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DEVELOPMENT OF COMMUNICATION INFRASTRUCTURE AND E-COMMERCE IN INDIA

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Abstract

In recent years, interaction among customers and companies are influenced by technology development. Human life is affected by digital technology in every aspects i.e. production, banking, education, agriculture, e-commerce, online survey. Mobile communication and internet technology are getting more and more importance. In terms of assortment and number of users, Indian market (e-commerce) is still behind foreign market, but it showing increasing growth rate. The development of technology brought the concept of e-commerce. Preference to purchase online is due to rapid growth of e-commerce. The purpose of this article is to indicate the e-commerce development due to availability of internet and development of communication infrastructure.

Keywords: Communication, e-commerce, infrastructure, internet, sales, technology.

Introduction

Information technology is the new era where internet has the significant impact on modern business. It is an affordable communication form and good source of information. Internet helps to reach the services of e-commerce on global level. Due to globalization, competition is increased between all the sellers. This situation forced all the traditional sellers to go for online business. The main focus of electronic market is to share the information which is a power of economic activity based on online business (Orzoł & Szopik-Depczyńska, 2022).

Consumers are using internet and taking advantage to buy product and services (Bączkiewicz, et al., 2021). E-commerce means purchasing and selling goods & services using internet and transmitting data or fund. E-commerce helps the consumer to visit website of the vendor to trade products & services. According to Cheba et al. (2021), the situation of COVID- 19 affected this market and caused many changes. Currently E-commerce enterprises are taking care of customers need & demands. These enterprises increasing their competitive strength by fast respond to change in demand, cost and time reduction.

Lack of specialists and lack of technical training are some factors which limiting the E-commerce development (Kraponina, 2016). now businesses are using social media to advertise their products & services. Through social media, people communicate with each other and share information using mobile phone or internet. Diverse range of goods & services are selling by different sites like; electronic gadgets, movie tickets, computers, greeting cards (Mitra, 2013). Basic analysis of E-commerce with information & communication infrastructure in India is the aim of this paper.

E-commerce in India

With increase of smartphones and laptops, results in high online consumer who start shopping online. In India, Rediff created first successful portal of e-commerce and after that India launched its own e-commerce sites named IndiaTimes and Baazee.com. These sites failed to convince Indian consumer to shop online. Later, Baazee.com was acquired by eBay and became the first Indian brand of e-commerce acquired by an overseas company. In 2017, Indian e-commerce market was of \$38 billion and till 2026 and it is assumed to grow worth \$200 billion. Whereas in 2009, e-commerce market of India was of \$3 billion (Raj, 2021).

