BCAR-601
E-commerce

Bachelor of Computer Application (BCA)

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E-COMMERCE

Dr. Babasaheb Ambedkar Open University

E-COMMERCE

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Dr. Himanshu Patel Assistant Professor, School of Computer Science, Dr. Babasaheb Ambedkar Open University, Ahmedabad	**(Member Secretary)**

Course Writer

Dr.G. Rajkumar Assistant Professor, Department of Computer Applications, N.M.S.S. VellaichamyNadar College, Nagamalai.

Content Reviewer

Prof. (Dr.) Nilesh Modi Professor and Director, School of Computer Science, Dr. Babasaheb Ambedkar Open University, Ahmedabad

Dr. Babasaheb Ambedkar Open University

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E-COMMERCE

BLOCK 1

INTRODUCTION TO E-COMMERCE

Unit 1 : Introduction to E-Commerce

Unit 2 : An Overview of Internet

Unit 3 : Electronic Commerce: Opportunities and Challenges

UNIT 1

INTRODUCTION TO E-COMMERCE

STRUCTURE

Overview

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1.2 What is Electronic Commerce?

1.3 Scope of Electronic Commerce

1.4 Objective of Electronic Commerce

1.5 Evolution of Electronic Commerce

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OVERVIEW

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 the paperless exchange of business information using the following ways: Electronic Data Interchange (EDI), Electronic Mail (e-mail), Electronic Bulletin Boards, Electronic Fund Transfer (EFT), Other Network-based technologies.

LEARNING OBJECTIVES

After completing this unit, you will be able to;

- describe the concepts of e-commerce
- gain introductory knowledge of e-commerce

- discuss about the evolution of e-commerce
- describe the benefits and limitations of e-commerce
- explore about the generic framework for e-commerce

1.1 INTRODUCTION

In the past few years, enterprises across the globe have experienced significant changes in their business information system. Huge investments were made in Enterprise Resource Planning (ERP) system implementations but still they struggle to get timely information that is needed to make effective business decision and to ensure continuous growth of enterprises. Placing "e" in front of any process or function seemed to be the magic prescription for never ending story of success and rapid returns for enterprises. E-business, e-procurement, e-sales, e-payment, e-banking, e-CRM, e-CAD, e-delivery are just a few.

Electronic Commerce has become a necessary component of business strategy, planning and economic development in the emerging global economy. Electronic commerce, in a broad sense, is the use of computer networks to improve organizational performance. Increasing profitability, gaining market share, improving customer service, and delivering products faster are some of the organizational performance gains possible with electronic commerce.

From the 1990s onwards, electronic commerce would additionally include Enterprise Resource Planning systems (ERP), data mining and data warehousing. Perhaps it is introduced from the Telephone Exchange Office, or maybe not. The first online information marketplace, including online consulting, was likely the American Information Exchange, another pre-Internet online system introduced in 1991.

Although the Internet became popular worldwide in 1994, it took about five years to introduce security protocols and DSL allowing continual connection to the Internet. And by the end of 2000, a lot of European and American business companies offered their services through the World Wide Web. Since then people began to associate a word "ecommerce" with the ability of purchasing various goods through the Internet using secure protocols and electronic payment services.

1.2 WHAT IS ELECTRONIC COMMERCE?

E-Commerce or Electronic Commerce is any form of business transaction in which the parties interact electronically over the Internet rather than by physical exchange. E-commerce is means of enabling and supporting the exchange of information, goods, and services between or among companies or between companies and their customers. It

enables companies to be more efficient in their internal operations and more responsive to the needs and expectations of their customers. Electronic commerce technologies enable enterprises to exchange information instantaneously, eliminate paper-work, and advertise their products and services to the global market. E-commerce is a subset of business, where products and services are advertised, bought and sold over the Internet. Any size business can have an E-commerce strategy. Many businesses have become extremely profitable through online sales. Dell Computers is a prime example. Small companies and even individuals can also market their products or services on a worldwide basis through E- Commerce. Large companies can reduce sales and stocking costs by selling online.
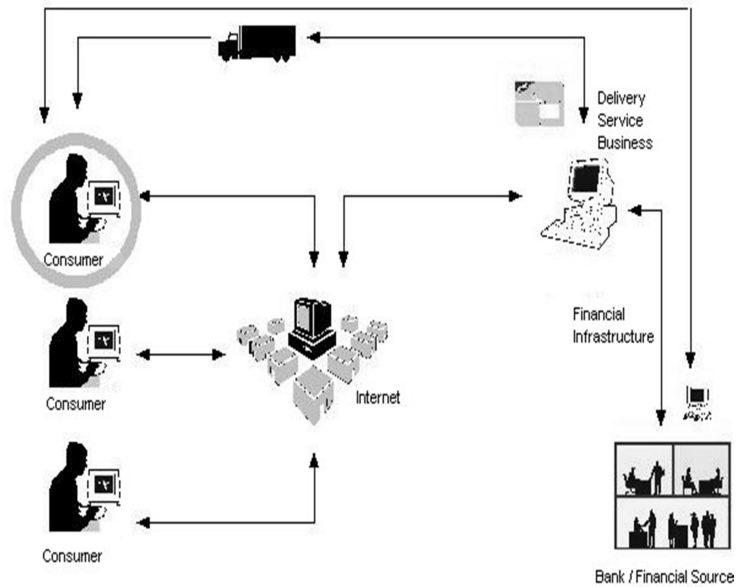
Figure 1.1 Electronic Commerce Systems

1.3 SCOPE OF ELECTRONIC COMMERCE

Electronic Commerce is a term popularized by the advent of commercial services on the Internet. Internet e-Commerce is however, only one part of the overall sphere of e-Commerce. The commercial use of the Internet is perhaps typified by once off sales to consumers. Electronic Markets (Ems) are in use in a number of trade segments with an emphasis on search facilities and Electronic Data Interchange (EDI) is used for regular and standardized transactions between organizations. The mainstream of e-Commerce consists of these three areas; these are represented as a diagram in Figure 1.2 and outlined in a little more detail below.
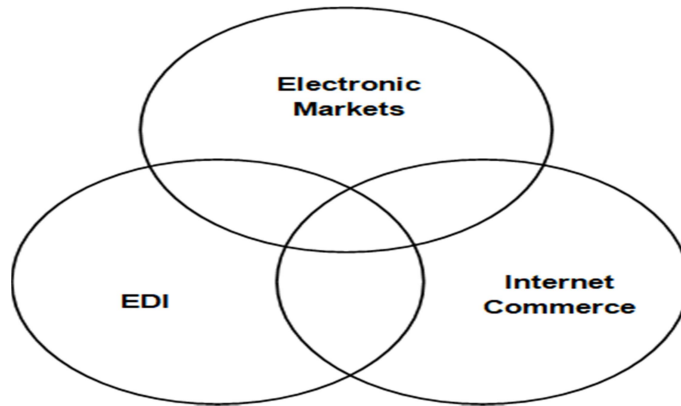
Figure 1.2 three categories of E-Commerce

a) Electronic Markets

An electronic market is the user of information and communications technology to present a range of offerings available in a market segment so that the purchaser can compare the prices of the offerings and make a purchase decision. The usual example of an electronic market is an Airline booking system.

b) Electronic Data Interchange (EDI)

EDI provides a standardized system for coding trade transactions so that they can be communicated directly from one computer system to another without the need for printed orders and invoices and the delays and errors implicit in paper handling. EDI is used by organizations that make a large number of regular transactions. One sector where EDI is extensively used is the large supermarket chains which use EDI for transactions with their suppliers.

c) Internet Commerce

Information and communications technologies can also be used to advertise and make once of sales of a wide range of goods and services. This type of E-commerce is typified by the commercial use of the Internet. The Internet can, for example, be used for the purchase of books that are then delivered by post or the booking of tickets that can be picked up by the clients when they arrive at the event. It is to be noted that the Internet is not the only technology used for this type of service and this is not the only use of the Internet in E-Commerce.

E-Commerce means buying and selling products and/or services over the internet by means of computers sending and processing electronic transmissions to each other. E-Commerce is used everywhere in everyday life. It ranges from credit card authorization, travel reservations

over a network, wire fund transfers across a globe, point of sale transactions in retailing, electronic banking, fund raising, political campaigning and auctioneering, online education and training and soon.

E-Commerce includes electronic trading of both goods and electronic material. E.Turban and others describes the process of buying and selling or exchanging of products, services and information via computer networks including the internet. J.F. Rayport and B.I. Jaworshi has suggested that, "E-Commerce can be defined as the technology mediated exchanges between the parties as well as the electronic based intra or inter organizational activities that facilitate such exchanges". Seddon has suggested that, "the world has just entered a third new phase in the evolution of IT capabilities: the Internet era'. The suggestion divides the evolution of Information Technology (IT) into 20 year periods:

- 1955 – 1974   The Electronic Data Processing (EDP) era.
- 1975 – 1994   The Management Information System (MIS) era.
- 1995 – 2019   The Internet era.

1.4 OBJECTIVES OF ELECTRONIC COMMERCE

Ecommerce business drives profitable growth with reduction is cost to customer, developing customer-reach, and providing a unique customer experience. It has become more than essential for Business to Business as well as other businesses to make the right use of ecommerce. Now, ecommerce is evolving or better say evolved into digital commerce that implies to the entire business journey from buying to delivery with an online experience. Below are the few objectives of ecommerce:

(i) Reduce management costs: Businesses aim at reducing the costs incurred for the betterment of their revenue. Automating the ecommerce business can help in reducing the management cost significantly. Moreover, the right use of digital marketing can help in reducing the cost spent on driving customers to such an extent that businesses can bring customers for free of cost.

(ii) Developing business relations: With E-commerce as the primary use, business development can be easily achieved. The direct communication between a company and the customer, the business relationship can be boosted. Eventually, the ecommerce market shall be expanded.

(iii) Increasing the number of loyal customers: Customers are the core of all business strategies. Therefore, ensuring the great customer

experience is of prime importance for the growth of the business. More than 60% of consumers look for purchasing goods and services online. If you meet your customers where they are already active, the chances of them, interacting with your business increases two folds. You can increase the number of loyal customers by giving the best experience to your already existing customers as well as bring in newer customers.

(iv) Boosting the efficiency of services: With the continually evolving technology, you need to enhance the efficiency of your services. By choosing an online ecommerce platform to create an online store, you can efficiently reduce the cost of managing and selling online. You have various opportunities to boost the efficiency of your service that eventually enhances the revenue earned. By reducing the delivery time, you can witness happy customers getting back to your business two times faster. Another way is to provide your customers with automated services such as status update, invoice creating, chat support, etc.

(v) Making responsive E-commerce website: With the increasing use of smart phones for shopping online, it has become more than mandatory for E-commerce businesses to go mobile. It is one of the major objectives of all leading E-commerce businesses. By responsive, it means to create a website that can be viewed from any devices of varying screen size, equally. Studies say that Google may next rank a website based on its mobile website. It means that any website that has a responsive design would be ranked on top of the website that does not have one. Making your E-commerce website responsive can help you optimize it. A mobile-friendly website earns more traffic than the rest.

1.5 EVOLUTION OF ELECTRONIC COMMERCE

History of E-commerce dates back to the invention of the very old notion of **"**sell and buy", electricity, cables, computers, modems and the Internet. E-commerce became possible in 1991 when the Internet was opened to commercial use. Since that date thousands of businesses have taken up residence at web sites. At first, the term E-Commerce meant the process of execution of commercial transactions electronically with the help of the leading technologies such as Electronic Data Interchange (EDI) and Electronic Funds Transfer (EFT) which gave an opportunity for users to exchange business information and do electronic transactions.

