

2.1 Introduction

E-commerce, that is, the buying and selling of goods on the Internet, complements traditional trade. Now, technology has moved forward to the next level of E-biz. Technology moves so fast, it is overtaken before it can even be validated. E-commerce is like that.

E-commerce can best be described as *buying and selling of goods and services over the Internet*. This includes both business-to-business (called B2B) and business-to-consumer (B2C) transactions.

E-commerce technology is changing in a big way. Just keeping pace with the changing world will be a full time task. It is impossible for any individual to keep pace with all the changes to technology that are occurring today as he needs the assistance of staff, consultants, outsourced services and suppliers. Similarly, e-commerce involves a lot, just as one aspect of e-commerce such as the Internet, requires extensive knowledge of web languages like HTML, XML or Java. Further, there are thousands of applications one has to know such as search engines, web servers, communications and networking. All these are significantly different than the internal technology structure of most organisations. In order to position the organisation to take advantage of any changes in technology, one has to be cautious in investment. If the organisation does not get the right benefits, it is advisable not to buy the newest of everything which may result in inefficient use of your cash. But today, any company can capitalise on e-commerce.

The potential dimension of e-commerce today is the substantial cost savings that could occur if a company's business is done electronically.

2.2 Main Activities of Electronic Commerce

The functions included are :

- Buying and selling of products.
- Shipping of products and
- Producing financial statements.

All the above functions are without human intervention, which is termed as real 'E' in e-commerce. Humans cannot vanish from the scene. They will be moving to other tasks that generate real value like :

- Personalised customer service
- Sales
- Corporate development and
- New product research etc.

We will avoid tasks that can be handled faster and more efficiently by a computer such as creating journal entries, sending purchase orders or confirming shipments etc. If a company uses computers extensively to perform tasks within the organisations, we call it "e-commerce ready or capable".

2.3 Definition of Electronic Commerce

This term has evolved from its simple notion of electronic shopping which in turn means all aspects of business and market processes enabled by the Internet and the World Wide Web technologies.

- The narrow definition of e-commerce is :
- a. The narrow definition of e-commerce is :
 - (i) Doing business online or
 - (ii) Buying products and services through web store fronts.

Products could be trading of any physical products such as tractors, cars, trucks etc. Services could be distant education, online medical consultation with an hospital outside the country or arranging excursion etc.

E-commerce is a business conducted exclusively through an electronic format. It is derived from the phrase electronic commerce.

b. It is buying and selling, marketing and servicing, and delivery and payment of products, service and information over the Internet, intranets, extranets and other networks, between an inter-networked enterprise and its prospects, customers, suppliers, and other business partners.

E-commerce can be considered as:

- (i) A strategy
- (ii) A technology
- (iii) A system
- (iv) A separate business
- (v) A sales approach
- (vi) A mystery and
- (vii) A combination of some of (i) to (iv) indicated above.

c. E-commerce is the buying and selling of products, information and services over the Internet. It is also a particular type of e-business initiative that is focussed around individual business transactions that use the Net as medium of exchange, including business to business, as well as business to consumer.

e. It is defined as a modern business methodology that addresses the desire of firms, consumers and management to cut costs while improving the quality of goods and increasing the speed of services.

2.4 Broad Goals of Electronic Commerce

As already defined, e-commerce is a modern business methodology which addresses the needs of the organisations, merchants and consumers to cut costs while improving the quality of goods and services and increasing the speed of service regarding delivery. It is associated with the buying and selling of information products and services via computer network today and in the future via any one of the myriad of networks that make up the information super highway. It is well suited to facilitate re-engineering of business processes occurring at many firms. The broad goals are :

- (i) Reduced costs
- (ii) Lower product cycle time
- (iii) Faster customer response
- (iv) Improved service quality

E-commerce is a new way of conducting, managing and executing business transactions using computer and tele-communication networks. It is expected to improve the productivity and competitiveness of participating businesses, by providing unprecedented access to an online global market place with millions of customers and thousands of products and services.

one digital platform, whether it be a computer connected to the Internet and intranet, a new kind of device capable of interacting with other devices, because that device will prove to be more efficient and productive.

2.10 Advantages of Electronic Commerce

- Distances do not matter in carrying out trade; you can reach the world any time you want. This helps companies to have a cheap and effective way of communication with suppliers on one side and with customers on the other (contact with suppliers via Internet or via an EDI system).
- Unlike a brick and mortar store, an online store works 24 hours a day, 7 days a week, 365 days a year, round the clock.
- Compared with a retail outlet or new office, the cost of setting up an e-commerce website is very low; can be integrated straight into your infrastructure with very little overheads or outlay.
- More flexibility in a website to add and remove a product or products than in catalogues or brochures.
- Being online, it potentially gives exposure to previously untapped market segments.
- Error reduction because orders do not have to be re-keyed into order entry systems and increased efficiencies through the automation of the business processes.
- Wider choice and no wastage of time (people who buy have to go outdoors and find a shop with a product of their desire). Now they can turn on their computer and select one of the thousands of online stores. Customers can find products from all over the world; so the amount of offers is much more than in a local shopping centre.
- Buying/selling of items from any place using one's computer, if internet connection is available.
- Can avail of services such as financial services, legal services, medical advice etc from appropriate portals.
- Large variety of goods (more so in books, music etc) accessible easily, without spending time and money by physical (personal) visits and searching in various shops.
- Availability of anonymous friendly advice on items one may like to buy/rent.

