

# An Analysis of Electronic Commerce

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**ABSTRACT-** Globalization and information technology (IT) have altered how businesses conduct their operations. The IT system is deployed and integrated in virtually all businesses who have made significant investments in IT infrastructure for the long-term development of their business. The use of e-commerce (EC) as a means of conducting commercial transactions is causing growing concern. The global economy is undergoing a transformation. Through the use of internet technology, all businesses are converted into information-based operations. The rate of technological change is now so rapid that contemporary internet commerce is causing major economic changes that are affecting every sector. The Internet has broadened the scope of businesses. The enormous amount of business information made available by the worldwide network that enables the collection of information between companies, corporations, their customers, and different business divisions is growing at an exponential rate. Virtual value chains built on information are critical to every company's operational and strategic success. The significance, facilitators, advantages, difficulties, and extent of electronic commerce in the Indian market were addressed in this review study.

**KEYWORDS-** Business, Consumer, Electronic Commerce, Internet, Market Strategy, Profit.

## I. INTRODUCTION

Many businesses have made it a priority. Businesses will be able to connect "Just in Time manufacturing" and "Just in Time" to their trade partners via EC, enhancing their strategic capabilities globally. The EC's description isn't generally accepted. From a communications standpoint, EC may represent information, services, goods, or online payments through telephone lines, computer networking, or other methods. From a business process standpoint, EC utilizes technology to automate corporate transactions and processes [1]. From a service perspective, EC is a method of reducing service costs while improving product efficiency and speeding up service delivery, which meets the needs of industry, consumers, and management. From an online standpoint, EC provides online purchasing and distribution of products and information for the Internet and other online services. The electronic sector has grown in importance for modern businesses as a result of the popularity and rapid development of the Internet and network technologies. Large-scale business activities are

now conducted entirely online. People sell and buy goods and services online, and some transactions are impossible to do without internet infrastructure [2].

This review article gives an overview of electronic commerce, with an emphasis on its definition and importance in today's market. It also went through the many kinds of electronic commerce sectors and the people that help them. Aside from the advantages that e-commerce provides, there are certain drawbacks that will be addressed in the following sections. The last parts will go over the current state and prospects of electronic commerce in India [3].

### A. E-Commerce and its Importance

Electronic commerce is referred to as e-commerce. It refers to the use of electronic media and the internet to trade products and services. E-commerce refers to a business's use of the internet and IT, such as electronic data exchange (EDI). E-commerce refers to a website where a vendor sells products or services to a customer directly from the platform. To pay by credit card, debit card, or electronic money transfer, the gateway utilizes a wireless purchase cart or a buy basket (EFT). The following is a more detailed description: In commercial transactions, electronic communications and digital information processes are utilized to establish, alter, and redefine value generating relationships between companies and people [4].

With the widespread use of information and communication technologies (ICTs), particularly the Internet, the global business sector is quickly moving towards e-commerce (Business-to-Business). Consumers may compare costs across regions, learn how prices change by request, and become aware of replacement since the Internet allows them to participate in the global market. The purchasers get a significant edge. Consumers may easily compare e-commerce offers from several websites because to market openness. If the business were electronic, competitors would be one click away from the consumer. Consumers may adapt even more rapidly than in conventional terms if they aren't happy with particular e-goods, content price, or services. From the suppliers' perspective, they don't need a physical shop [5].

### B. E-Commerce Facilitators

#### 1) Internet

E-commerce has increased as the internet has been more widely used. The Internet and sophisticated mobile

phones have become an inseparable part of everyone's lives. The internet is no longer a reliable source of information, but it is a convenient way for riders, carpenters, doctors, and others to purchase, read, interact, and even get assistance. Because digital networks can rapidly connect to consumers, the supply chain is lean and intelligent, reducing pollution and benefiting green companies. The ICT revolution has propelled the economy to new heights in the past 15 years [6].

With significant technical advances, the Internet and its services have assisted in the growth of new markets. The number of internet users was modest in the 1980s, and there was a slow but steady growth until 1994, when the number of test users began to rise. With the introduction of the World Wide Web and, subsequently, the growth of multimedia content, the number of network users skyrocketed. As a result, the internet has developed much faster than any other prior media. The International Telecommunication Union (ITU) of the United Nations has predicted that 3.2 billion people would be online in 2015. In May 2015, there were 7.2 billion people on the planet. In the year 2000, there were only 400 million Internet users globally [7].