Table 1.1: Evolution of Electronic Commerce

Year	Event
1970	Electronic Funds Transfer (EFT) used by the banking industry to exchange account information over secured networks.
1984	Electronic Data Interchange (EDI) was standardized through ASC X12.
1992	CompuServe offers online retail products to its customers. This gives people the first chance to buy things off their computer.
1994	Netscape arrived. Providing users a simple browser to surf the Internet and a safe online transaction technology called Secure Sockets Layer.
1995	Two of the biggest names in E-commerce are launched: Amazon.com and eBay.com.
1998	PayPal launches as an E-commerce payment system.
1999	World Wide Web, Alibaba launches
2000	Google introduces Google AdWords as an online advertising tool.
2005	Amazon introduces Amazon prime membership
2011	Face book throws its hat in the E-Commerce ring with sponsored stories
2014	Apple pay introduced as a mobile payment method.
2015	Google respond by introducing Android pay.
2017	Retail E-commerce sales across the world reaches $2.304 trillion, which was a 24.8 percent increase than previous year.

1.6 GENERIC FRAMEWORK OF ELECTRONIC COMMERCE

The basic structure of E-commerce consists of four layers. The four layers are hold by two pillars. The framework of E-commerce is projected in the figure 1.3.
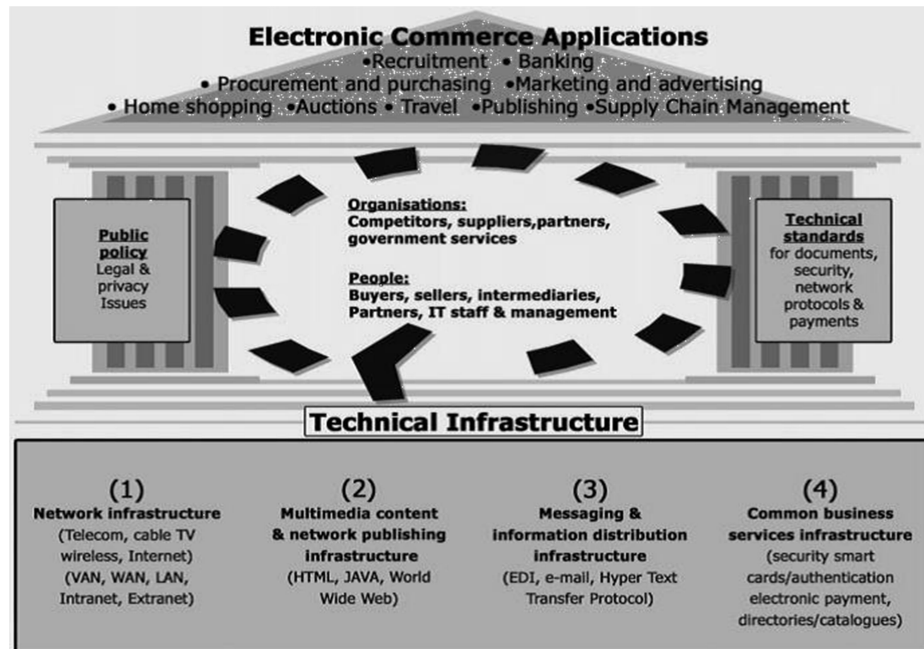
Figure 1.3 Generic frameworks for electronic commerce

The four building blocks in the infrastructure are:

1) **Common Business services:** It facilitates business and selling process.
2) **Multimedia content and network publishing:** It creates and communicates about it.
3) **Messaging and information distribution:** It acts as means sending / retrieving of information.
4) **The Network information:** It forms the platform for the operation of E-commerce activities.

The four blocks of framework are hold together by the two pillars supporting all E-commerce applications and infrastructure are just as indispensable:

- **Public policy:** Public policy to govern such issues as universal access, privacy and information pricing.
- **Technical standards:** Technical standards to dictate the nature of information publishing, user interfaces and transport in the interest of compatibility across the entire network.

The various E-commerce applications are at the top of the above structure. The applications include Supply chain management, Video on demand, Remote banking, Procurement and purchasing, online marketing and advertising and Home shopping.

1.7 KEY DRIVERS OF E-COMMERCE

It is important to identify the key drivers of e-commerce to allow a comparison between different countries. It is often claimed that e-commerce is more advanced in the USA than in Europe. These key drivers can be measured by a number of criteria that can highlight the stages of advancement of E-commerce in each of the respective countries. The criteria that can determine the level of advancement of e-commerce can be given as:

i) Technological factors – The degree of advancement of the telecommunications infrastructure which provides access to the new technology for business and consumers

ii) Political factors – including the role of government in creating government legislation, initiatives and funding to support the use and development of e-commerce and information technology

iii) Social factors – incorporating the level and advancement in IT education and training which will enable both potential buyers and the workforce to understand and use the new technology

iv) Economic factors – including the general wealth and commercial health of the nation and the elements that contribute to it

v) These are mainly at the level of the firm and are influenced by the macro- environment and e-commerce, which include:

vi) Organizational culture – attitudes to research and development (R&D); its willingness to innovate and use technology to achieve objectives.

vii) Commercial benefits – in terms of cost savings and improved efficiency that impact on the financial performance of the firm.

viii) Skilled and committed workforce – that understands, is willing and able to implement new technologies and processes.

ix) Requirements of customers and suppliers – in terms of product and service demand and supply.

x) Competition – ensuring the organization stays ahead of or at least keeps up with competitors and industry leaders.

These key drivers for the implementation of e-business can be put into the context of the classic economic equation of supply and demand illustrated in below figure.
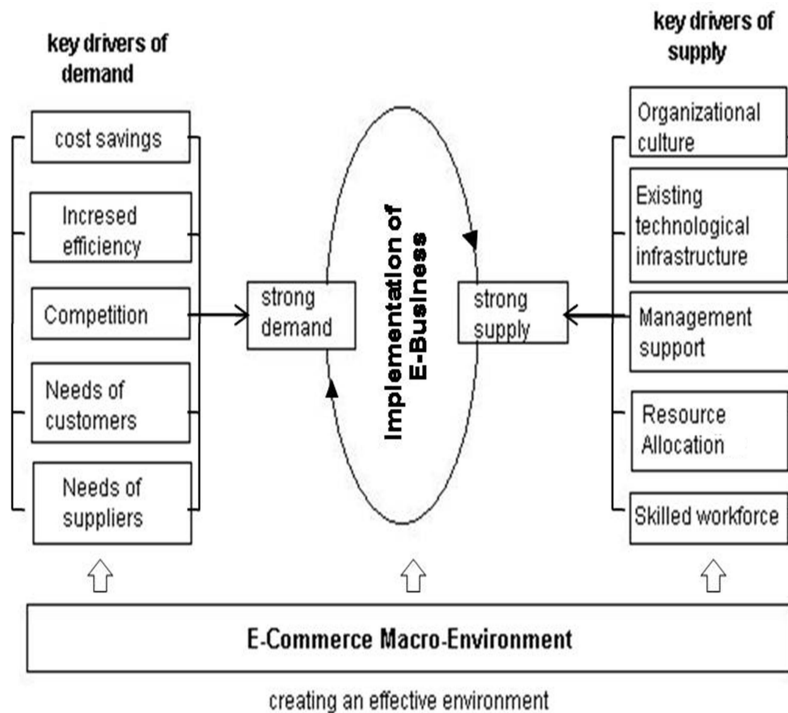
Figure 1.4 Electronic Commerce Drivers

Thus, E-commerce provides the infrastructure and environment that enables and facilitates e-business. Within this, the implementation of e-business is solely dependent on whether there is a demand by the organization and whether it can be supplied within the organization. Demand is created largely by the need to cut costs, improve efficiency, maintain competitive advantage and meet stakeholder requirements.

1.8 BENEFITS OF ELECTRONIC COMMERCE

Few innovations in human history encompass as many potential benefits as E-Commerce does. The global nature of the technology, low cost, opportunity to reach hundreds of millions of people, interactive nature, variety of possibilities, and resourcefulness and growth of the supporting infrastructure (especially the web) result in many potential benefits to organizations, individuals, and society. These benefits are just starting to materialize, but they will increase significantly as E-Commerce expands. It is not surprising that some maintain that the E-Commerce revolution is just 'as pro- found as the change that came with the industrial revolution.

Benefits to Organizations

The benefits to organizations are as follows:

a) Electronic commerce expands the market place to national and international market with minimal capital outlay; a company can

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easily and quickly locate more customers, the best suppliers, and the most suitable business partners worldwide.

b) Electronic commerce decreases the cost of creating, processing, distributing, storing, and retrieving paper-based information. For example, by introducing an electronic procurement system, companies can cut the purchasing administrative costs by as much as 85 percent.

c) Ability for creating highly specialized businesses. For example, dog toys which can be purchased only in pet shops or department and discounts stores in the physical world are sold now in a specialized www.dogtoys.com (also see www.cattoys.com).

d) Electronic commerce allows reduced inventories and overhead by facilitating "pull" type supply chain management. In a pull-type system the process starts from customer orders and uses just-in-time manufacturing.

e) The pull-type processing enables expensive customization of products and services which provides competitive advantage to its implementers.

f) Electronic commerce reduces the time between the outlay of capital and the receipt of products and services.

g) Electronic commerce initiates business processes reengineering projects by changing processes, productivity of salespeople, knowledge workers, and administrators can increase by 100 percent or more.

h) Electronic commerce lowers telecommunication cost the internet is much cheaper than value added networks.

i) Other benefits include improved image, improved customer service, new found business partners, simplified processes, compressed cycle and delivery time, increased productivity, eliminating paper, expediting access to information, reduced transportation costs, and increased flexibility.

Benefits to Consumers

The benefits of E-Commerce to consumers are as follows:

a) Electronic commerce enables customers to shop or do other transactions 24 hours a day, all year round, from almost any location.
b) Electronic commerce provides customer with more choices; they can select from many vendors and from many more products.
c) Electronic commerce frequently provides customers with less

expensive products and services by allowing them to shop in many places and conduct quick comparisons.

d) In some cases, especially with digitized products, E-Commerce allows quick delivery.

e) Customers can receive relevant and detailed information in seconds, rather than days or weeks.

f) Electronic commerce makes it possible to participate ate in virtual auctions.

g) Electronic commerce allow customers to interact with other customers in electronic communities and exchange ideas as well as compare experiences.

h) E-commerce facilitates competition, which results in substantial discounts.

Benefits to Society

The benefits of E-Commerce to society are as follows:

a) Electronic commerce enables more individuals to work at home and to do less traveling for shopping, resulting in less traffic on the roads and lower air pollution.

b) Electronic commerce allows some merchandise to be sold at lowest prices, so less affluent people can buy more and increase their standard of living.

c) Electronic commerce enables people in third world countries and rural areas to enjoy products and services that otherwise are not available to them.

d) Electronic commerce facilitates delivery of public services, such as health care, education, and distribution of government social services at a reduced cost and/or improved quality. Health care services, e.g., can reach patients in rural areas.

1.9 THE LIMITATIONS OF ELECTRONIC COMMERCE

The limitations of E-Commerce can be grouped into two categories which are:

- Technical limitations and
- Non-technical limitations

Technical Limitations of E-COMMERCE

The technical limitations of E-Commerce are as follows:

a) There is a lack of s stem security, reliability, standards and communication protocols.

b) There is insufficient telecommunication bandwidth.

c) The software e development tools are still evolving and changing rapidly.

d) It is difficult to integrate the Internet and E-Commerce software with some existing applications and databases.

e) Vendors may need special Web servers and other infrastructures in addition to the network servers.

f) Some E-Commerce software might not fit with some hardware or may be incompatible with some operating systems or other components.

g) As time passes, these limitations will lessen or be overcome; appropriate planning can minimize their impact.

Non-Technical Limitations

The many non-technical limitations that slow the spread of E-Commerce, the following are the major ones:

a) Lack of Awareness

The biggest challenge before successful e-commerce over the Net is that of changing the minds and attitudes of the merchants in tune with the emerging information technology. Further, optimism and strategic business projections are required. If e-commerce has to be an alternate means of doing business in India, a new awareness is needed, something that would cut through the hype and U.S. look alike.

