

7. Impact of ICT in E-Commerce

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Abstract:

Information and communication technologies (ICT) are regarded as a fundamental component of e-commerce (EC) and have been from the start of the industry. This is because ICT advancements directly influence e-commerce's development. The Internet is utilized in online commerce for data interchange, promotion, e-mail, conversation, give-and-take, and consumer counseling. There are two types of electronic commerce: business-to-business and business-to-consumer. The cost of creating websites and providing gadgets is the biggest barrier to using information technology. Although there is great potential for e-commerce to expand in underdeveloped nations, the absence of ICT infrastructure is impeding that expansion because ICT is a prerequisite. The expansion of ICT infrastructure is a key factor in e-commerce's growth. The expansion of the e-commerce business has been accelerated by the use of smartphones and the Internet. This essay intends to analyze the role of ICT and its services in promoting the e-commerce sector in developing nations like India as well as the impending switch from e-commerce to e-commerce. The potential for e-commerce to flourish in developing nations is quite strong, but as ICT is a prerequisite, a lack of ICT infrastructure slows the expansion of the industry. The expansion of ICT infrastructure is a key factor in e-commerce's growth. The market for smart phones and the widespread use of the Internet have proven to be strong drivers for the e-commerce sector. We shall talk about the impact of ICT on e-commerce in this paper..

Keywords:

E-Commerce, Information, Communication, Technologies, Applications, Business-To-Customer, Business-To Business, Growth, Smartphone, Market, Internet, People.

7.1 Introduction:

E-commerce and computers are becoming an essential aspect of daily life. For the majority of individuals, especially those living in urban areas, having access to e-commerce platforms is not a luxury but rather a necessity. Almost every facet of our lives has an alternative e-commerce platform available, from buying common home things to trading shares and commodities online. "E-commerce" is the use of information and ICT to support all business activities and spheres, according to its definition. Since a few years ago, the idea of e-commerce has expanded and has contributed to the economic expansion

of several major and emerging economies. ICT is one of the main elements driving the expansion of e-commerce. ICT and e-commerce go hand in hand since they are both essential to the operations and growth of the e-commerce sector. Since the idea of e-commerce is so open-ended, it encompasses all potential applications of information and communication technology.

Although the goods are ordered electronically, online payments, as well as the delivery of goods and services, are not required. The increased use of the internet, high educational standards, changing lifestyles, daily living, and the country's economic development are a few of the main factors driving demand for e-commerce tools and strategies. Among these strategies, online buying is essential.

The exponential growth of e-commerce and online shopping is mostly due to the expansion of the internet and its growing penetration into India's rural areas. The e-commerce industry is expected to be driven by the growing penetration of technology enablers like Internet connections, software, broadband and third generation services, laptops, smartphones, mobile phones, tablets and dongles, Wi-Fi, as well as the rising acceptance of the concept of virtual shopping. [1]

Information and communication technologies (ICT) are important for the development of e-commerce, and given how quickly technology is developing today, it is inevitable that more businesses, especially SMEs—which, by the way, account for 97 percent of all businesses worldwide—will adopt e-commerce in some capacity. Particularly in the commercial sphere, electronic commerce is constantly being implemented.

Businesses have tested the benefits of incorporating new technology into their operational procedures and found that the profits surpass the costs.

As more people used the Internet, e-commerce became more important and gained new significance. The secret to the growth of E-commerce lies in its unique features, which include globalizing business, doing away with time and place restrictions, lowering the cost of sources for purchases, increasing the amount of dealing, doing away with time and place restrictions in transactions, having easy access to information, lowering transaction costs, lowering chronological transaction costs, and many other benefits.

Since it has been expanding for a while, the idea of e-commerce has contributed to the expansion of several developed and emerging economies. ICT is one of the main factors influencing the expansion of e-commerce. ICT and e-commerce go hand in hand since they are both essential to the operations and growth of the e-commerce sector.

Since the idea of e-business is so open-ended, it encompasses all potential applications of information and communication technology. Although ICT infrastructure and services are not a major concern in wealthy nations, they occasionally appear to be a barrier to the expansion of electronic commerce in emerging nations like India. E-commerce refers to the exchange of products and services over the internet or through TV channels. Electronic ordering of the goods eliminates the requirement for online payment or service delivery.