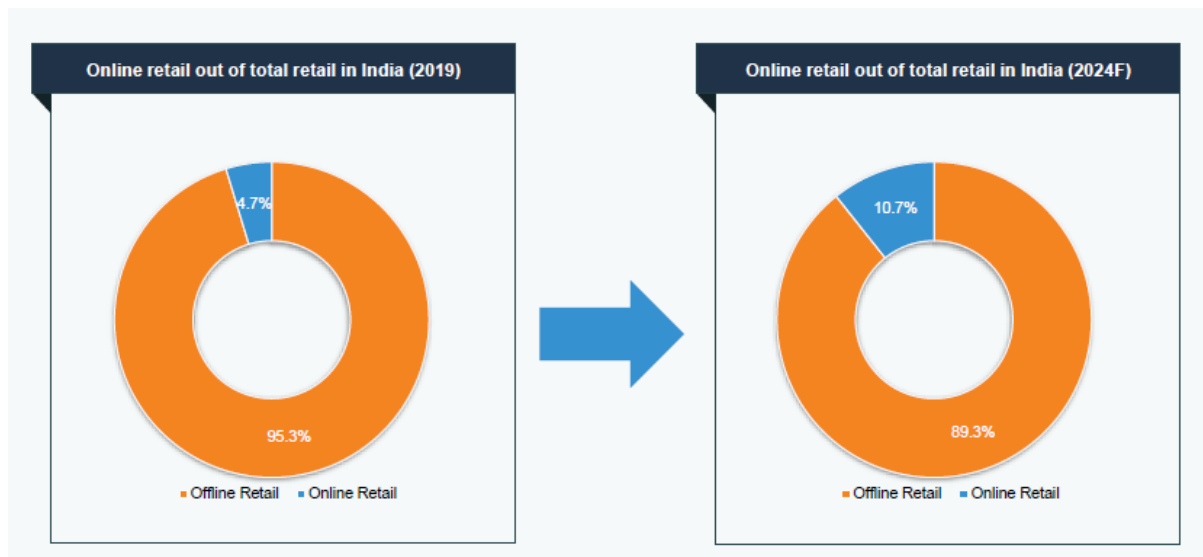
E-commerce eliminates middlemen and reduce the cost of customer and seller search. Generally a gap is lie among sellers who provide information and the consumer who receive the information. This gap is covered by providing information about a product or service on webpage. This helps the consumer to get the information and make decision regarding purchase. The platform is also important to MSMEs which are limited their self to a particular area. This will help them in developing the market for their local products. E-commerce provides an international marketplace where sellers can sell their products. Earlier it was restricted to a geographical area. It also gives customization and this also changes the buying way of consumers as they can customize their goods and services according to their choice. Consumers can also operate e-commerce websites 24/7 (Shahjee, 2017).

Ziaul Hog (2005) talked about the impacts of e-commerce on business & how cost is reduced by it for any enterprise. Prices of various electronic equipments are reduced and it helps in e-commerce development. Through this reduction of cost, it attracts new customers. It also saves the cost of employees as most of the activities are performed online. Trust is also an important factor which influence purchase decision of the customer. If customer trusts e-commerce, the potential customer will surely buy a product or service. Businesses need to form a good image and need to portray that dealing with them is safe for customers (Sim & Koi, 2002). Communication speed with other businesses with ease is improved by e-commerce. This fast communication helps in fast decision making. To eliminate uncertainties, companies are more concerned about relationship management by acquiring required resources and stability in relationship (Gefen & Straub, 2004).

E-commerce has a huge scope in India, as Indians are price concerned. There are lots of opportunity to develop the market and retailers. Online stores provide good customer services and variety of products as compare to offline. Retailers are benefited with more profit as it is available 24*7 (Dahiya, 2017). O'Leary (2000) conducted a study and found that 19 percent of the respondents bought in real from internet. Whereas 93.7 percent respondents had used internet earlier and maximum internet shoppers had credit and debit cards. This might be due to absence of physical contact with products.

COVID-19 accelerated e-commerce and digital transformation. Now customers expect something beyond their gratification and expectation. Social media, payment option, after sale service, online shopping experience, sales promotional scheme, social factors, internet knowledge, demographic factors, and products characteristics are some factors which affect customers' online buying behavior (Pandey & Parmar, 2019). According to Neger and Uddin (2020), online shopping behavior is influenced by easy way of payment, less time consuming and some other factors of organization. Situation of COVID-19 resulted in increase in online sale.

Figure 1: online retail in India



Source: www.ibef.org

With growing usage of internet in India, E-retailers have lots of opportunities to take advantage of. As shown in figure1, the online retail is 4.7 percent in 2019 but it is assumed that it will reach 10.7 percent in 2024 (figure 1). Also, by 2025 the expected online shoppers are 220 million.