Most of the business people do not understand the significance and implications of the electronic business medium or are unsure of the quality and delivery schedule, physical delivery of goods and mode of payment. Lack of awareness of the technology and its potential benefits are also equally responsible for the poor growth of e-commerce. Lack of interest and willingness to make a paradigm shift has become a crucial issue. Many companies are not willing to accept that their businesses need a revolutionary change to subsist in the potentially digital world. In short, information technology should not be looked upon as an end but as a means to achieve overall development. The IT sector is people intensive, ensuring vast employment opportunities.

b) Lack of Infrastructure

E-commerce infrastructure development is at its infancy stage in India. This unsatisfactory development is yet another major bottleneck for successful net business in India. The lack of infrastructure, if made available as required, will ensure that the investment in e- commerce starts flowing in because the business is happening and infrastructure will grow. To improve the country's wide infrastructure, major players

must come forward to contribute their pie of technology. The entire infrastructure framework needed for virtual e-commerce has not been there from the very beginning when it was started, there was a cry for the real shape of the virtual infrastructure for initiating successful e-commerce. This high cost of infrastructure development for e-business is also including the cost of leased lines.

c) Lack of Confidence

The people in India still show hesitancy in buying through the Net. Lack of quality products, timely delivery of products as some of them tend to go out of stock, lack of solutions security are the potential reasons for not developing e-commerce. People do not understand this new way of buying and selling products, i.e. the services in a digital environment which are available online.

d) Skeptic Attitude

Though the Internet is continuing to grow at a rapid rate, along with E commerce transactions, the shoppers are still skeptical about safety and have not been quick to trust sending personal information such as credit card numbers or address over the Net. Lack of adequate imagination and understanding of what web-based technologies can do to markets and competition only adds to the delay in economic development. The old business habits are demanding and controlling the business. The risk adverse attitude of the people is conspicuous and waiting for others to lead is also another attitude.

e) Credit Cards Frauds

In India, distribution channels are just one part of the problem related to e-payments. The bigger problem is that of security. All credit cards related transactions are approved offline and given the high incidence of frauds, the banks are extremely wary of approving them. In-fact, there are some unconfirmed reports of a multi-national bank refusing to approve credit card transactions carried out by a large Indian portal.

Other drawbacks may include that the buyers are quite prepared to boot the real mail for e-mail. The e-tailers themselves are not yet ready to keep pace with the potential E- commerce and this brings us to another point. Although e-commerce has the ingredients of being successful, it may have come slightly ahead of its time. The e-commerce mechanism eliminates the need for intermediaries. Unfortunately, this also has negative effects. So, security needs to be extended to customers to gain their loyalty including substantial business.

Absence of Tax Laws

E-commerce over the net has effectively eliminated national borders. This has posed an important question as to tax on the transactions over the internet. Net business posed many peculiar technological and legal problems making it difficult to impose tax and formulate a sound taxation policy. The following are the various tax implications of e- commerce:

a) There is no fixed physical location for the internet.
b) It is difficult to monitor or prevent transmissions of information or electronic cash across the Net.
c) Neither the users, administrators nor intermediaries have any control on the type of information, either transactions or cyber cash and traveling through their networks.
d) There is no emphasis on national boundaries, and messages travel across the boundaries of several countries globally. So, it means no difference, whether the information or electronic money sought to be transmitted are within one jurisdiction or between several.
e) A person's location and identity is necessary for tax purposes. Since these two are difficult, the anonymity on the Net would pose a big problem for taxations.
f) Electronic commerce eliminates intermediaries or middlemen. Though it is an advantageous feature, it also has negative effects because they could have served as leverage points for collection of tax also as information sources for transactions entered by the customers.
g) In addition to technology problems, certain legal hurdles may also be encountered with reference to international taxation laws.
h) The difficulties in defining service incomes as distinguished from sale of products, income or royalties cannot be ignored.

LET US SUM UP

E-Commerce or Electronic Commerce means buying and selling of goods, products, or services over the internet. E-commerce is also known as electronic commerce or internet commerce. These services provided online over the internet network. Transaction of money, funds, and data are also considered as E-commerce. These business transactions can be done in four ways: Business to Business (B2B), Business to Customer (B2C), Customer to Customer (C2C), and Customer to Business (C2B). The standard definition of E-commerce is a commercial transaction which is happened over the internet. Online stores like Amazon, Flipkart, Shopify, Myntra, Ebay, Quikr, Olx are

examples of E-commerce websites. By 2020, global retail e-commerce can reach up to $27 Trillion. You have also learn in detail about advantages and disadvantages of E-commerce and its types.

CHECK YOUR PROGRESS

Choose the Correct Answer:

1. Which of the following describes E-Commerce?

 a) Doing business electronically   b) Doing business

 c) Sale of goods   d) All of the above

2. During E-Commerce transaction we should ensure _____.

 a) Integrity   b) Security

 c) Confidentiality   d) All of the above

3. E-Commerce involves _____.

a) Marketing   b) Advertising

c) Warehouse   d) All of the above

4. What is the name for direct computer to computer transfer of transaction information contained in standard business documents?

a) Internet commerce   b) Electronic Data Interchange

c) E-Commerce   d) Transaction Information Transfer

5. _____ includes the general wealth and commercial health of the nation and the elements that contribute to e commerce.

a) Political factor   b) Social factor

c) Economic factor   d) Technological factor

GLOSSARY

E-Commerce or Electronic Commerce	:	Electronic Commerce is the buying and selling of goods and services, or the transmitting of funds or data, over an electronic network, primarily the Internet.
Electronic Markets	:	Internet is the ability to bring buyers and sellers together in a virtual space. This creates electronic markets. These markets, or commerce web sites, on the internet allow buyers and suppliers to meet and trade with each other.

Electronic Data Interchange (EDI)	:	These electronic markets are also known as online markets or e-hubs. EDI stands for Electronic Data Interchange. EDI is an electronic way of transferring business documents in an organization internally, between its various departments or externally with suppliers, customers, or any subsidiaries.
Electronic Data Processing (EDP)	:	Electronic Data Processing is also known as EDP, a frequently used term for automatic information processing. It uses the computers to collect, manipulate, record, classification and to summarize data.

SUGGESTED READINGS

1. Alexi Leon and Mathews Leon, (2004), Introduction to Information Systems, McGraw-Hill Education (India) Pvt Limited, New Delhi.
2. Anup K. Ghosh, (2012), E-Commerce Security and Privacy, Kindle Edition
3. Peter G W Keen, (1994), Every Manager's Guide to Information Technology, 2nd Edition, Harvard Business School Press, Boston.
4. Rajesh Chakrabarti and VikasKardile, (2002),The Asian Manager's Handbook of E-Commerce (paperback edition), Tata McGraw – Hill Publishing Company Limited, New Delhi.

WEB RESOURCES

1. [How to start Ecommerce Business | Ecommerce Business in Tamil - Bing video](#)
2. [e commerce || What is e Commerce in amharic || ecommerce business for beginners/e commerce website - Bing video](#)
3. [Fundamental Of E-Commerce | Unit 1 Revision | E-Commerce | BBA | Bcom | MBA | PGDM | BCA - Bing video](#)
4. [E 3 ELEMENTS AND DRIVERS OF E-COMMERCE - Bing video](#)
5. [Introduction to e commerce, types,advantages, disadvantages - YouTube](#)

ANSWER TO CHECK YOUR PROGRESS

1. a)   2. d)   3. d)   4. b)   5. c)

Unit 2

AN OVERVIEW OF INTERNET

STRUCTURE

Overview

Learning Objectives

2.1 Introduction

     2.1.2 Basic terms and concepts

2.2 History and evolution of the Internet

2.3 Advantages of Internet

2.4 Disadvantages of Internet

2.5 Business and Information technology

Let Us Sum Up

Check Your Progress

Glossary

Suggested Readings

Web Resources

Answers to Check Your Progress

OVERVIEW

The Internet is a collection of computers connected by network cables or through satellite links. Rather than connecting every computer on the Internet with every other computer, individual computers in an organization are normally connected in a local area network (LAN). One node on this local area network is physically connected to the Internet. So the Internet is a network of networks. There are millions of computing devices that are connected to this network either permanently or for a short duration. These devices run network applications that communicate through copper or fiber optic cables, radio or satellite transmission. Internet is defined as an Information superhighway, to access information over the web.

LEARNING OBJECTIVES

After completing this unit, you will be able to;

- describe the concepts of Internet.
- gain the basic knowledge about Internet.

- discuss about the history and evolution of Internet
- explain the advantages and disadvantages of Internet.

2.1 INTRODUCTION

The Internet has revolutionized the computer and communications world like nothing before. The invention of the telegraph, telephone, radio, and computer set the stage for this unprecedented integration of capabilities. The Internet is at once a world-wide broadcasting capability, a mechanism for information dissemination, and a medium for collaboration and interaction between individuals through computers irrespective of geographic locations.

In this Learning Unit, we are going to explore the fascinating and ever-changing world of the Internet. The Internet is the largest computer network in the world, connecting more than a billion computer users. The Internet is most often used for three main purposes:

1. Communication

2. Buying and selling (e-commerce)

3. Searching for information

One of the most important things you need to know about the Internet is that it is a self-publishing medium, which means that no one is in charge of the content found on it. Anyone can publish anything on the Internet, whether the information is true or not. Later in this Learning Unit, you will learn some tips for evaluating the information you find on websites.

2.2.1 Basic Terms and Concepts

a) **Internet:** It might be helpful to think of the Internet as a vast system of roads all connecting to each other. You may have heard the term "information superhighway." It's a vast infrastructure of pathways allowing computers to "talk" to each other, even though the computers may use different operating systems. They do this through unique identification numbers called Internet Protocol Addresses (IP addresses).

b) **WWW (World Wide Web)**: The abbreviation "www" stands for World Wide Web. A technical definition of the World Wide Web is, all the resources and users on the Internet that are using the Hypertext Transfer Protocol (HTTP). Many people think the World Wide Web is the same thing as the Internet. It isn't. While the Internet is a large connection of networks (hardware), the World Wide Web is a way to access the information on the Internet.
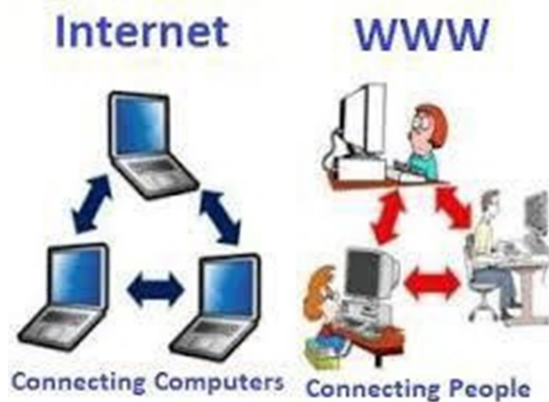
Figure 2.1 Internet Vs World Wide Web

It's like the software you need to run programs on the hardware of your computer. So, the Internet is broader than the World Wide Web.

c) **Browser:** Browser contains the basic software you need in order to find, retrieve, view, and send information over the Internet.

d) **Download:** To copy data from a remote computer to a Download local computer.

e) **Upload**: To send data from a local computer to a remote computer.

f) **E-mail**: E-mail (Electronic mail) is the exchange of computer-stored messages by telecommunication. E-mail can be distributed to lists of people as well as to individuals. However, you can also send non-text files, such as graphic images and sound files, as attachments sent in binary streams.

g) **Home Page**: The beginning "page" of any site.

h) **HTML (HyperText Markup Language)**: The coding langu HTML (HyperText Markup Language) age used to create documents for use on the World Wide Web. There are three-letter suffixes used in coding that help to identify the type of location one is viewing.

i) **HTTP (Hypertext Transport Protocol)**: The set of rules for exchanging files (text, graphic images, sound, video, and other multimedia files) on the World Wide Web. Relative to the TCP/IP suite of protocols (which are the basis for information exchange on the Internet), HTTP is an application protocol.

j) **Hypertext**: Generally, any text that contains "links Hypertext" to other text.

k) **Search Engine**: A web server that collects data from other web servers and puts it into a database (much like an index), it provides links to pages that contain the object of your search.

l) **TCP/IP:** Transmission Control Protocol/Internet Protocol is the basic communication language or protocol of the Internet. It can also be used as a communications protocol in a private network (either an intranet or an extranet). When you are set up with direct access to the Internet, your computer is provided with a copy of the TCP/IP program just as every other computer that you may send messages to or get information from also has a copy of TCP/IP.

m) **Modem:** Modulator and demodulator, it is a device used for converting analog signal to digital and digital signal to analog signal. Used in internet access.

n) **ISP:** Internet Service Provider, these are companies, who provide internet and value-added services to the users

o) **DNS:** Domain Name System, a method for naming websites, It is also the worldwide system of distributed databases of names and addresses on internet.

p) **URL (Uniform Resource Locator)**: The Internet address. The prefix of a URL indicates which area of the Internet will be accessed. URLs look differently depending on the Internet resource you are seeking.