The increased use of online resources, high educational standards, changing lifestyles, and the nation's economic expansion are a few of the main factors driving demand for e-commerce strategies and solutions. Among these strategies, online buying is essential. [2] The most important cause for the exponential rise of e-commerce and specifically online shopping is the expansion of the internet and its growing penetration into India's rural areas.

The e-commerce business is expected to be driven by the emerging availability of technology facilitators including Internet connections, broadband and third generation services, laptops, smartphones, tablets, and dongles, as well as the rising acceptability of the concept of virtual shopping.

The B2C sector appears to be the most promising and is anticipated to dominate the e-commerce business in the near future. In addition to the expansion of ICT infrastructure, additional drivers of this growth include simple payment methods and creative legislation. The industry intends to provide far more ground-breaking services in the future, such as access to virtual trial rooms and mobile money transactions. [3]

7.2 Classification of E-Commerce Business:

Business to Business (B2B): B2B refers to online transactions between businesses, such as those between a manufacturer and a wholesaler or a wholesaler and a retailer. [4]

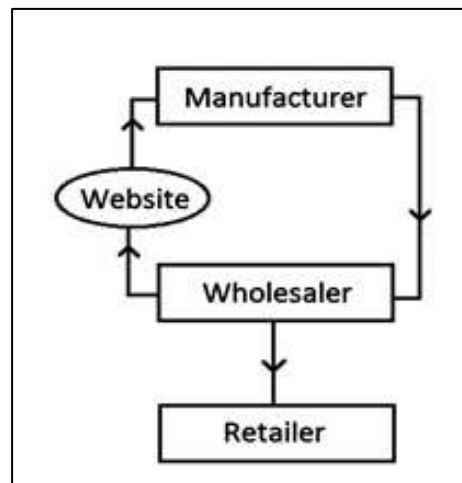


Figure 7.1: The e-commerce Business to Business model

Business to Consumer (B2C): B2C refers to business-to-consumer transactions conducted online, such as those between a store or manufacturer and a customer. It can be viewed as an e-commerce paradigm that involves the selling and buying of goods and services between businesses and consumers over the Internet. It also facilitates the sharing of goods and services between business organizations and final customers in a retailing transaction. Additionally, it involves firms selling their goods directly to the people who will actually use them. [5]

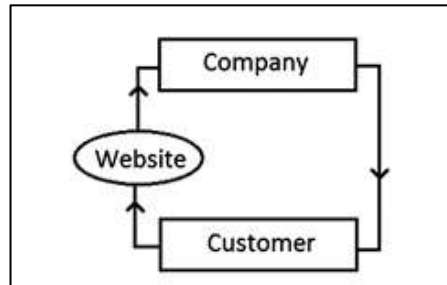


Figure 7.2: The e-commerce Business to Consumer model

Consumer to Business (C2B): E-commerce firms in which private individuals offer to sell goods and services to businesses ready to buy them. This company strategy deviates from the conventional B2C approach. By providing venues for such commercial transactions to occur, this kind of e-commerce enables both business owners and customers of goods and services to have a neutral meeting ground where prices of goods and services are discussed. [6]

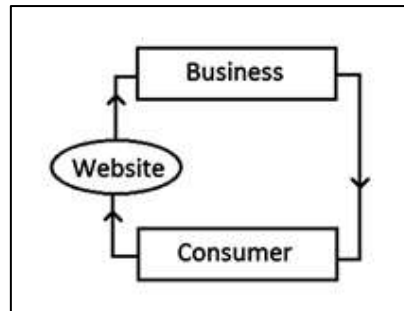


Figure 7.3: The e-commerce Consumer to Business model

Consumer to Consumer (C2C): Individual customers offer to sell goods and services to other people who are willing to buy them through C2C e-commerce enterprises. In a virtual marketplace known as cyberspace, this sort of e-commerce involves customers interacting and conducting direct business transactions with other consumers.