#### 2) *Payment Gateway*

An ecommerce application service provider service is one that enables e-commerce, online stores, bricks and clicks, and conventional brick and mortar payments through credit card. Payment channels, such as credit cards, debit cards, online banking purchases, and electronic money transfers, are the most important factors in internet transactions. Payment gates are required for future e-Commerce to be viable, as the environment changes from cash to digital money.

#### 3) *Analytics*

Analytics is an empirical method of converting data into intelligence for decision-making. Analytics aids businesses in gathering, organizing, evaluating, and commenting on their customers. Because of the massive increase in data volume, businesses must depend on research to understand consumer behavior. To calculate returns on online investments and a channel mix, retailers need real-time access to information. For e-commerce businesses, basic statistics are accessible; however, for customer insight, average order volume, basket size measurement, and conversion ratios, a deeper analytical approach is necessary.

#### 4) *Social Media*

Businesses often utilize social media to promote their products. Blogs and computer programs that enable the use of a computer or a mobile phone to connect to the internet and exchange information are examples of social media. Social networking is becoming increasingly important in the development of goods and in reminding customers of various offers. The feedback on the product or service is also beneficial. It serves as a brand-building technique for establishing a trustworthy customer base via publications, word-of-mouth, and other means [8].

#### 5) *Autonomous Vehicles*

Autonomous vehicles are motor vehicles that can operate without the direct involvement of a human operator by using artificial intelligence, sensors, and the global positioning system. The era of the personal automobile is rapidly coming. Autonomous customers will have plenty of time to surf the internet, read emails, shop for new products, and watch advertisements in their immediate surroundings. Autonomous cars need a great deal of digital media knowledge. Businesses may use these purchasing and search patterns to adapt their marketing approach to avoid this new sector. Big data is currently considerably broader in scope, but it will become so adaptable and predictive in the future years that nothing will be able to be manually changed again.

#### 6) *3D Printing*

A 3D printer is a kind of electrical equipment that can create a digital three-dimensional model. The "additive manufacturing" method is an overlay that looks like the colours of an ink-jet printer successfully laid out on a flat piece of paper. As the Industrial Revolution disrupted agricultural life in the early nineteenth century, 3D printing may one day obliterate the manner of output individuals utilize. 3D printing creates prototypes that the customer is expected to print or that the designer is linked to a third-party manufacturer to build. The completed product is not sold; instead, the idea and a printed license are sold. Promising artists post their printing ideas on the internet, either at home or at work.

### C. *E-Commerce Business Types*

#### 1) *Business-to-Business (B2B)*

Electronic commerce (B2B) is a kind of business-to-business (B2B) trade. B2B refers to the exchange of electronic goods or services between businesses. This kind of electronic trade is often used by manufacturers and conventional industrial wholesalers [9].

#### 2) *Business-to-Consumer (B2C)*

Electronic firm relationships with end clients E-commerce business to consumer. It's the internet shopping area, which is where most traditional retail transactions take place. These partnership types may be basic, complicated, or intermittent, and they can be terminated at any time. Because of the Internet, this company type has grown significantly, with a slew of online shops and centers selling a wide range of goods to consumers, including computers, gadgets, books, accessories, automobiles, food, financial materials, and digital periodicals. In contrast to traditional retail sales, the buyer usually has a greater understanding of the informative information accessible, and it is widely recognized that you may purchase cheaply without sacrificing a similarly personalized customer experience or guaranteeing quick processing and delivery.

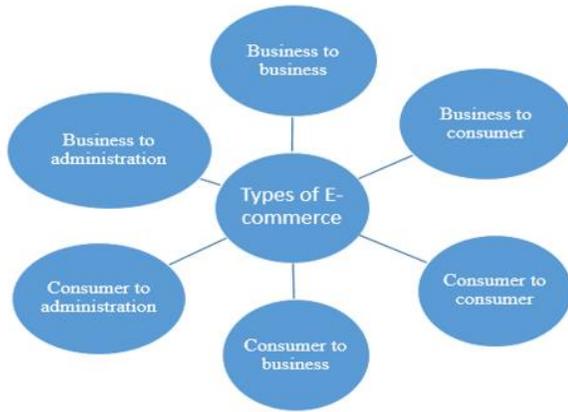


Figure 1: Representation of several types of E-commerce.