2.2 HISTORY AND EVOLUTION OF THE INTERNET

The simplest way of explaining the Internet is to call it "the network of networks." It's the connection of computer networks around the world into one entity, so to speak. It's not one big computer, but rather numerous networked computers connected together. When you dial into your Internet service provider (AOL, Earthlink, etc.) from home, you are essentially connecting your computer to a network. The "backbone" of all these connections is what you might hear referred to as the "information superhighway."

The Internet completely revolutionized communication and technology across the Globe. Initially, computerized devices were only used for large industries but later its usage increased massively.

It is also mandatory for people to know that it is not possible for a single person to develop something as broad and wide as the Internet all by himself/herself. It was a combined effort of multiple researchers and programmers that the Internet was discovered.
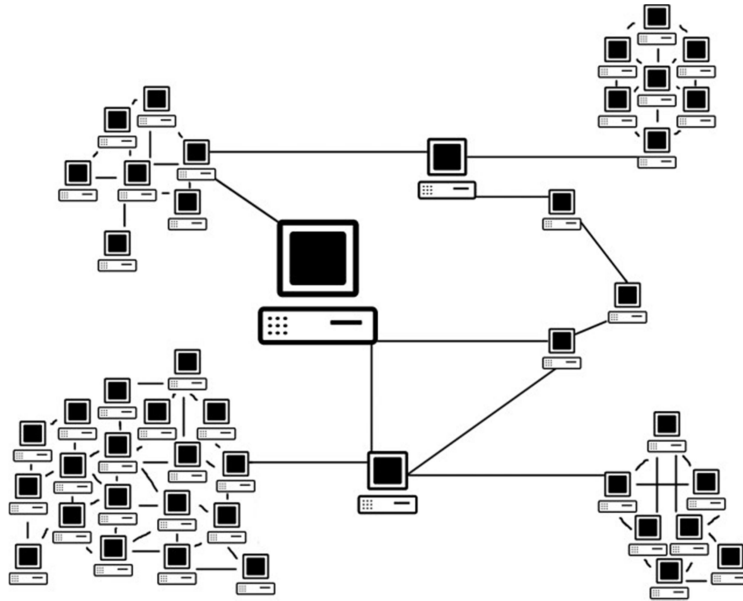
Figure 2.2 Networks of Networks (Internet)

Given below are a few important points which played an extremely important role in the development of Internet and making it one of the most widely used resources across the world.

- **1958**: The United States government creates the Advanced Research Projects Agency, which is later responsible for ARPANet and the Internet.

- **1961:** Leonard Kleinrock writes "Information Flow In Large Communication Nets," a Ph.D thesis for the Massachusetts Institute of Technology. This thesis is the first step toward establishing packet-switching theory, which is the basis of the future Internet.

- **1962:** The earliest form of electronic mail comes into existence, provided by the Automatic Digital Network, or AUTODIN.

- **1964**: Paul Baran compiles a series of reports titled "On Distributed Communications: Introduction to Distributed Communications Networks" for the United States Air Force Project RAND. This theory proposed distributed networks that would send data in pieces across many routes rather than one. This was intended to make networks resistant to damage in the form of lost nodes.

- **1967:** Dr. Lawrence Roberts writes the paper "Multiple Computer Networks and Intercomputer Communications," which helps define ARPANet. Meanwhile, Wesley Clark coins the term "Interface Message Processors" (IMP), which refers to packet-switching devices that later evolve into modern network routers.

- **1969:** ARPANet is formed out of the need for redundancy in communications to defend against nuclear attack. It provides a means to connect different networks to each other, primarily those owned by military and educational institutions.

- **1971:** The first network computer virus, Creeper, infects ARPANet. Written by a BBN programmer named Robert Thomas, it was intended as an experiment in self-replicating software.

- **1974.** The word "Internet" first appeared in print—in a DARPA-published Request for Comments document on TCP/IP, a new set of communications and networking protocols for managing data transmissions on the new system. TCP/IP is still integral to the present-day Internet. In the meantime, Arpanet was growing fast as more universities, science centers, and army installations got connected.

- **1976.** Queen Elizabeth of England became the first head of state to send an email. Jimmy Carter followed suit and used email several times while campaigning.

- **1981:** The Computer Science Network, or CSNET, is created by University of Wisconsin-Madison computer science professor Lawrence Landweber. CSNET succeeds in connecting many universities as well as international computer science networks to each other as well as bringing nationwide attention to the benefits of networking. It also makes the TCP/IP protocol mainstream within the networking community

- **1983.** The Domain Name System (DNS) was invented. Whereas site's names had been obtuse sequences of letters and numbers, they would now be easy-to-remember names with endings such as .gov, .edu, or .mil.

- **1985.** The National Science Foundation (NSF) funded construction of Arpanet's biggest upgrade yet: the NSFNET, a command hub of five supercomputers to serve as highways for all data traffic. NSFNET could transmit data at 56 kilobits per second—slower than some present-day modems.

- **1986:** The National Science Foundation Network, or NSFNET, goes online. This enabled multiple university supercomputer centers to connect, and it later evolved into a major route for data moving through the Internet, an Internet backbone.

- **1989:** Tim Berners-Lee invents the World Wide Web using the Hypertext Transfer Protocol (HTTP) and the Hypertext Markup Language (HTML). It becomes the primary medium of global Internet-based communications years later.

- **1990.** Tim Berners-Lee invented HTML and a text browser, as well as a hypertext graphical user interface (GUI) browser. Then he established the first successful communication between a Hypertext Transfer Protocol client and a server via the Internet. These inventions, put together, were the makings of Web pages as we know them today. Lee also made up the term "World Wide Web." The synonym Information Superhighway would follow in a few more years.

- **1991.** The NSF allowed commercial enterprises to use the Internet for the first time.

- **1993:** W3Catalog becomes the first World Wide Web search engine. It indexes the Web, enabling users to find Web pages.

- **1994.** Jeff Bezos founded Amazon. A whole new world of e-commerce was born.

- **1995.** The NSF ceased funding the Internet altogether, leaving it a completely self-sustaining industry. Also noteworthy, Sun Microsystems first released Java, still an immensely popular Internet programming language to this day.

- **1998.** Google opened its first office.

- **2001:** Jimmy Wales and Larry Sanger found Wikipedia, forming a user-made encyclopedia online.

- **2004-2005.** Facebook was launched in December 2004. YouTube debuted the next year. The social-media revolution had begun.

- **2006.** Google CEO Eric Schmidt introduced the term "cloud computing" at an industry conference. "The Cloud" would become another synonym for the Internet soon thereafter.

- **2007.** Mobile and smartphones technologies going commercial and growing rapidly. Consumers would no longer need a personal computer to go online. The Internet would be reachable wherever they could find a wireless signal.

- **2008.** Google Index reaches 1 trillion URLs. Google launched Chrome. Spotify launched. Apple launched App Store. Dozens of

space images are transmitted to and from a Nasa science spacecraft located more than 32 million km from Earth.

- **2009.** Mobile data traffic exceeded voice traffic every single month. Globally, mobile data exceeded an exabyte (a billion gigabytes) for the first time. Foursquare launched – users start "check in" at locations all over the world. Kichstarter is founded in April: crowdfunding becomes popular with start-ups.

- **2010.** The number of registered domains reaches 200 million. Apple launches iPad, many other producers followed. 4G wireless networks launches in US. Instagram and Pinterest launched. Astronaut T.J. Creamer uploads the first tweet from space.

- **2011**. The number of Internet users reaches 2 billion. Google+ launched. Microsoft buys Skype. The Stop Online Piracy Act is introduced in the US.

- **2012.** Worldwide internet users breaks 2.4 billion. Nasa's Curiosity Rover checks in on Mars using FourSquare.

- **2013 – 2015.** More data was produced than throughout all human history. Apple releases Apple Watch, other producers followed – smart watches industry was created. Google releases Google Glasses. Microsoft announces the mercy killing of Internet Explorer. Mobile Internet surpasses desktop. Almost a half of the world's populations become Internet users. Superfast Gigablast Internet (100 times faster than DSL) is introduced to residential customers.

- **2016.** Donald Trump victory on the US presidential elections claimed to be premised on huge digital campaign investment. 40% of global internet users, or more than 1 billion people, buy products or goods online. Live Streaming goes popular.

2.3 ADVANTAGES OF INTERNET

The Internet is the most popular and innovative creation within the world of technology is the Internet. The web is that the place where all types of data are present and even the communication process is feasible using the web. The planet has now become internet dependent due to its vast advantages. Here may be a checkout both its advantages and drawbacks. The web is run and governed by various companies, businesses, governments, and academic institutions for his or her purpose.

a) Communication

The main advantage of the internet is the faster communication than any other device. It's an instant process. Communication in the form of video calls, emails, etc. is possible using the internet. Thus, there is no specific region that can be accessed. It is accessible all over the world. Hence, tackling global issues has become easier with thought leaders from different parts of the world coming together to solve them.

b) Information

The internet is the source of knowledge. One can get information about almost everything. It is easily accessed with sources giving you the option of additional knowledge on the subject as well. Information like educational related, government laws, market sales, stocks and shares, new creations, etc. are gathered from a single place.

c) Learning

The internet has now become a part of education. Education like homeschooling is easily carried out using the internet. Teachers can upload their teaching videos on the internet and are accessed by people across the world which is helpful for all students. The marks are also released on the internet since, releasing mark for the whole institution in notice boards will create chaos.

d) Entertainment

The internet is now the most popular form of entertainment. Movies, songs, videos, games, etc. are available on many websites for free. Social networking is also possible using the internet. Hence, there is tons of entertainment that are available online with easy accessibility for everyone.

e) Social network

Social networking is the sharing of information with people across the world. Apart from being an entertainment website, it has many uses. Any job vacancy, emergency news, ideas, etc. can be shared on the website and the information gets passed on quickly to a wide area. Also, social networking websites are used to easy communications. For example, Face book, Twitter, and Instagram are some popular networking sites.

Figure 2.3 Social Networks

f) E-Commerce

All business deals started shifting towards working on the internet like transactions of money etc. And this is what evolved into E-Commerce later. Online reservations, online ticket bookings for movies, etc. can be done easily. It saves us lots of time. Online shopping is now the latest trend in the internet world where products from dresses to household furniture are available at doorstep.

g) Internet of Things

The Internet makes smarter your device in your home and giving them access to the Internet. For instance, to control the heating and cooling in your home, the Nest thermostat can connect to the Internet. When devices have been connected to the Internet, they can be controlled remotely with the help of your smart phone or computer. The devices can become smarter and more efficient and help save time, money, and energy by connecting IoT (Internet of Things). The main benefit to connect devices to the Internet of Things is that if you are far from your home, you can control your device remotely.

h) Cloud computing and cloud storage

One of the biggest advantages of the Internet offers connectivity to your computer and Internet-enabled devices to connect with cloud services, such as cloud storage and cloud computing. A device can have access to more powerful computers to perform complex tasks with cloud computing whereas your business works on other tasks.