Table 1: Advantage & disadvantage of online store

<p>Advantages</p>	<p>For owner:</p> <ul style="list-style-type: none"> • Trading 24*7 • Can reach more customers • Unlimited products can be sold virtually • Cost reduction due to less requirement of rental space and staff • Cost reduction due to get rid of intermediates <p>For customers:</p> <ul style="list-style-type: none"> • Cheaper shopping • Customers can compare and watch offers • Available 24*7, 365 days • Customers can use it conveniently • Customers can purchase anytime they want • Customers can get maximum choices
<p>Disadvantages</p>	<ul style="list-style-type: none"> • Cant not see the product physically

- No contact with live person
- Security issues regarding payment
- Doubts on integrity and credibility of involved parties
- Took too long between purchase and delivery

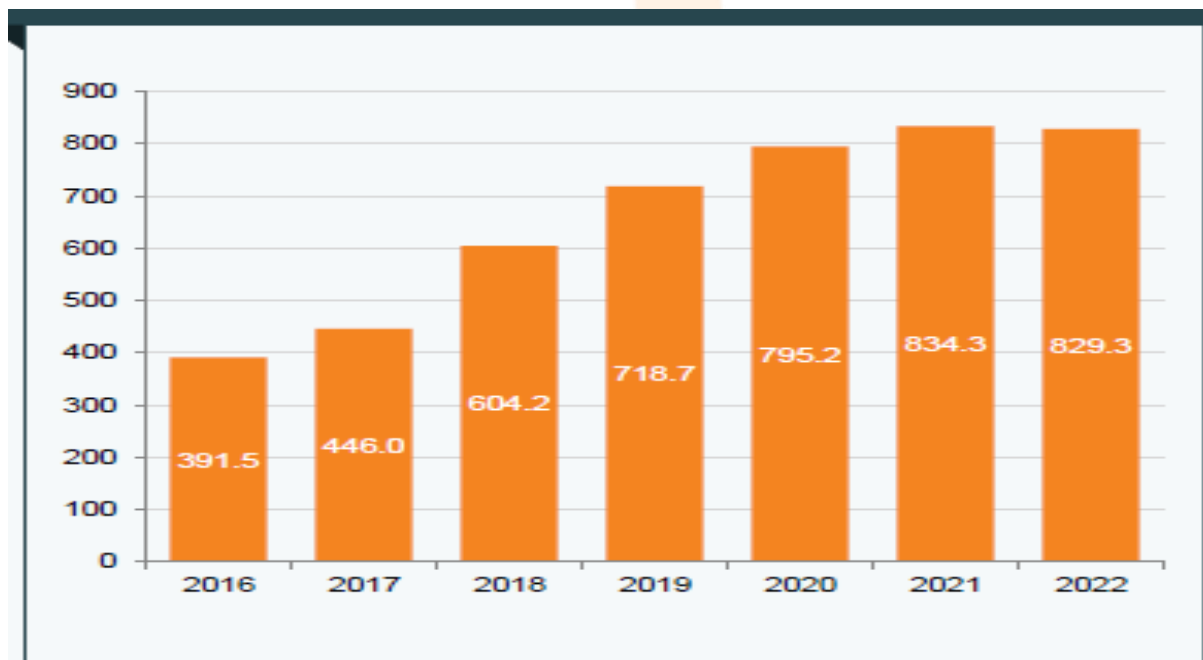
Source: Orzol & Szopik-Depczyńska (2022)

According to Raj Vardhman (2021), there are more than 28000 e-commerce businesses in USA as compared to more than 19,000 e-commerce companies in India. Use of smartphones was increase by 8 percent in past few years and usage of 50 million units of smartphones increased during 2020 (1st quarter). Also the digital buyer is increasing with increase in online sales. Mobile devices are also playing a significant role in e-commerce. Number of online store in e-commerce is increasing at a good speed.

Information and communication infrastructure in India

Internet connection is required to operate e-commerce. In past few years, usage of internet is increasing. In 2022, internet subscribers in India are increased to 829.3 million from 391.5 million in 2016 (Figure 2). The expected usage of wireless data per wireless data subscriber in 2026 is 40 GB from 14.6 GB/m in FY21.