3) *Consumer-to-consumer (C2C)*

Consumer-to-consumer (C2C) electronic e-commerce includes any electronic transaction in products or services between consumers. This trade is usually handled by a third party that provides an online transaction forum.

4) *Consumer-to-business (C2B)*

In C2B, the normal context of products transaction is inverted. In crowdsourcing-based businesses, this form of e-commerce is frequently utilized. Individuals sell their services or goods to businesses that specialize in certain kinds of services or commodities. Artists may request many logo ideas, but only one is chosen and bought at these events. Markets that offer royalty-free pictures, photographs, media, and design components are another prominent medium in this business sector[10].

5) *Business-to-administration (B2A)*

This category includes all online transactions between businesses and government agencies. This includes a broad range of programs, including taxes, social services, healthcare, legal paperwork and records, and so on. Spending on government has substantially expanded these forms of delivery in recent years.

6) *Consumer-to-administration (C2A)*

The C2A paradigm encompasses all government-to-individual electronic transactions. The following are some of the highlights of the application:

- *Education* - information dissemination, remote learning, and so forth.
- *Social Security* - through disseminating information, issuing payments, and so forth.
- *Taxes* - submitting tax returns, making payments, and so forth.
- *Health* – appointments, sickness information, and payment of health services, and so on.

**D. E-Commerce Potential in the Modern Market**

The number of trade locations on the global market has been reduced thanks to the World Wide Web (WWW) and the Internet. South Pacific countries have been closer to the rest of the globe in terms of shorter trade cycles and reduced transaction costs through speeding up the buying and selling of products. Countries in the South Pacific

will potentially gain access to new markets. Despite all of the hype around internet commerce and the recent bankruptcy of many dot-com companies it offers genuine opportunities for small businesses in developing countries. They may allow artists who make tapa clothing to sell directly on the Internet and display photographs of their goods taken using digital cameras. Though electronic commerce seems to be extremely promising for small-scale manufacturers that have difficulties accessing international markets, it is unclear whether a decrease in transaction costs generated by the internet is sufficient to drive a wide-ranging change within the global economy. In comparison to how it started, the new e-commerce trend has now spread in numerous ways. The e-commerce marketplace is no longer just an online marketplace for people to buy and sell things, but it's become even more so as e-commerce has evolved, from being extremely local to incorporating artificial intelligence and even providing intangible products and services like GST enforcement and short-term loans. With the advent of technologies that advance at light speed, the consumer's prospective perspective is on the brink of complete transformation. For the future generation of e-commerce patterns, it will undoubtedly concentrate on consumer services improved across the Internet of Things (IoT), data processing, logistics, artificial intelligence, customization, and hyper-local area. Examine some of the latest developments in e-commerce in both established and developing areas in order to gain momentum in the future years.

**E. E-Commerce Benefits**

From a consumer standpoint, the greatest benefit is that it improves significantly, saves a lot of time, and is easy to use from anywhere in the globe. The client is able to make an order at any time. The following are the main benefits of e-commerce for consumers:

- Members of the stock market have lower trading rates.
- *Increased flexibility:* purchases may be made 24 hours a day, without having to come into touch with the company.
- *Save time:* Consumers may buy or sell any goods online at any time.
- The client gets easier and continuous access to information by clicking on the button to search data on several pages.
- Both purchases and transactions should be conducted from the comfort of a buyer's home or workplace.
- If the company's functioning is unpleasant, switching to other companies-customers is still simple.
- Customers may be able to purchase a product that was previously unavailable on the local or national market but now gives them with access to a bigger offering.
- Before making a final purchase, a consumer will leave feedback on a product to see what others have purchased or to read other customers' reviews.
- From the perspective of sellers, the main benefit of ecommerce is increased sales and lower operating

and maintenance expenses through the Internet. Include the following in your list:

- It aids in revenue creation; it lowers costs associated with operation and maintenance; it lowers costs associated with purchase and procurement; and it aids in increasing client loyalty and retention.
- A significant decrease in the money spent for product transportation
- It helps to speed up the selling process by improving client and supplier relationships. It also helps to improve internal and external communication.
- It enhances a company's or brand's image.