Figure 2.4 Cloud Storage

With cloud computing, you can access your data anywhere as cloud storage synchronizes data across any of your Internet-connected devices. It makes your data more secure because your files are stored in a professionally-maintained server.

2.4 DISADVANTAGES OF INTERNET

Although the Internet has various benefits and is one of the most powerful creations, it also contains many disadvantages. Below is given a list of the complete disadvantages of the Internet.

i) Unemployment

Even though the internet has improved many sectors, it has resulted in job unemployment through outsourcing, downsizing, and redundancies. For example, a factory can replace skilled personnel with robots which can work faster and for longer hours.

ii) Privacy

Although the internet has made communication easier, quicker and convenient, privacy problems have emerged. From email hacking to phone signal interceptions, more and more people are now troubled about their private information.

iii) Lack of job security

Since technology keeps on changing, job security has become a problem. This means that IT experts need to be continuously learning to keep up with the changes if they want to retain their jobs.

iv) Overruling cultures

While the internet has made the universe a global village, some cultures have consumed others. For instance, teenagers in western countries

have influenced most teenagers in other parts of the world on how they dress, act and behave.

v) Information loss

The information crucial to us or any important files can be easily taken by the hackers. There is no exact proof for the security for the details we store like account numbers, passwords, etc. hence, sensitive information must be carefully stored by the people.

vi) Spam

The unnecessary emails, advertisements, etc. sometimes are said to be spam because they have the ability to slow down the system and make the users to face lots of problems. Spam emails create confusion as important emails are also stored along with them.

vii) Virus attacks

The malware or virus threats are so deadly that affects the system to a greater extend. It immediately deletes all important files and finally, the system ends up crashing. The virus attack is possible in three ways. One it attacks selected files. Two, it harms the executable boot files and most dangerous of all is the macro virus which has the ability to replicate and expand to all parts of files.

viii) Virtual world

The people using the internet often will forget the difference between the virtual and real worlds. This causes people to get depressed quickly and it leads to social isolation and obesity problems. Obesity is due to the lack of any physical exercise. So it is better to play outdoor rather on the internet.

ix) Spending more time online

Also, some students spend more time online. Students are more likely to neglect their studies. If the cinema's grip is so secure, even the elderly may ignore some of their essential work. Students may lose focus on their studies as they spend too much time on the Internet. Many cannot devote their time to homework, but they may spend time watching movies or interacting with friends over the Internet.

x) Losing the ability to communicate

The Internet has made life easier for people in many ways; it also reflects a bizarre side to its existence through the many problems it throws at its users. There is a massive amount of free information on internet piracy and the possibility of misusing this information. Time and

time again, you see people's affairs using someone else's data and research and turn it off on your own. These days kids do lose the ability to communicate with others. They are used to communicating with others via the Internet, but they cannot cope with others. It is a strange sight that the Internet has lost its ability to communicate with people. It is because people are now relying on the Internet.

2.5 BUSINESS AND INFORMATION TECHNOLOGY

Current global and competitive business environment constantly asks for innovation, existing knowledge base is getting obsolete, continuously thriving for advancement in process improvement. The learning curve is always put to test, and every company is striving to remain ahead of the curve. Due to this shift in the way business is getting conducted has thrown out new reality of ever shortening product and service life cycle. More and more companies are coming out with customized products and finding ways to differentiate from competition.

A recent survey conducted has highlighted that the change in the business environment can be summarized with following:

i) Globalization and opening up of markets have not only increased competition but also has allowed companies to operate in markets previously considered forbidden.
ii) Inclusion of information technology as integral part of business environment has ensured that companies are able to process, store and retrieve the huge amount of data at ever dwindling costs.
iii) Globalization has encouraged free movement of capital, goods and service across countries.

Characteristics of Business Environment

To understand business environment and drivers of change, it is first important to study its characteristics. They are as follows.

a) Business environments are complex in nature as well as dynamic because they are dependent upon factors like political, economic, legal, technological, social, etc. for sustenance.
b) Business environment affects companies in different industries in its own unique way. For example, importers may favor lower exchange rate while exporters may favor higher exchange rate.
c) With change in the business environment, some fundamental effects are short term in nature while some are felt over a period of time.

Business Process Outsourcing

Business Process Outsourcing involves contracting one or many front end (customer related) or back end (finance, HR, accounting, etc.) activities within a company to a third party service provider. The number of jobs within BPO industry has increased exponentially in last decade. BPO is one of the new faces in business environment.

Outsourcing has help companies reduce their overhead expenses, improve productivity, shorten innovation cycles, and encourage new market penetration and also improving customer experience. India has seen tremendous growth in BPO industry within function like customer care, finance/accounts, payroll, high end financial services, human-resource, etc.

Emerging Trends

The recent explosion of information technology has seen few but significant emerging trends, for example, mobile platform for doing business, cloud computing, technology to handle a large volume of data, etc.

These fresh technologies and platforms are offering numerous opportunities for companies to drive strategic business advantage and stay ahead of the competition. Companies need to work on new plans as to maintain flexibility and deliver customer satisfying products and services.

LET US SUM UP

The Internet is the biggest world-wide communication network of computers. The Internet has millions of smaller domestic, academic, business, and government networks, which together carry many different kinds of information. The short form of internet is the 'net'. A few of the Internet's major uses are e-commerce, e-learning, knowledge sharing, social connectivity, variety of media, file transfer, communication, etc. Internet allows people to improve the quality of their life. It opens access to the previously inaccessible things. With almost three millions of users, internet has been emerging as one of the most important tools of communication. Some of the positive effects are faster communication, an organization of data and information, computerization of tasks, and easier access to the information. Some of the negative effects of computers are human's break their social interact with friends and families, cause back problem, depression, and poor health.

CHECK YOUR PROGRESS

Choose the Correct Answer:

1. What is the term for unsolicited Email?

a) Spam   b) backbone

c) usenet   d) news groups

2. Servers are computers that provide resources to other computers connected to a _____.

a) client   b) Mainframe

c) Super Computer   d) Network

3. Internet is _____.

a) A worldwide interconnected network of computers which use a common protocol to communicate with one another.

b) A worldwide network of computers

c) An interconnected network of computers

d) A local computer network

4. Generally, to send data from a local computer to a remote computer / Internet is called _____.

a) Download   b) Upload

c) Editing   d) E-mail

5. _____refers to the process of contracting standard business functions to be handled by a party outside of the company.

a) Internet   b) BPO

c) Network   d) IOT

GLOSSARY

Internet	:	The Internet is a global wide area network that connects computer systems across the world. It includes several high-bandwidth data lines that comprise the Internet "backbone."
Network	:	A network is a collection of computers, servers, mainframes, network devices, peripherals, or

		other devices connected to one another to allow the sharing of data.
BPO	:	Business Process Outsourcing, or BPO, refers to the process of contracting standard business functions to be handled by a party outside of the company.
Social Network	:	Social networking is the use of Internet-based social media sites to stay connected with friends, family, colleagues, customers, or clients.
Internet of Things	:	The Internet of Things (IoT) refers to a system of interrelated, internet-connected objects that are able to collect and transfer data over a wireless network without human intervention.

SUGGESTED READINGS

1. Alexi Leon and Mathews Leon, (2004), Introduction to Information Systems, McGraw-Hill Education (India) Pvt Limited, New Delhi.
2. Anup K. Ghosh, (2012), E-Commerce Security and Privacy, Kindle Edition
3. Peter G W Keen, (1994), Every Manager's Guide to Information Technology, 2nd Edition, Harvard Business School Press, Boston.
4. Rajesh Chakrabarti and VikasKardile, (2002), The Asian Manager's Handbook of E-Commerce (paperback edition), Tata McGraw – Hill Publishing Company Limited, New Delhi.

WEB RESOURCES

1. [What is Internet of Things(IoT) in Tamil? | History & Industrial Revolution of IoT | Quick Through - Bing video](#)
2. [History of The Internet in Tamil Video - YouTube](#)
3. [Evolution of the Internet - Bing video](#)

ANSWER TO CHECK YOUR PROGRESS

1. a)　　　2. d)　　　3. a)　　　4. b)　　　5. b)

UNIT 3

ELECTRONIC COMMERCE: OPPORTUNITIES AND CHALLENGES

STRUCTURE

Overview

Learning Objectives

3.1 Introduction

      3.1.1 Electronic Commerce Challenges

      3.1.2 Electronic Commerce Opportunities

3.2 Difference between Traditional Commerce Vs Electronic Commerce

3.3 Most common E-Commerce Applications

3.4 Functions of Electronic Commerce

3.5 E-Business

      3.5.1 Difference between E-Commerce and E-Business

Let Us Sum Up

Check Your Progress

Glossary

Suggested Readings

Web Resources

Answers to Check Your Progress

OVERVIEW

In India offline business has become difficult for both retailers and consumers. Asset is expensive, according to quality infrastructure is not good and market area became heavily complicated. Because of this the future of online business is going to become very bright. It is taking big portion of the market segment. It is also very catchy for retail business man to enhance their business & market. With 250 million internet users, the Indian online business is a land of opportunities for business man and it's also a good platform for online business. Many online sites provide better opportunities in getting different option for selection to consumers. But it is a big challenge for all sites to provide better payment mode to all type of consumers. Delivery of goods in distance

area is another big problem for consumers. So opportunities should be provided by websites for getting goods at the right time because it is a big problem in online business which is faced by consumers. Another challenge to consider in this field is, using low internet facility in India. The internet users are very few here, which is a very big challenge in front of online business. So education should be provided about the use of internet. In spite of the big opportunity because of the region and growth of the market, E-commerce is the big market in India which has its own challenges in business world.

The purpose of this study is show and explain opportunities & challenges for E-commerce in India in future which challenges will going to be arise in online business in near future. This study will tell how e-commerce can play a competitive role in business field, so it has a great scope and opportunities in India.

LEARNING OBJECTIVES

After completing this unit, you will be able to;

- explain the key features of the E-Commerce opportunities.
- difference between Traditional Vs E-Commerce.
- analyze the challenges in E-Commerce
- describe the ways and means of building a successful E-business.

3.1 INTRODUCTION

E-Commerce has been on the rise over the past few years of time in India. There have been an increasing number of instances where different Electronic Commerce businesses are popping up. The rise of Electronic Commerce is mainly due to the ease of availability of the internet. In an addition to this, people prefer the online of a mode of shopping which saves a lot of time for them which makes sure that they do not have to take out time from their busy schedule and go shopping. The business owners always make sure to for an appropriate E-Commerce website design so that the site is able to attract more customers. Now, with this tremendous growth of the E-Commerce sector in India has come up with a number of challenges for the business owners.

3.1.1 Electronic Commerce Challenges

The competition of E-Commerce in the Indian market has been growing at a rapid pace which has certainly been a point of concern for the business owners. On the other hand, there are a number of

opportunities as well that E-Commerce offer. So, here we have listed a few of the challenges as well as opportunities of E-Commerce business in the Indian perspective both from the point of view of the customers as well as the business owners. Challenges faced by the marketers or the business owners. The developing countries like India have to face a number of challenges for the purpose of utilizing the benefits of increasing incomes as well as the trade flows in Electronic Commerce business. The reasons behind the fact are a wide range of legal, technical and international governance considerations need to be taken care of In India, there are a number of challenges faced by the customers as well in the E-Commerce business which are as follows.

a) Personalization

It is certainly one of the most important challenges for the suppliers when it comes to e-commerce business in the country and its stiff competition with the retail stores. In a developing country like India, there are a lot of people who still prefer retail stores where they can physically check out the products before buying. The retail stores, on the other hand, provide a personal touch which is quite difficult to be replaced with online selling.

b) Challenges of Shipping

Even though you have a great e-commerce website design and a good number of customers, the challenge of shipping remains a concern. There are a lot of issues related to the lack of supply chain integration, delay in delivery along with a lack of proper courier services, especially in the rural areas. This results in the frustration of the customers and hence a major challenge.

c) Currency

Currency challenge is another major area of challenge that is faced by Electronic Commerce businesses. Different countries have different export as well as import specifications. Thus, issues related to credit card limits and currency exchange rates play a negative role in E-Commerce business thereby hindering the smoothness in the overall E-Commerce shopping. Nowadays, E-Commerce site development is done in such a way that it is able to accept different payment options which makes it easier for the customers.

d) Refund

The refund issue is one of the major hindrances in the E-Commerce businesses in India. If the product acquired does not match with the specification or the product is a faulty one or any other issue, there arises a situation of return but the refund in these cases takes a lot of time which pushes the customers in the back foot.

e) Trust

Trust is another issue that affects the E-Commerce businesses in India such as assurance of the quality product, guaranteed refund & return in case of faulty goods and trust in the privacy of the personal data.