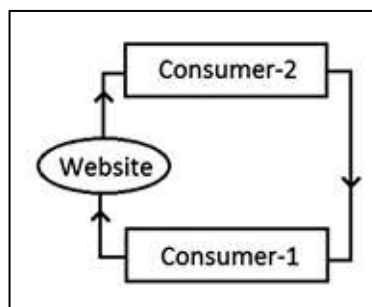


Figure 7.4: The e-commerce Consumer to Consumer model

when a customer offers products and services directly to another person without using a business as a middleman. Faster transactions are completed. Due to the usage of the already-existing IT infrastructure, small and medium-sized businesses can now implement it.

Organizational cultural modifications are needed for its application. Considerations for implementing e-commerce include: Strategy evaluation To decide the tactics to use, we must first conduct an examination of the Internet as a communication tool. The following traits apply to the Internet as a whole: Creativity Segmentation of Notoriety Only four factors need to be prioritized for network success: One: Create a superior good or service Create a website that works well for business, second. technical facets of internet hosting. 4. Drive targeted visitors to the website. [7]

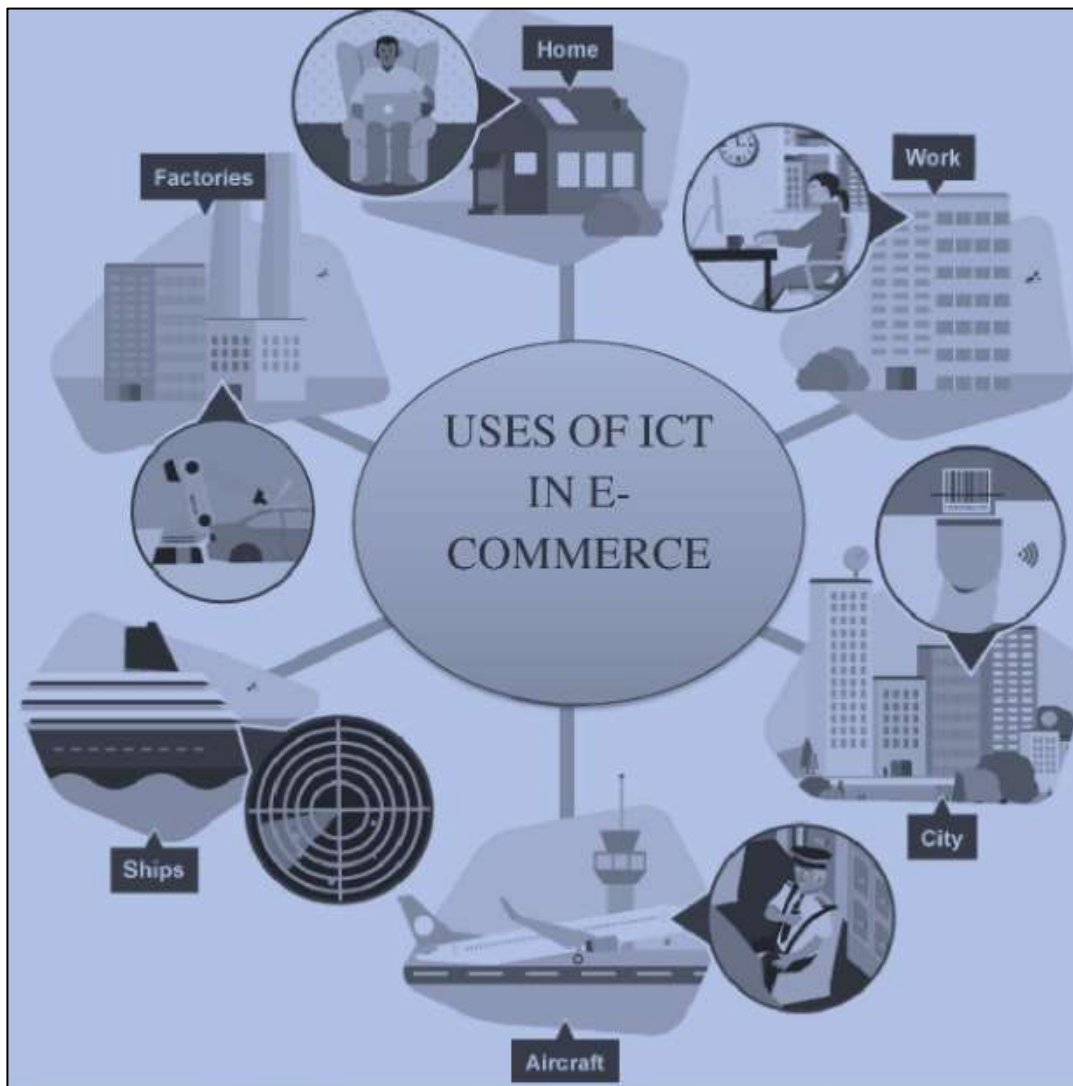


Figure 7.5: ICT in E-Commerce [8]

E-commerce is the practice of conducting business operations using computer systems and communication networks. E-commerce mostly takes place between businesses, not between businesses and customers. Trade activities have been impacted by the expansion of technology use through electronic networks in daily life. Cross-continent trading has been practiced by humans since the dawn of time. This involves traveling between continents using basic means of conveyance. Technology advancements are incredibly beneficial to people and make life easier for them.

Trading over electronic networks is the collective term for any business transaction operations carried out using computer-based internet network access. Businesses have created information technology for three reasons: (1) Supporting business operations; (2) Managerial Decision Support; and (3) Competitive Advantage Strategies. Because it gives managers access to additional information through a decision-making system (Decision Support System, or DSS), information technology has an impact on the process of formulating marketing strategy. Information technology has the power to bring together disparate elements of the company and give managers access to a wealth of data. For instance, executive information systems (also known as EIS) have an impact on the vertical information flow throughout the business. Top management parties have more access to information and rely less on intermediate management as a source of that knowledge. Information may move simply and swiftly between many departments and divisions thanks to telecommunication networks. Information technology also affects how organizations interact with their external environments, including their suppliers and consumers. [9]