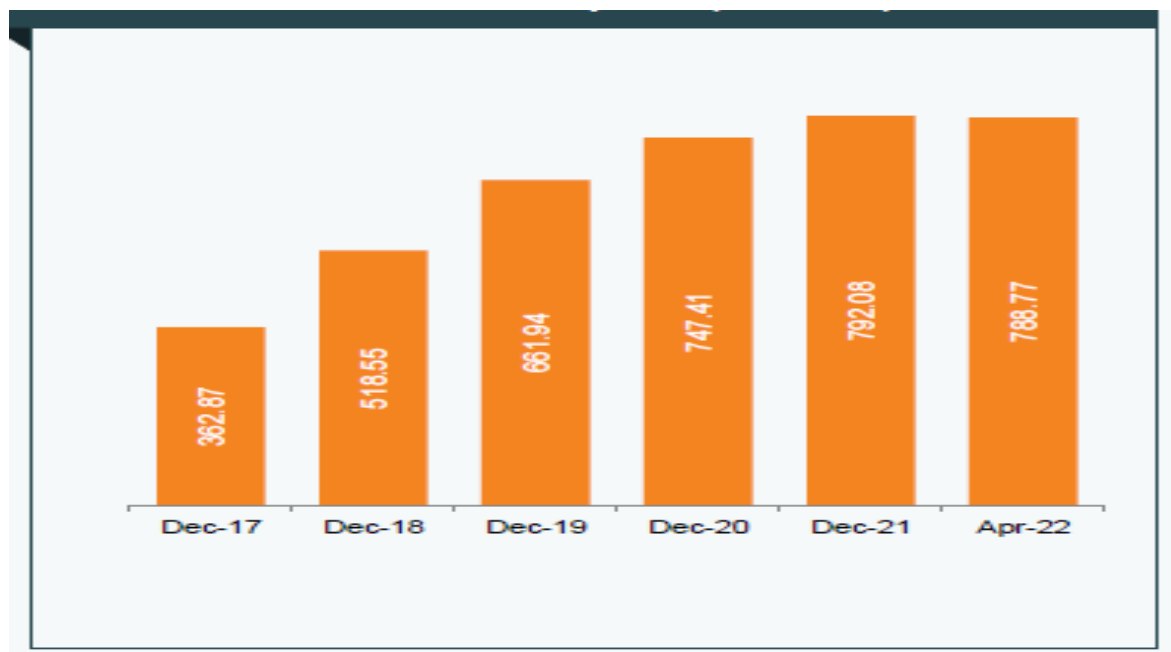
Figure 2: Internet subscription (in millions)



Source: www.ibef.org

Vodafone Idea, Bharti Airtel and Reliance Jio Infocomm Ltd. are the three service providers who give 98.49 percent of the total broadband subscriber (April 2022). The total broadband subscriptions increased from 362.87 million in 2017 to 788.77 million in 2022 (figure 3).