3.1.2 Electronic Commerce Opportunities

For the last decade, there has been growth in E-Commerce business, and hence there has been a rise in career options. Now to prove there has been growth in the career opportunities in E-Commerce, know a few things as in the coming five years the E-Commerce company is supposed to grow by approx. Through the E-Commerce platform, the customer can get our daily needs solution under one roof. It's maybe domestic or global product.

Apart from the challenges faced by the marketers in E-Commerce business in India, there are some opportunities as well which needs to be capitalized at its best. First of all, it minimizes the inventory cost to a great extent as in the case of expensive retail showrooms. It can play a vital role in the improvement of customer service. It provides a great scope for the globalization of the business by making the products and services available to customers worldwide.

The buying options in E-Commerce are quick, convenient and user-friendly which is necessarily the best part. It helps in the elimination of the travel cost for the customers. The E-Commerce stores are available 24 * 7 * 365 which allows the customers to shop at their own convenient time. So, at any point in time, you wish to engage in an E-Commerce business, opt for a good E-Commerce site development along with a great E-Commerce website design and appropriately analyze the challenges and opportunities in the business for achieving successful results. Strategies for growth, the growth rate of E-Commerce in India is mentionable and higher than other countries. In terms of E-Commerce it places the third position in the world but due to lack of proper IT infrastructure, logistic support and financial infrastructure it faces challenges for its development.

The Smart phone user and internet subscriber in India are growing rapidly which stimulates the E-Commerce growth in India. Now E-Commerce traders provide a wide range of services from daily necessities to logistics which help them to spread the E-Commerce business all over in India. E-Commerce traders are getting benefit for reducing their inventory cost due to living as a big country like India. It helps them to minimize the cost by storing the product at any places in India. It also provides a big opportunity for E-Commerce traders to provide just-in-time (JIT) services and forecast the demand of the product more accurately.

Better customer service E-Commerce is a best approach to provide maximum level customer services in terms of low cost, quality products, and just in time. Customer satisfaction is an asset for businessman to increase their business growth. Best level customer satisfaction can be given by E-Commerce business. In this business, both traders and customers get benefit from it. It is an alternative system of traditional business which provides an opportunity to deal their business from distant places and without physical interaction by saving money, cost and minimizing risk. Reducing distribution costs Since E-Commerce is based on virtual market i.e. internet, so it reduces distribution cost and time by providing just-in-time (JIT) services. It is a great opportunity for buyer and sellers to deal their business by sitting their own places. It helps to avoid all kinds of risk.

Generally traditional business requires a mentionable amount for its distribution cost but E-Commerce is an alternative system of traditional business which helps to reduce distribution cost and easily spread the business all over the country and sometimes out of the boundary of the country. Globalizing business E-Commerce is a business platform which can provide the same kind of services to its customer crossing the country's boundary. The people can easily buy products from an online shop which is situated within the country or from abroad by online payment through debit or credit card, m-cash and other related methods. It also helps to market the products easily to mass people over.

3.2 DIFFERENCE BETWEEN TRADITIONAL COMMERCE Vs ELECTRONIC COMMERCE

Traditional commerce is the process of buying and selling goods in direct form, this began with the start of human civilization, namely the Barter system. While the Barter system was exchanging goods for other goods, the recent traditional business exchanges goods for monetary

gains. Now, traditional commerce is losing its importance and high regard to that of Electronic commerce.

E-commerce is the process of exchanging goods or services in the form of digital mode where the payment is done via online transactions, in electric form. The payments can be made by any form of digital modes such as credit or debit cards, digital wallets or Net banking. E-commerce is an online platform for customers to sell and buy goods or services and it is delivered to the doorstep of the customer. This saves the time and money that would have been otherwise spent on traveling. In E-commerce, shopping could be done all round the clock without any chaos, during our free time.

BASIS FOR COMPARISION	TRADITIONAL COMMERCE	ELECTRONIC COMMERCE
Meaning	Traditional commerce is a branch of business which focuses on the exchange of products and services, and includes all those activities which encourages exchange, in some way or the other.	E-Commerce means carrying out commercial transactions or exchange of information, electronically on the internet.
Processing of Transactions	Manual	Automatic
Accessibility	Limited Time	24×7×365
Physical inspection	Goods can be inspected physically before purchase.	Goods cannot be inspected physically before purchase.
Customer interaction	Face-to-face	Screen-to-face
Scope of business	Limited to particular area.	Worldwide reach
Information exchange	No uniform platform for exchange of information.	Provides a uniform platform for information exchange.

Resource focus	Supply side	Demand side
Business Relationship	Linear	End-to-end
Marketing	One way marketing	One-to-one marketing
Payment	Cash, cheque, credit card, etc.	Credit card, fund transfer etc.
Delivery of goods	Instantly	Takes time

3.3 MOST COMMON ELECTRONIC COMMERCE APPLICATIONS

E-Commerce is widely considered the buying and selling of products over the Internet. The applications of E-Commerce are used in various business areas such as retail, wholesale and manufacturing. The most common E-Commerce applications are as follows:

Retail and Wholesale

E-retailing or online retailing refers to the transaction of goods and services through online stores from businesses to consumers. It is achieved through means such as virtual shopping carts and e-catalogs. The applications of E-Commerce in this sector are numerous.

a) Finance

Finance and E-Commerce is more connected today than ever. Banks and stock markets use E-Commerce significantly in their operation. Online banking provides provisions such as balance check, bill payment, money transfer, etc. Online stock trading enables people to carry out trading electronically by giving information about stocks such as performance reports, analysis, charts, etc. through websites.

b) Manufacturing

In manufacturing, E-Commerce forms a medium for companies to execute the electronic exchange. Combined buying and selling, sharing market status, inventory check information, etc. enables groups of companies to fluidly carry out their operations.

c) Auctioning

Applying E-Commerce to auctions takes it to a more significant level where people can participate without any geographical boundaries. That

leads to more participation, more negotiation, and helps to make auctions successful.

d) Marketing

Marketing activities such as pricing, product features, and building customer relationships can be strengthened using e-commerce to provide users an enhanced and customized shopping experience. Digital marketing strategies have become a significant way to promote businesses.

e) Online Shopping

The shopping preferences of people have undergone a massive change in the last few years. "Go online" has become a mantra for all businesses to succeed. Online shopping is comfortable, convenient, and at most times, cost effective. The prosperity of online shopping apps such as Flipkart, Amazon is proof of this.

f) Mobile and Web Applications

Popularly called mobile commerce or m-commerce applications, this is a subset of retail E-Commerce. Mobile or web application development has become a staple for brands to showcase their business capabilities. The consumer carries out purchases through mobile or web applications that are optimized for the retailer. These applications also ensure payment security through safe e-payment methods.

g) Online Booking

Travel and tourism are a thriving industry today, and online booking is an ecommerce application that is growing as a result of it. Online booking helps people book travel essential services like train/flight tickets, hotel rooms, tourism packages, transportation services, etc. It makes travel very convenient and easy for people as everything can be set from the tip of the fingers.

h) Online Publishing

Digital magazines and E-books are slowly replacing traditional printed books. It has several advantages such as portability, lightweight, accessible from everywhere, etc. They are also environment friendly as they help in reducing paper and saving trees. Due to these reasons, online publishing or e-publishing has been seeing a rise in popularity.

i) E-banking

E-banking or internet banking is an E-Commerce application that has simplified time-consuming and complex banking processes for people. It enables bank users to perform transactions easily online without having to wait in long queues in banks. Every major bank has its own online application today to provide virtual banking services to its customers.

3.4 FUNCTIONS OF ELECTRONIC COMMERCE

i) Marketing

One of the areas it impacts particularly is direct marketing. In the past this was mainly door-to-door, home parties (like the Tupperware parties) and mail orders using catalogues or leaflets. This moved to telemarketing and TV selling with the advance in television technology and finally developed into e-marketing.

ii) Human Resource Management

Issues of on-line recruiting, home working and 'entrepreneurs' work on a project-by-project basis replacing permanent employees.

iii) Business law and ethics

The different legal and ethical issues that have arisen as a result of a global 'virtual' market. Issues such as copyright laws, privacy of customer information etc.

iv) Management Information System

Analysis, design and implementation of e-business systems within an organization; issues of integration of front-end and back-end systems.

v) Product Operations and Management

The impact of on-line processing has led to reduced cycle time. It takes seconds to deliver digitized products and services electronically; similarly, the time for processing orders can be reduced by more than 90 percent from days to minutes.

vi) Finance and Accounting

On-line banking, issues of transaction costs, accounting and auditing implications where 'intangible' assets and human capital must be tangibly valued in an increasing knowledge-based economy.

The impact of E-commerce on local and global economies; understanding the concepts of a digital and knowledge-based economy and how these fit into economic theory.

3.5 E-BUSINESS

"E-Business is the conduct of business on the Internet, not only buying and selling but also servicing customers and collaborating with business partners". E-Business means connecting critical business systems directly to customers, vendors and suppliers- via the Internet, Extranet and Intranets. Therefore, it means using electronic information to boost performance and create value by forming new relationships between and among businesses and customers. One of the first to use the term was IBM, in October 1997, when it launched a campaign built around e-business.
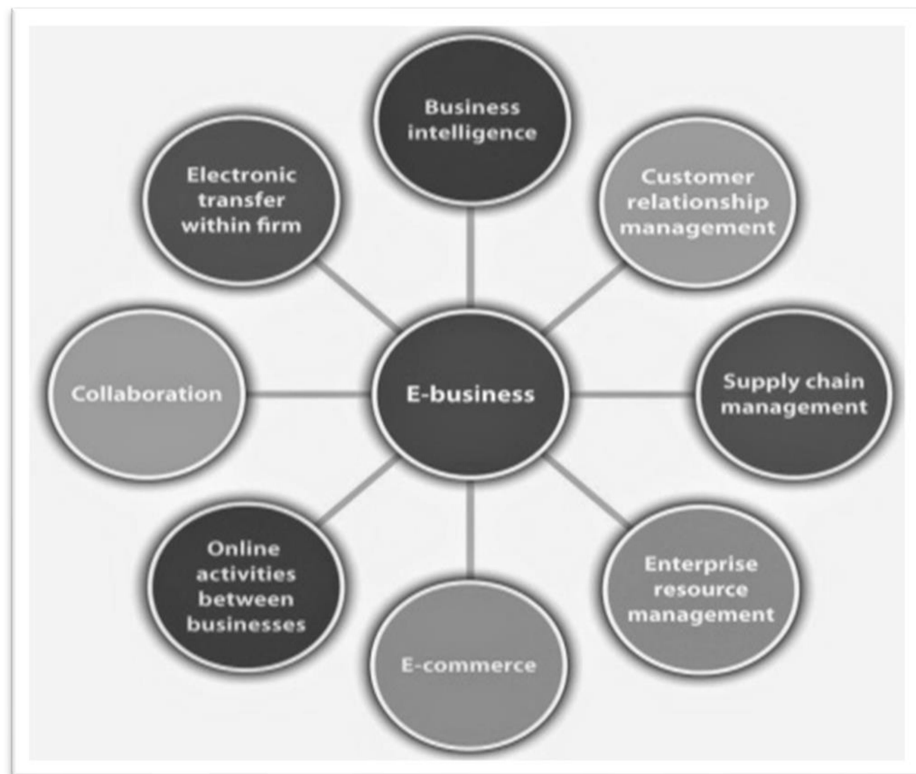
Figure 3.1 Electronic Business

E-Business enables organizations to accomplish the following goals

   a) Reach new markets.
   b) Create new products or services.

c) Build customer loyalty
d) Make the best use of existing and emerging technologies.
e) Achieve market leadership and competitive advantage.
f) Enrich human capital.