The major advantages to the business are:

- A website helps the business to reach out to a worldwide customer base at a very low cost.
- Reduction in order processing cost as manual data entry is greatly reduced. Business carried out faster, as all documents are exchanged electronically.
- Inventory size reduced because of reduction in transaction time.
- Funds transfer is faster.
- Large number of potential business partners can be quickly found and contacted using appropriate search enquiries and e-mail correspondences.
- In some cases, middlemen such as retailers can be eliminated as a manufacturer can reach out directly to a customer to (Eg., Dell Computers sells PCs in USA directly to customers) reduce cost and delays. Example of change is what is known as a supply chain.

2.11 Disadvantages of Electronic Commerce

- Inability to touch and feel merchandise, since the selling is online (kick the tyres). This is a psychological barrier, but as consumers become more familiar with shopping online, this barrier is removed.
- Majority of the population is acknowledging importance of e-commerce and computer based technologies (a major drawback being that people don't socialise much). Everything is done on a PC at home and there is not much need to go to the market. Online buying is the trend today which is being appreciated substantially.
- Online stores do not exist for very long. Many companies do not know exactly how to set up a store, resulting in a large group of annoyed and dissatisfied customers, who want to buy something; not clear how they should and there is no one to guide (whom they can approach) like a shop keeper.
- Computer systems will never be hundred percent safe. Hackers intercept (money) transactions and cause problems for both consumers and companies that operate on the Internet.
- In a developing nation, the average Internet user is usually a young highly educated man. If a business is started on the Internet, women and elderly persons will not be reached.
- As of today, e-commerce poses problems to sell products to a target group other than young, high educated males, whereas in the future, this threat may not exist as more people are getting aware of computers and online shopping.
- From the Indian context, internet access is not widely available at present.
- Payment by credit card requires faith in the system security. As on date, there is no mutual trust between seller and buyer in this system of payment using credit cards for goods and services ordered via internet in India. Suspicious attitude exists. Customers are wary of giving their credit card numbers to vendors who have only a 'web presence'.
- EDI standards have to be in place before B2B e-commerce can increase. Small businesses may find it difficult to conform to these standards.
- Many persons go shopping for social contacts, touch and feel the product/item before using them. Hence, e-commerce will de-personalise transactions.
- One of the major problems is security of transactions on the Net. Spies or hackers can steal and misuse credit card numbers if not careful.
- Shopping portals are more vulnerable to attacks by hackers unless special precautions are taken. One such nuisance called '**denial of service**' is there in which a large number of frivolous enquiries are posted onto a portal, making it inaccessible to legitimate customers.
- Portals have to be protected from virus attacks and other electronic vandalism and espionage by special security systems.

2.12 Pre-requisites of Electronic Commerce

Very few requirements are needed to conduct e-commerce business such as:

- A website, may be your own or one supplied to you by a cart provider.
- A shopping cart program to list your products or services and a means to collect purchase information.
- A method to get the funds into your bank account.

If the process is to be automated, a compatible credit and merchant account and a transaction processor (eg. authorise-net) to collect credit card information and to obtain authorisation are needed. These would enable to post funds to the account.

2.13 Lessons from Electronic Commerce Evolution

The following are considered as checklist regarding the evolution of e-commerce.

- No one that has properly embraced ATMs, credit or debit cards ever went back to the old ways.
- Customers want extended hours. Of course, 24 hours per day is the ceiling.
- Customers want expanded locations – closer to their homes, the better. The home is the limit.
- Customers change the way a businessman does business, technology is merely the facilitator.
- If convenient, people will gravitate to it after experimenting with it.
- There is an inevitable trend in its emergence and e-commerce is here to stay.