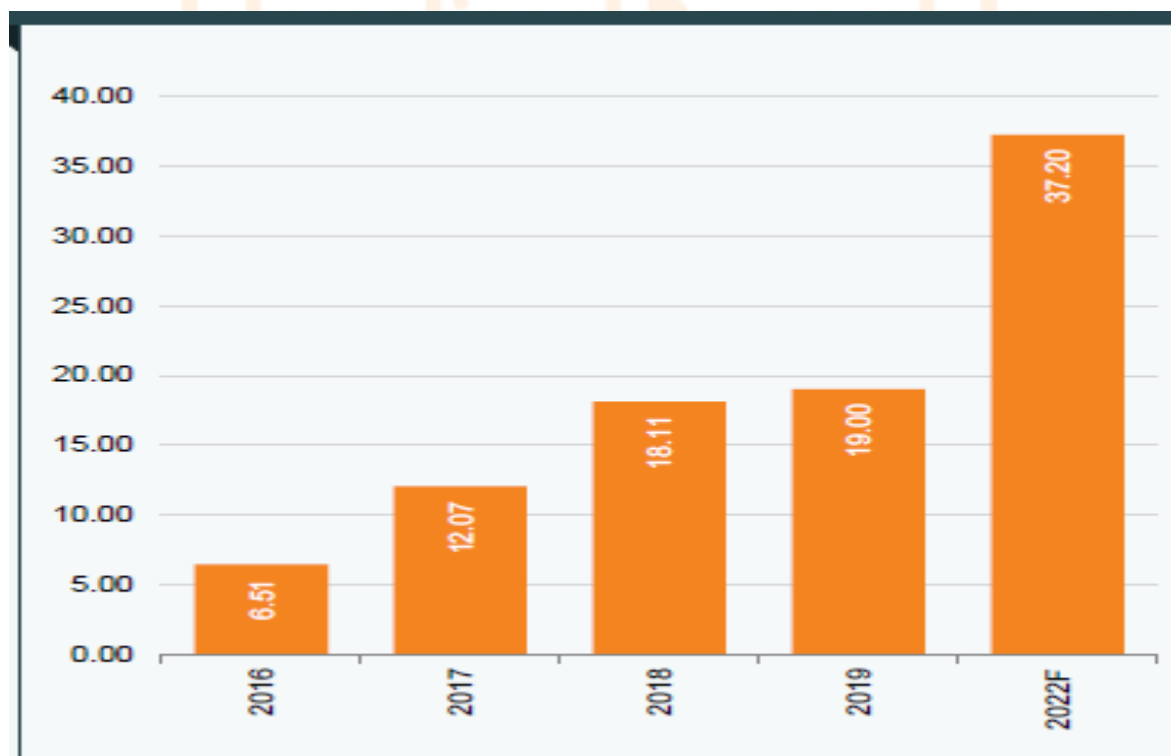
Figure 3: Broadband subscription (in millions)



Source: www.ibef.org

In terms of app installation, US were surpassed by India in 2019. Out of total, 14 percent global app installation accounted by India in 2020. In 2019, the app downloads were 19.00 billion as compared to 12.07 billion in 2017. In 2022F, It is assumed to be reach at 37.21 billion.

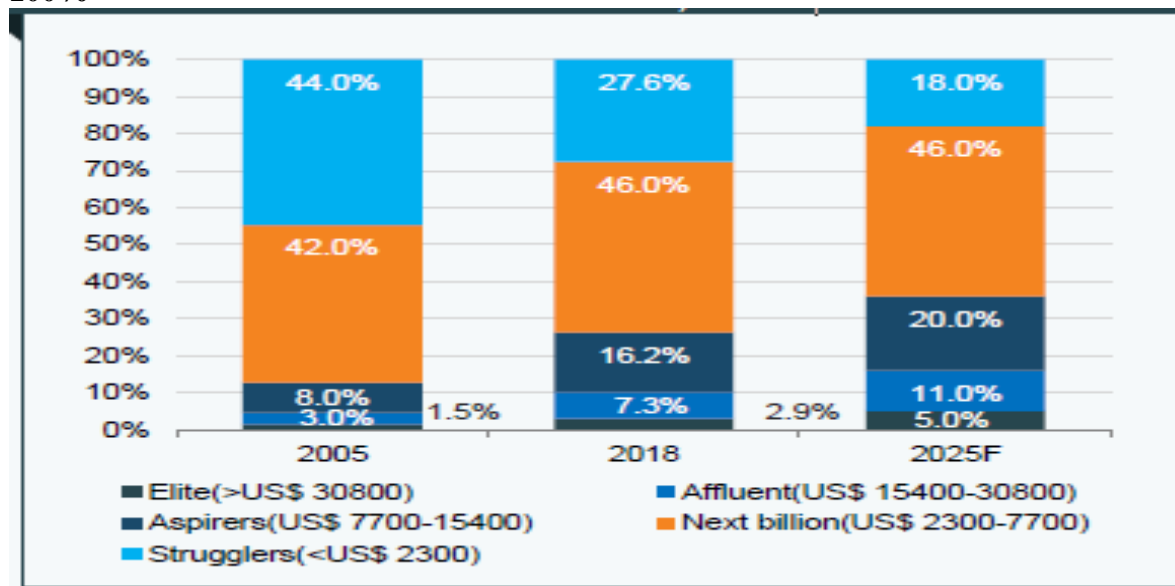
Figure 4: Apps download in India (in billions)



Source: www.ibef.org

In telecommunication sector, rising income is the key factor of growth in India. The demand for internet and mobile is triggered by prosperous middle class (Figure 5). Especially the young population is upholding the demand of smartphones.