#### **F. Challenges Associated with E-Commerce**

Electronic commerce (E-commerce), like other technologies, has many difficulties. These issues are mostly encountered by buyers and sellers who do business via the internet. The following are some of these issues to consider:

- The electronic commerce market is not growing at the same rate as private and public businesses. To grow the electronic commerce sector, private and governmental cooperation is required. People get the credibility they need to thrive in electronic commerce when they work together.
- There is no system security, dependability, or particular needs, and just a few communication protocols are available. If an e-commerce website is hacked, the client loses his money. Cyber security is the most frequent issue for e-commerce Web sites.
- Financial intermediaries and financial institutions: Financial institutions and banks have been hesitant to actively assist the e-commerce sector in developed nations so far. However, merchants need the involvement of banks in growing e-commerce and popularity, as well as reducing theft and potential losses associated with credit card fraud. Alternative methods to secure and effective online transactions are threatening banks and other financial service intermediaries outside of conventional payment card strategy, in places where there are no regular credit cards.
- In wealthy countries, there is a tradition of buying products through haggling with vendors, which makes e-commerce difficult in poor countries owing to a lack of infrastructure.
- The lowering of internet costs is one of the most difficult problems. The authorities are attempting to keep bandwidth prices low. The internet, on the other hand, does not stay cheap owing to increasing network delivery and maintenance expenses.
- The most important element is electronic settlements' trustworthiness. A standard document on Baseline Laws and Rules may ensure that e-commerce transactions are accurate and legitimate. Modern regulation and fairness in electronic transactions underpin confidence in the developed world. Despite the fact that law and the legal system do not recognize e-commerce-based transactions, they are detrimental, whether actual or perceived. Cash delivery is still the most common method of payment

in many industrialized countries, since cheques and credit cards are not widely accepted.

- The legal description, permission, and authorisation are required for contemporary transaction processes, new instruments, and new service providers. It's crucial to distinguish between an electronic signature and the state of a handwritten signature, for example. The new legislative definitions and permissions, such as a bank's legal term and the concept of a domestic border, may also be examined.

## **II. DISCUSSION**

Electronic commerce (E-commerce) refers to the use of telecommunications networks to share commercial information, establish business connections, and execute business transactions. Traditional E-commerce is quickly migrating to the Internet, relying on information technologies such as electronic data interchange (EDI) via proprietary value-added networks. The World Wide Web, a component of the Internet, has emerged as the primary engine of modern E-commerce. This article offers an E-commerce hierarchical architecture made up of three meta-levels: infrastructure, services, and goods and structures, each of which is made up of seven functional levels. These stages of E-commerce development and analysis include everything from wide-area telecommunications infrastructure to electronic markets and electronic hierarchies made possible by E-commerce. Integrating electronic payment into the purchasing process, creating a consumer marketplace, electronic business governance, and new intermediation are all considered as nodal issues that will shape future E-commerce growth? The article also launches the International Journal of Electronic Commerce, which will offer a comprehensive perspective of the emerging E-commerce industry.

## **III. CONCLUSION**

In conclusion, electronic commerce will be one of the most important sectors in the area of electronic business in the next years. The electronic commerce revolution has had a significant beneficial effect on the transaction sector by rapidly opening up new markets and bridging gaps. It had a significant impact on the world's traditional market system and enabled individuals to live better lives. E-commerce, although rewarding consumers and sellers, presents challenges to traditional companies' long-term viability. When compared to developed nations, emerging countries offer a variety of difficulties to the successful conduct of e-commerce. E-commerce thrives when Internet costs are low, and many businesses are usually depleted. One of the main benefits of internet commerce for customers is convenience, which increases client loyalty. This is due to the fact that customers may place orders from wherever they have internet connection. Any consumer should expect a smooth operation and various payment options from a company's e-commerce, as well as additional services available online. Other benefits include a wider range of goods and better regional

coverage. However, e-commerce businesses confront many difficulties as they expand.

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