Through the usage of e-commerce technology, ICT applications in business transactions have transformed the world into a global marketplace. Many firms in Nigeria have adopted e-commerce into their daily operations as a result of the quick expansion and use of ICT in business today. This is done in order to satisfy the pressing need for current technologies and innovations from their clients. Previous studies have shown that Nigeria has made significant progress and development in the ICT sector during the first decade of the twenty-first century. This is largely because the nation experienced a lot of ICT-related infrastructural development between the years 2000 and 2009. Nigeria is still lagging behind in terms of digital growth when compared to its rival rising economies of the world, despite the apparent amount of improvement in its ICT sector.

Ten Summoner's Tales, Sting's fourth album, was the first product to be successfully sold and purchased online in the year 1994 thanks to e-commerce.

E-commerce has become widespread worldwide twenty years after it was first introduced, and in 2014, it is expected to be worth \$1500 billion globally. Despite all of e-commerce's contributions to the growth of the world economy, the Middle East and Africa were said to be lagging behind other regions in terms of e-commerce development. [10]

The most notable application of information technology (IT) that has recently transformed the world's economies is still e-commerce, which is unmistakably linked to all procedures that either directly or indirectly involve the exchange of goods and services over computer networks and the Internet.

Benefits need to outweigh investment and maintenance expenses for small businesses to use e-business and e-commerce strategies and solutions. Adoption is driven by commercial concerns and prospective rewards. Not all SMEs will necessarily "catch up" with major enterprises once they reach a certain level of connectivity (PC, Internet access, online information, or marketing), simply because e-commerce may not provide significant benefits and SMEs will stick with traditional business methods.

The availability of ICT competences within the company, as well as the cost and availability of suitable, interoperable small-firm systems, network infrastructure, and support services for the Internet, have all been identified as additional impediments. Cross-country legal and regulatory disparities as well as a lack of trustworthy trust and recourse procedures make international business transactions difficult. Policies that are intended to enhance the network infrastructure, the legal and regulatory environment, promote technical diffusion, and generate a positive business climate will have an impact on the adoption and use of e-business techniques. In addition to these broad framework policies, the ICT and e-business awareness programs, business consultation services, and management and employee training to improve ICT and managerial skills have been the focus of particular policies for SMEs.