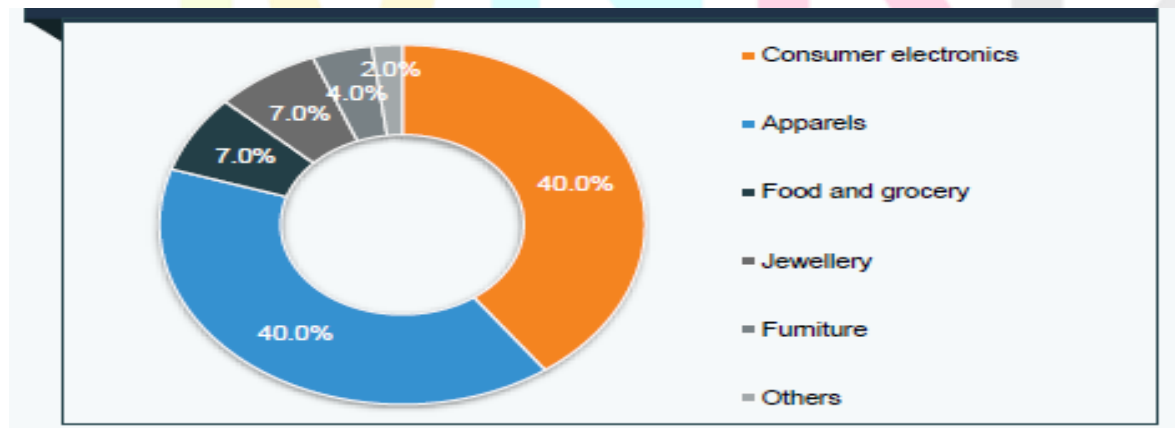
Figure 5: Shifting from low to high income groups- Indian residents (%), Million Household, 100%[^]



Source: www.ibef.org

As discussed above, due to increase in internet, e-commerce business is also growing. By FY 2026, it is expected that e-retail market will grow & reach to 120-140 billion (US dollar) in India. India is the 3rd largest online shopper base after China and US with 140 million in 2020. In e-commerce retail, consumer electronics and apparels are at first place with 40.00 percent each of share in the segment followed by food and grocery (7 percent), jewellery (7 percent), furniture (4 percent) and others (2 percent) as shown in figure 6.

Figure 6: Share of different segments in e-commerce retail



Source: www.ibef.org

Conclusion

The functioning of retail has changed by internet. Mobile internet becomes the new technology which provides ability to shop online. For e-commerce, it is necessary to have an internet connection. In April 2022, 97.8 percent subscriptions of total telephone are accounted of wireless segment. India stands 2nd in the world with largest telecom network. Also in April 2022, there are 1167.82 million subscribers. Google made investment of 1 billion (US dollar) in Airtel in January 2022. For telecom and networking goods, other global vendors (Flex, Sanmina, Foxconn, Jabil, cien, Cisco and samsung) also show interest for investment to set up manufacturing. From April 2000 to June 2022, in telecom sector there are 38.94 billion (US dollar) of foreign direct investment in India. To increase e-commerce, development of communication infrastructure is required. This development increase the company's competitiveness locally and globally through better connect with suppliers and enter into foreign market. In addition to this, it also improves company's image and service quality like; steady connection and less waiting time. Limitations of this study refer maximum to data of communication infrastructure used for analysis so in future research analysis can be extended to e-commerce market with statistical tools and methods. Before and after effects of COVID-19 on e-commerce can be analyzed.

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