Advancements in Information Technology, International Proceedings of Computer Science and Information Technology*, 2011.
17. Rath RC, Samal S. An overview of e-commerce practices of marketing on supply chain management in India: Emerging business opportunities and challenges. *International Journal of Supply Chain Management*,2013:2(2):107-115.
18. Rekha P. Trends in e-commerce-An empirical study. Thesis submitted to department commerce, Osmania University Hyderabad, 2010.

19. Rekha IS. A study on customer perception towards online precious metal jewellery shopping in India. *International Journal of Applied Business and Economic Research*,2016:14(14):251-257.
20. Siddegowda CJ, Ilango V, Devi J. Analysis of e-commerce challenges in India by using weka tool. *International Journal of Control Theory and Applications*,2016:9(36):363-371
21. Sumanjeet. The state of e-commerce laws in India: A review of information technology act. *International Journal of Law and Management*,2010:52(4):265-282.
22. Vasumathi A, Sasi RK, Subashini R. An empirical study on customer preference towards online shopping among engineering students. *International Journal of Services and Operations Management*,2016:24(3):289-307.
23. You-Qinghe CW, Liu K. The online shopping change the retail business model: A survey of the people use online shopping in China. *IOSR Journal of Business and Management*,2014:15(5):77-110.
24. Zia U. Perception towards online shopping: An empirical study of Indian consumers. *National Monthly Refereed Journal of Research in Commerce & Management*,2012:1(8):9-22.
25. Indian brand equity foundation (2021), [https://www.ibef.org/industry/ecommerce-presentation/Indian E-commerce Industry Analysis/](https://www.ibef.org/industry/ecommerce-presentation/Indian-E-commerce-Industry-Analysis/) accessed on 18 June,2021.
26. Statista, (2021) <https://www.statista.com/topics/2454/e-commerce-in-india/> accessed on 20 June,2021
27. The Economics Time (2021), <https://economictimes.indiatimes.com/small-biz/sme-sector/indias-e-commerce-market-to-be-worth-99-billion-by-2024-report/articleshow/81583312.cms?from=mdr/> accessed on 17 June, 2021.