E-commerce refers to the marketing, distribution, and exchange of goods and services using electronic networks such as the internet, television, or other computer networks. Electronic data transfers, automated inventory management systems, and automated data collection systems are all examples of e-commerce activities.

According to the information technology sector, e-commerce activities include the use and application of e-business (e-business) related to commercial transactions, such as: electronic fund transfers, supply chain management (SCM), e-marketing (e-marketing), or online marketing (online marketing), online transaction processing, electronic data interchange (EDI), etc. E-business, which covers e-commerce as well as other aspects like customer service, job openings, and collaborative business partners, has a wider scope than just commerce. E-commerce also needs database or database (e-mail) technology, e-mail, and other non-computer technologies like the shipping system and payment methods in addition to internet network technology. [11]

Figure 6 depicts the outcome of the examination of small and medium-sized business industry distribution. Figure 6 shows that there are the most wholesale and retail businesses, accounting for 26% of SMEs. The total number of these businesses is 7771.

The real estate, leasing, construction, service, and banking industries are further significant industries. For small and medium businesses, electronic commerce has both internal and external effects.

By implementing e-commerce, businesses can increase the effectiveness of their internal operations and build complete management information systems. E-commerce can increase product sales by expanding the external sales channels and removing intermediary intermediaries. As a result, SMEs must grow their e-commerce sectors if they are to compete effectively. It is also a crucial strategy to boost revenue and operational effectiveness. [12]

Role of ICT: Reaching to Unreached

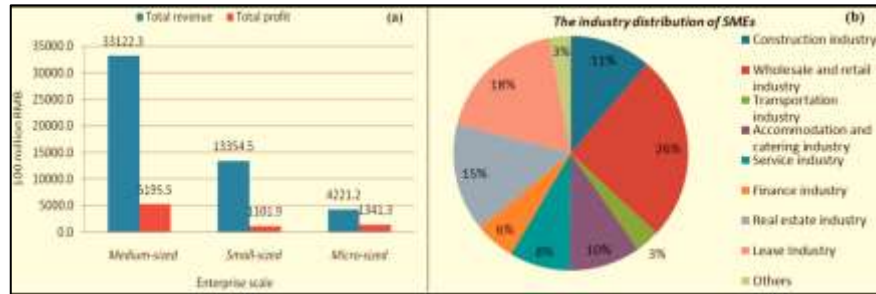


Figure 7.6: (a) The scale and profitability analysis of SMEs; (b) The industry distribution analysis of SMEs.

The development of e-commerce is linked to sociotechnical developments. Users are drawn to a medium more and more as it becomes deeply ingrained. Markets grow as users do as well. More commercial organizations are drawn to the expanding markets. As more firms grow, competition increases. Competition spurs innovation, which in turn propels the development of technology and supports the expansion of e-commerce.