3.5.1 Difference between E-Commerce and E-Business

E-Commerce is nothing but buying and selling of goods around the web. On the contrary, E-Business is a little different as it is not limited to, commercial transactions, but it also provides other services.

S.No	E-COMMERCE	E-BUSINESS
1	E-Commerce refers to the performing online commercial activities, transactions over internet.	E-Business refers to performing all type of business activities through internet.
2	E-Commerce is a narrow concept and it is considered as a subset of E-Business.	E-Business is a broad concept and it is considered as a superset of E-Commerce.
3	Commercial transactions are carried out in E-Commerce.	Business transactions are carried out in E-Business.
4	In E-Commerce transactions are limited.	In E-business transactions are not limited.
5	It includes activities like buying and selling product, making monetary transactions etc over internet.	It includes activities like procurement of raw materials/goods, customer education, supply activities buying and selling product, making monetary transactions etc over internet.
6	It usually requires the use of only a website.	It requires the use of multiple websites, CRMs, ERPs that connect different business processes.
7	It involves mandatory use of internet.	It involves the use of internet, intranet or extranet.
8	E-Commerce is more appropriate in Business to Customer (B2C) context.	E-Business is more appropriate in Business to Business (B2B) context.

9	E-Commerce covers outward/external business process.	E-Business covers internal as well as external business process/activities.

LET US SUM UP

E-commerce is a challenging in India in business field. But it has its own opportunities & challenges. It focuses on different opportunities and challenges in electronic business. In business field E-commerce is a fastest business option for the consumers. When online business fulfills its challenges then consumers will get complete satisfaction from this and the future will be very bright of online business in India. To describe the present status and facilitators of E-Commerce and opportunities of E-Commerce in India, analyze the present trends of E-Commerce in India, Benefits of E-Commerce and examine the various challenges of E-Commerce in India. There are different opportunities of e-commerce viz. E-business, E-learning, E-Insurance, E-Banking, E-Payment, E-Marketing, E-Advertisement etc. These opportunities are offered to business, Producers, Distributers and Customers. E-Commerce is showing tremendous business growth in our country.

CHECK YOUR PROGRESS

Choose the Correct Answer:

1. E-banking is also known as _____.

a) ATMs   b) Net banking

c) Traditional Banking   d) None of the above

2. What is the name given to an interactive business providing a centralized market where many buyers and suppliers can come together for e-commerce or commerce related activities?

a) Direct marketplace   b) B2B

c) B2C   d) Electronic Marketplace

3. Auction sites like eBay tend to use _____ pricing.

a) Dynamic   b) fixed

c) trigger   d) utilization

4. The _____ standards for conducting E-Commerce are universal standards.

a) Technical   b) fixed

c) direct   d) utilization

5. _____is the process of exchanging goods and services in the form of money directly.

a) Traditional Commerce   b) E-Commerce

c) E-Business   d) B2C

GLOSSARY

Traditional Commerce	:	Traditional Commerce is the process of exchanging goods and services in the form of money directly. Traditional Commerce involves face to face and in person dealing with all the parties to perform the exchange of goods and services with predefined prices.
E-Business	:	Online Business or e-business is any kind of business or commercial transaction that includes sharing information across the internet.
E-Auction	:	An e-auction is a transaction between sellers (the auctioneers) and bidders (suppliers in business-to-business scenarios) that takes place on an electronic marketplace. It can occur business to business, business to consumer, or consumer to consumer, and allows suppliers to bid online against each other for contracts against a published specification.
Digital Magazine	:	Digital magazine has many of the same characteristics as a print magazine but uses digital publishing technology so it can be consumed on an electronic device like a computer, tablet, or mobile phone.

SUGGESTED READINGS

1. Alexi Leon and Mathews Leon, (2004), Introduction to Information Systems, McGraw-Hill Education (India) Pvt Limited, New Delhi.

2. Anup K. Ghosh, (2012), E-Commerce Security and Privacy, Kindle Edition
3. Peter G W Keen, (1994), Every Manager's Guide to Information Technology, 2nd Edition, Harvard Business School Press, Boston.
4. Rajesh Chakrabarti and VikasKardile, (2002),The Asian Manager's Handbook of E-Commerce (paperback edition), Tata McGraw – Hill Publishing Company Limited, New Delhi.

WEB RESOURCES

1. [Python Django Complete E-Commerce Project With Bootstrap 5 in Tamil | Django in Tamil | Tutor Joes - Bing video](#)
2. [What is E-Commerce? Types of E-Commerce (Business ideas in Tamil) - Bing video](#)
3. [Features of Business || Business notes for B.com, M.com, BBA, MBA - Bing video](#)
4. [E Commerce Vs Traditional Commerce - Bing video](#)

ANSWER TO CHECK YOUR PROGRESS

   1. b)   2. d)   3. a)   4. a)   5. b)

BLOCK 2

BUSINESS STRATEGY IN NEW ECONOMY

Unit 4: Key Features of Internet Economy

Unit 5: Business Strategy in New Economy

Unit 6 : E – Retailing and Marketing on the Internet

Unit 7: Emerging Trends in E-Commerce

UNIT 4

KEY FEATURES OF INTERNET ECONOMY

STRUCTURE

Overview

Learning Objectives

4.1 Introduction

      4.1.1 Components of Digital Economy

      4.1.2 Major Attributes of the Digital Economy

4.2 Benefits of Digital Economy

4.3 Limitations of Digital Economy

4.4 Features of Digital Economy

4.5 Key Features of Internet Economy

4.6 Advantages of Digital Economy

4.7 Disadvantages of Digital Economy

Let Us Sum Up

Check Your Progress

Glossary

Suggested Readings

Web Resources

Answers to Check Your Progress

OVERVIEW

The digital economy, also known as the Internet economy, new economy, or the Web economy, refers to the economy that is based in a large part on digital technologies, including digital communications networks (Internet, intranets, etc.), computers, software, and other related information technologies. In other words, the term digital economy refers to the convergence of computing and communication technologies through the Internet and the resulting flow of information and technology that is stimulating e-commerce and spurring vast organizational changes. Digital networking and communication infrastructures provide a global platform to interact, communicate, collaborate and search for information.

A wide area of products made of digital bits - databases, news and information, books, magazines, TV and radio programming, movies, electronic games, musical CDs, and software - that are delivered over the digital infrastructure anytime, anywhere in the world in the 24/7 mode. Consumers and firms conduct financial transactions digitally through digital currencies or financial tokens downloaded and carried on smart cards via networked computers and mobile devices.

LEARNING OBJECTIVES

After completing this unit, you will be able to;

- describe the concepts and components of digital or Internet economy
- gain introductory knowledge about digital economy
- discuss about the key features of digital economy
- describe the benefits and limitations of digital economy
- discuss the advantages and disadvantages of digital economy.

4.1 INTRODUCTION

Digital economy refers to an economy that is based on digital computing technologies, although we increasingly perceive this as conducting business through markets based on the internet and the World Wide Web. The digital economy is also referred to as the *Internet Economy*, *New Economy*, or *Web Economy*. Digital economy is underpinned by the spread of Information and Communication Technologies (ICT) across all business sectors to enhance its productivity.

The Internet Economy is an economy based on the Internet, fully exploiting its global character, speed and efficiency in dealing with information and knowledge. The Internet Economy includes companies that directly generate all or some part of their revenues from the Internet or Internet related products and services. The Internet Economy can be classified into four layers: the Internet infrastructure, its applications, the intermediaries between buyers and sellers, and electronic commerce.

The Internet infrastructure layer includes companies that provide products and services that make up the network infrastructure for Electronic Commerce, and consists of Internet backbone carriers, Internet Service Providers, "last mile" access companies, and manufacturers of end-user networking. The Internet applications infrastructure includes products and services built on the network infrastructure that make it technologically feasible to perform business online.

With the advancement of globalization as well as modern technology, traditional and digital economies are merging into one. As the name suggests, the digital economy refers to the economy based on computing and digital technologies. It includes economic, business, cultural, and social activities that are highly supported by the web. The term digital economy discusses all the economic transactions that happen on the internet. Also known as the internet economy or web economy, the digital economy plays a vital role today. Here we will read about what is a digital economy and some of its merits and demerits.

4.1.1 Components of Digital Economy

Basically, there are three major components of the digital economy as listed below:

    a) e-business
    b) e-business infrastructure
    c) e-commerce

In the present technological world, consumers easily get influenced by things they see on websites and on the other social media platforms. The digital economy is unified into a different aspect of the user's life, including education, healthcare, entertainment, banking, etc.

4.1.2 Major Attributes of the Digital Economy

a) **Digitized:** Various analogue objects produce digital signals that can be easily measured, tracked, and even analyzed for efficient decision making. Moreover, lower costs for modern technology are allowing operators to concern more processing out into the business.

b) **Connected:** Workers, assets, suppliers, and even stakeholders are all linked by wireless communications. It enables people to make better decisions and promotes safety, visibility, and efficiency across the enterprise.

c) **Shared:** The digital economy operates on the concept of sharing. Buying what is required often reduces costs and allows companies to pay only for the value received.

d) **Personalized:** One of the major characteristics of the digital economy is customer personalization. Thus, it enables customers to get benefits from their favourite brands whenever and wherever they want.

e) **Direct:** Leveraging remote intelligence to monitor, manage, report, and resolve asset problems throughout the service lifecycle, eradicates the need to have local personnel.

4.2 BENEFITS OF DIGITAL ECONOMY

The benefits of the digital economy are given in the points below:

i) **Contributes to Economic Growth**: The widespread digital economy has recorded tremendous growth and innovation as well as it can be broadly applied to other economic sectors

ii) **Expands business opportunities**: It has also reported an increasing trend in the business opportunities for those firms and businesses which are overlooked in the global marketplace. Digitalization enables small firms and businesses to actively participate in international buying and selling of goods and services.

iii) **Creates new jobs**: It is a well-known fact that the digital economy has given a boost to jobs too. In the last few years, the development of mobile apps has solely created millions of jobs worldwide.

iv) **Improves public services**: A set of global access to broadband and a powerful information and communication technology services ecosystem provides a platform to improve service delivery in core sectors.
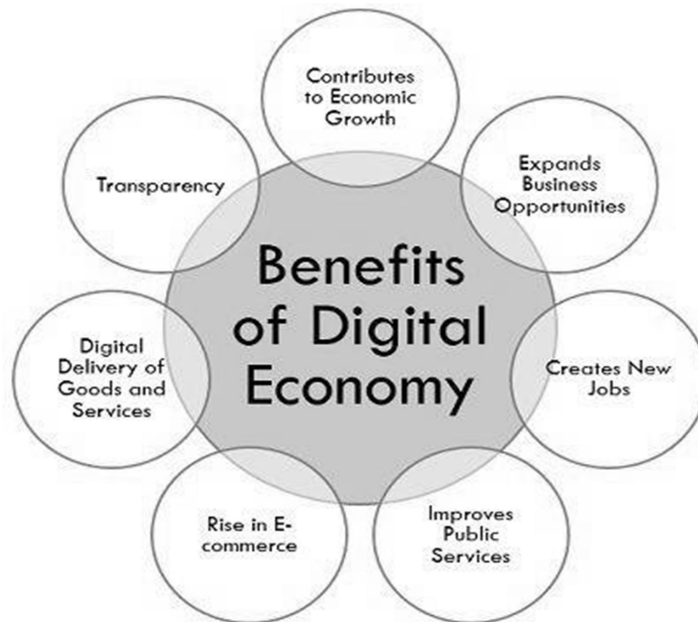
Figure 4.1 Benefits of Digital Economy

v) **Rise in e-commerce:** A recent growth in e commerce transactions has been reported in the last few years. And all credit goes to the digitalization of commercial activities, due to which developing, buying, distributing, selling and tracking of products and services, has become much simpler, competitive, and profitable.

vi) **Digital delivery of goods and services**: With digitalization, the way in which goods and services are delivered has been changed drastically. From aviation to banking, entertainment to education and insurance to hotel booking, one can easily get the goods and services of their need, online.

vii) **Transparency**: In the digital economy, major commercial transactions take place online, which eliminates cash transactions, and ultimately increases transparency and reduces corruption.