2.14 Meaning of Electronic Commerce

E-commerce involves: Multimedia, advertising, product information, customer support on the world wide web, Internet

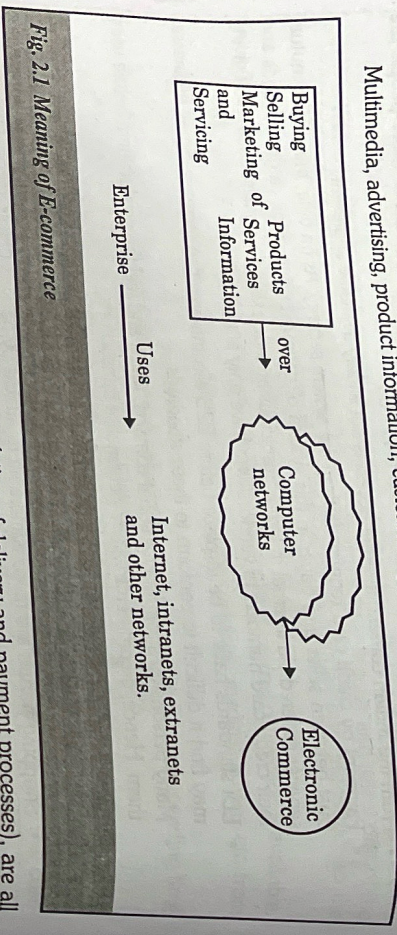


Fig. 2.1 Meaning of E-commerce

security and payment mechanism (to ensure completion of delivery and payment processes), are all covered under electronic commerce.

Example : Electronic commerce could include :

- Use of multimedia web pages of product catalogs on the Internet
- Access of inventory databases by large customers through the extranet
- Use by sales representative to access customer records through corporate intranet

Electronic commerce covers :

- Online point-of-sale and Transaction processing
- Web retailing and Wholesaling
- Electronic Data Interchange (EDI)
- Electronic Funds Transfer

- Electronic Banking
- Interactive Marketing and Supply Chain Management

Enterprise collaboration systems include :

- Electronic Mail
- Data conferencing
- Voice Mail
- Video conferencing
- Discussion Forums
- Electronic Meeting Systems.

2.15 Scope of Electronic Commerce

The Scope of e-commerce is shown in Fig.2.2 below, which is self explanatory.

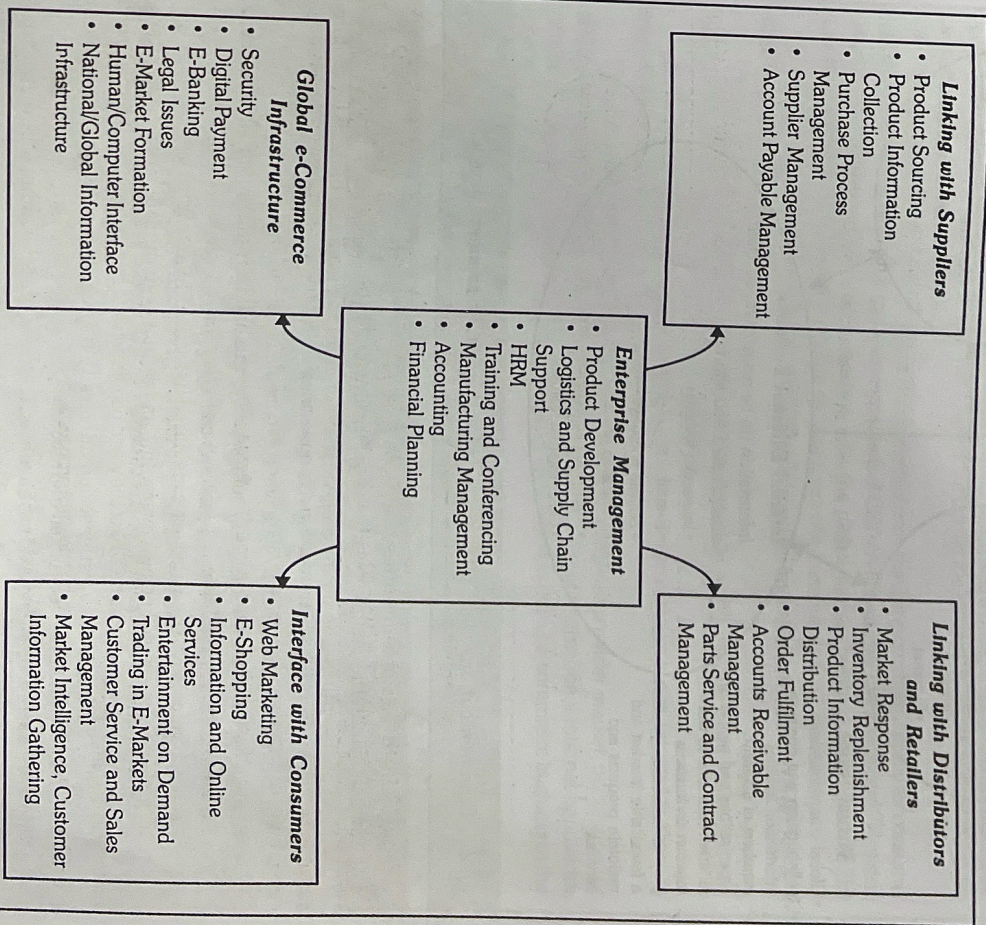


Fig. 2.2 Scope of E-Commerce

(Source: ER&DCI [Electronic Commerce: State of the Art])