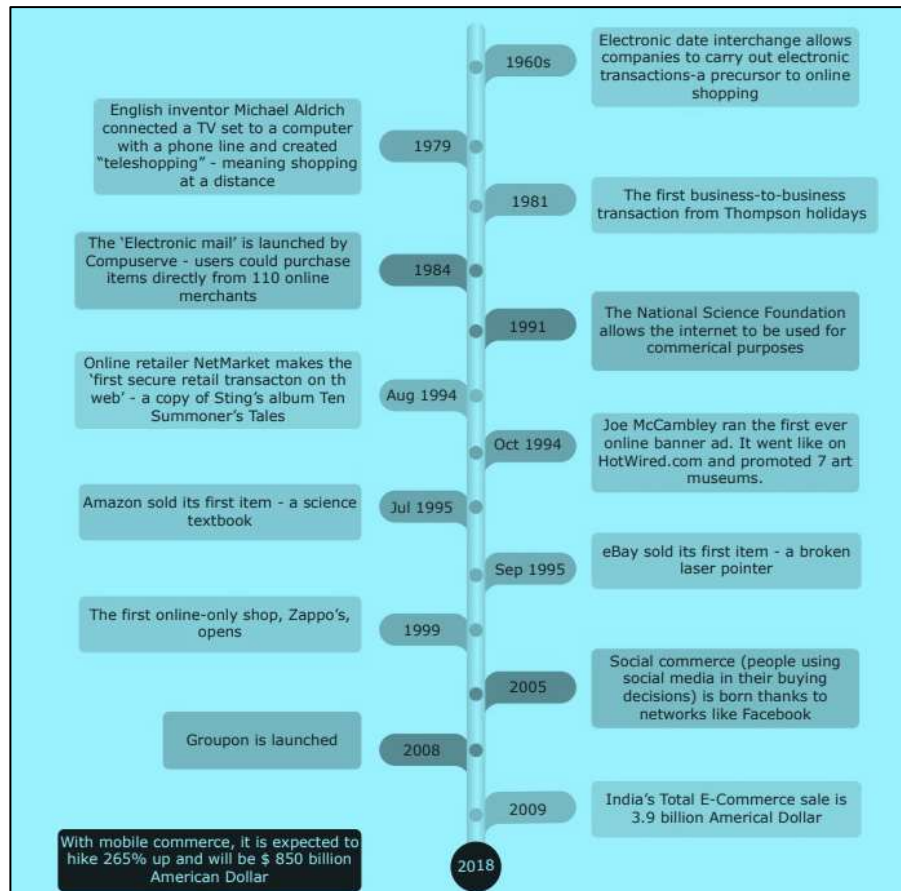


Figure 7.7: The growth of E-Commerce

7.3 E-Commerce Industry in India:

India has the fastest-growing economy in the world in terms of e-commerce. Indian e-commerce is anticipated to expand from \$30 billion in 2016 to \$120 billion in 2020, at the highest yearly rate in the world (source: Assoc. Ham-Forester study paper). With \$680 billion in online retail sales in 2016, China is the world's largest e-commerce market, followed by the United States and India. Although e-commerce was used in India before the 1990s, their contributions were incredibly small. Blue-chip PE firms have recently made considerable investments in India's e-commerce due to the market's enormous potential and possibility for success. B2B e-commerce is allowed for 100 percent FDI in India, which demonstrates the government's commitment to the country's e-commerce business. The e-commerce industry in India is strongly dependent on the aforementioned supporting elements, which have an effect on the Indian economy. Some of these elements include: [13]

- Participation of niche companies in online trading
- Unmatched FDI
- Uniform GST

India is one of the biggest developing economies of the world. There is substantial utilization of web among Indian natives.

The fundamental essential target of this exploration paper is:

- To examination the present patterns of online business in India
- Government activities and diverse plan in development of online business in India
- Impact of online business on education rate and work rate in India

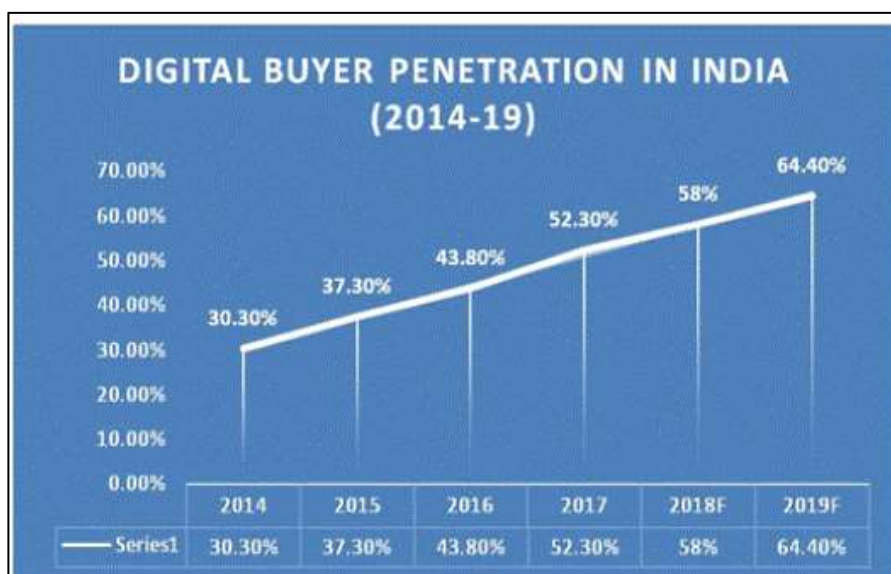


Figure 7.8: Digital Buyer Penetration in India

With the rise in mobile phone usage and the widespread accessibility of the internet, web-based businesses are becoming an increasingly important part of the Indian economy.

The graph above shows the increase in digital infiltration in India, which went from 30% in 2014 to an extraordinary 64% by 2019. The availability of a large number of electrical devices and its good effects have contributed to this developing pattern. According to (analyst), we should be able to identify where the population went and what they did as a result of the increase in digital admission.

According to analyst studies, Indian digital citizens in January 2017 were divided into numerous subsections, which largely had an impact on India's online industry. [14]

7.4 Conclusion:

E-commerce was created and has evolved as a result of information technologies, and as a result, it will continue to follow ICT in every step of the way. The essay goes on to describe how having an understanding of ICT and using it effectively can aid businesses in achieving their main objective, which is to cut costs and boost success. E-commerce has had a significant impact on the world economy in recent years, largely as a result of the enormous potential it offers to boost economic growth and corporate expansion on a global scale. The strategic use of information technology has become a critical factor in determining the success of a firm due to the globalization of markets and industries and the changing role of IT within corporate organizations. Employees can access their bank accounts from anywhere in the world. Since the population is young, enthusiastic, and receptive to the innovative methods of shopping made possible by Information and Communication Technology in commerce or e-business, the e-commerce industry is expanding quickly in developing nations like India and other countries.

7.5 References:

1. Win win Yediot; Meiryani (2019), The role of information technology in E-commerce, International Journal of Scientific & Technology Research, Volume 8, ISSUE 01, ISSN 2277-8616.
2. Nishant Srivastava and Shashank Singh (2013), E-Business: Scope and challenges in India, International Journal of Business and Management Invention ISSN Volume 2 Issue 8, August. 2013 PP.01-08.
3. D. K. Gnaneshwar, E-Commerce or Internet Marketing: A Business Review from Indian Context, International Journal of u- and e- Service, Science and Technology Vol.6, No.6 (2013), pp.187-194.
4. E-Business: Scope and challenges in India, International Journal of Business and Management Invention ISSN Volume 2 Issue 8, August. 2013 PP.01-08.
5. E-COMMERCE IN INDIA- A REVIEW, International Journal of Marketing, Financial Services & Management Research, ISSN 2277- 3622 Vol.2, No. 2, February (2013).
6. Gupta, A. (2014) E-Commerce: Role of E-Commerce in Today's Business. International Journal of Computing and Corporate Research, 4, 1-8.

7. Kuliya, M. (2015) The Impact of Information and Communication Technology in the Growth of E-Commerce in Nigeria: Challenges and Prospects. *International Journal of Scientific and Research Publications*, 5, 507-512.
8. Muhammad, J., Dominic, P.D.D., Naseebullah and Alamgir, K. (2011) Towards Digital Economy: The Development of ICT and E-Commerce in Malaysia. *Modern Applied Science*, 5, 171-178.
9. Utami, Setyaningsih Sri. 2010. Effects of Information Technology on Business Development.
10. China Statistic Year Book 2014. Available online:
<http://www.stats.gov.cn/tjsj/ndsj/2014/indexch.htm> (accessed on 25 January 2015).
11. The Ministry of Commerce of the People's Republic of China. *China's E-Commerce Development Report (2013)*; China Business Press: Beijing, China, 2014.
12. Nugroho, Adi. 2006. *E-commerce Understanding Maya World Modern Trade*. Informatics. Bandung.
13. Blili, S., & Raymond, L. (1993). Information Technology: Threats & Opportunities for Small and Medium sized Enterprises. *International Journal of Information*, 13, pp. 439-448
ITIF. (2013). *The Economic Benefits of Information and Communication Technology*.