Digital Economy covers a broad spectrum of activities, which uses information and knowledge in digital form. Nowadays, to collect, store, analyze and share data in digital form, technologies like internet, cloud computing, big data is used.

4.3 LIMITATIONS OF DIGITAL ECONOMY

The limitations of the digital economy are discussed as under:

a) **Cyber security**: An exponential increase in cyber threats has been reported in recent years due to increasing digitalization in the economy. Except if cyber security is countered successfully, it will not be easy to develop a safe and trusted environment, which is conducive to the growing business.

b) **Disruptions in labor markets**: Though it is assumed to create new job opportunities, there is also a risk related to the speed of labor market changes and destruction of basic jobs. As everything will be digitized and automated, processes that involve labor and manual work will be avoided and is replaced by technology-oriented work, which will result in loss of jobs and may also widen income inequality.

c) **Strong infrastructure requirement**: It requires strong infrastructure concerning internet, telecommunication and mobile industry. For the development of such industries, heavy investment is required, so as to link all the cities, towns and villages.

4.4 FEATURES OF DIGITAL ECONOMY

There are a number of features that are increasingly prominent in the digital economy and which are potentially relevant from a tax perspective. While these features may not all be present at the same time in any particular business, they increasingly characterize the modern economy. They include:

a)   Mobility of Intangibles

Development and exploitation of intangibles is a key feature of the digital economy. This investment in and development of intangibles is a core contributor to value creation and economic growth for companies in the digital economy. For example, digital companies often rely heavily on software, and will expend substantial resources on research and development to upgrade existing software or to develop new software products. This heavy reliance on intangibles can be present even where technology is incorporated into a business model primarily to manage wholly tangible resources. For example, an online retailer may develop a multi-layer digital activity to manage a logistic platform including warehouses and shipping capacity. As businesses evolve, the relative importance of these intangibles frequently grows, resulting in further concentration of value in the intangibles.

b) Mobility of Users

Advances in ICT and the increased connectivity that characterizes the digital economy mean that users are increasingly able to carry on commercial activities remotely while traveling across borders. An individual can, for example, reside in one country, purchase an application while staying in a second country, and use the application from a third country. Challenges presented by the increasing mobility of consumers are exacerbated by the ability of many consumers to use virtual personal networks or proxy servers that may, whether intentionally or unintentionally, disguise the location at which the ultimate sale took place. The fact that many interactions on the Internet remain anonymous may add to the difficulty of the identity and location of users.

c) Mobility of Business Functions

As noted above, improved telecommunications, information management software, and personal computing have significantly decreased the cost of organizing and coordinating complex activities over long distances. As a result, businesses are increasingly able to manage their global operations on an integrated basis from a central location that may be removed geographically from both the locations in

which the operations are carried out and the locations in which their suppliers or customers are located.

d) Reliance on Data

It is common in the digital economy for businesses to collect data about their customers, suppliers, and operations. For example, the use of a product or service by a user may provide data about the user that has value to the business as an input either in improving existing products and services or in providing products and services to another group of customers.

Although the use of data to improve products and services is not unique to the digital economy, the massive use of data has been facilitated by an increase in computing power and storage capacity and a decrease in data storage cost, which has greatly increased the ability to collect, store, and analyze data at a greater distance and in greater quantities than was possible before. The capacity to collect and analyze data is rapidly increasing as the number of sensors embedded in devices that are networked to computing resources increases.

e) Network Effects

Networks effects refer to the fact that decisions of users may have a direct impact on the benefit received by other users. These network effects are an important feature of many businesses in the digital economy. Network effects are seen whenever compatibility with other users is important, even where the primary purpose of a particular technology may not be to interact with others. For example, a widely-adopted operating system will generally have a larger amount of software written for it, resulting in a better user experience. These effects are known as positive externalities, meaning situations in which the welfare of a person is improved by the actions of other persons, without explicit compensation. For example, when additional people join a social network, the welfare of the existing users is increased, even though there is no explicit agreement compensation among the users for this improvement.

f) Multi-sided Business Models

A multi-sided business model is one that is based on a market in which multiple distinct groups of persons interact through an intermediary or platform, and the decisions of each group of persons affects the outcome for the other groups of persons through a positive or negative externality. In a multi-sided business model, the prices charged to the members of each group reflect the effects of these externalities. If the

activities of one side create a positive externality for another side (for example more clicks by users on links sponsored by advertisers), then the prices to that other side can be increased.

The rise of the digital economy made multi-sided business models more prevalent in a cross-border context. In this regard, two key characteristics of multi-sided business models in the digital economy should be noted:

i) **Flexibility:** The nature of digital information and the infrastructure of the Internet greatly expand the facility to design and implement multi-sided business models. Resources such as content, user data, or executable code can be stored to create value long after they have been produced. This specific nature of digital resources makes them an asset in business models where the different sides of the market can be created then dynamically adapted based on evolving technology, the latest expression of consumer demand, and a firm's position on the market. In addition, as discussed below, digital technology has enhanced the ability to collect, analyze and manipulate user and market data, which has allowed platforms to enhance the value to one side of a market of the participation of the other side of the market.

ii) **Reach:** The digital economy also makes it easier to locate the different sides of the same business model in different countries. Whereas many traditional multi-sided business models such as broadcasting paid for by advertising, or shopping malls were confined to a limited perimeter due to physical constraints or to regulations, over-the-top businesses in the digital economy can more easily connect two sides that are located far from one another to maximize value on each side. For instance, resources designed to collect data can be located near individual users, whereas the infrastructure necessary to sell this data to paying customers can be located elsewhere.

g) Tendency toward Monopoly or Oligopoly

In some markets, particularly where a company is the first actor to gain traction on an immature market, network effects combined with low incremental costs may enable the company to achieve a dominant position in a very short time. This ability to gain traction can be enhanced where a patent or other intellectual property right grants one competitor the exclusive power to exploit a particular innovation in a particular market. The impact of these network effects tend to lead to this result, for example, where companies provide a platform or market

in which users on one side of the market prefer to use only a single provider, so that value to those users is enhanced when a single standard is chosen, and the price that can be charged to the other side is enhanced because the platform becomes the only means of access to those users.

h) Volatility

Technological progress has led to progress in miniaturization and a downward trend in the cost of computing power. In addition, neither an Internet end user nor in many cases the service provider are required to pay a marginal price for using the network. These factors, combined with increased performance and capital expenditure have markedly reduced barriers to entry for new Internet-based businesses. These factors have combined to foster innovation and the constant development of new business models.

4.5 KEY FEATURES OF INTERNET ECONOMY

All sectors of the economy have adopted ICT to enhance productivity, enlarge market reach, and reduce operational costs. This adoption of ICT is illustrated by the spread of broadband connectivity in businesses, which in almost all countries of the Organization for Economic Co-operation and Development (OECD) is universal for large enterprises and reaches 90% or more even in smaller businesses. The widespread adoption of ICT, combined with the rapid decline in price and increase in performance of these technologies, has contributed to the development of new activities in both the private and public sector. For example, online retailers initially adapted the business model of brick-and-mortar stores by selling traditional physical goods (for example, books) digitally.

Online intermediaries that allowed the discovery, sale, and purchase of goods and services such as vehicles, homes, and jobs were another early category. Other digital players specialized in the online selling of traditional services (for example, online insurance brokers). Retailers then began selling digital products and services, like downloadable and streaming music and movies, executable code, games, and services based on data processing, increasingly blurring the line between goods and services as businesses continued to develop. Online advertising similarly started from traditional advertising business models, becoming more sophisticated as the potential of digital technology became fully integrated into the industry.

The spread of ICT across business sectors: the digital economy Sectors as diverse as retail, logistics and education have changed and keep changing due to the spread of ICT:

a) Retail

The digital economy has enabled retailers to allow customers to place online orders (often fulfilled from a local store) and has made it easier for retailers to gather and analyze data on customers, to provide personalized service and advertising. It has also enabled retailers to manage logistics and supply stores with products, which has had a significant, positive impact on productivity.

b) Transport and Logistics

The logistics sector has been transformed by digital economy, which enables the tracking of both vehicles and cargo across continents, the provision of information to customers and facilitates the development of new operational processes such as Just In time delivery in the manufacturing sector. Vehicle telemetry also helps maximize fuel efficiency, ensure efficient use of the transport network and support fleet maintenance activities. The information collected by fleets can also be used to create datasets with commercial value.

c) Financial Services

Banks, insurance providers and other companies, including non-traditional payment service providers, increasingly enable customers to manage their finances, conduct transactions and access new products on line, although they still continue to support branch networks for operations. Better use of data also allows growth in customer insights and associated products, such as personalized spending analysis, which can be used to generate advertising revenue. The digital economy has also made it easier to track indices and manage investment portfolios and has enabled specialist businesses such as high-frequency trading.

d) Manufacturing and Agriculture

The digital economy has enhanced design and development, as well as the ability to monitor production processes in factories and control robots, which has enabled greater precision in design and development and ongoing product refinement. The products being produced are also increasingly knowledge-intensive. In the automobile industry, for example, it is estimated that 90% of new features in cars have a significant software component. On farms, systems can monitor

crops and animals, and soil/environmental quality. Increasingly, routine processes and agricultural equipment can be managed through automated systems.

e) Education

As the digital economy spreads, universities, tutor services and other education service providers are able to provide courses remotely without the need for face to face interaction through technologies such as video conferencing and streaming and online collaboration portals, which enables them to tap into global demand and leverage brands in a way not previously possible.

f) Healthcare

The digital economy is revolutionizing the healthcare sector, from enabling remote diagnosis to enhancing system efficiencies and patient experience through electronic health records. It also allows opportunities for advertising, for example of drugs and other treatments.

g) Broadcasting and Media

The digital economy has dramatically changed the broadcasting and media industry, with increasing broadband access in particular opening new avenues for delivery of content for traditional media players, while also enabling the participation in the news media of non-traditional news sources and expanding user participation in media through user-generated content and social networking. The digital economy has also enhanced the ability of companies to collect and use information about the viewing habits and preferences of customers, to enable them to better target programming.

4.6 ADVANTAGES OF THE DIGITAL ECONOMY

a) **Promotes Internet Use:** The Internet has become a worldwide network used by people for various tasks. It makes a great sense to invest in hardware, research, technology, digital communication, software, services, etc. The digital economy ensures that the internet is here to stay long-term and suitable for a web-based business.

b) **Digital services:** Whether it's about DVDs, music CDs, or anything else, almost everything is now available digitally. There is no need for visiting the shops, in-person to buy any product. Similar to these, digital solutions have made it quite hassle-free to get insurance, banking, and other services online. There is no need to visit a bank with the digital economy if you can do transactions

online. Hence, certain goods, as well as services, have been digitized in this digital economy.

c) **Growth in the e-commerce sector:** There is no doubt that firms adopting the internet and other online business strategies are flourishing. The introduction of the digital economy resulted in the expansion of the e-commerce sector. It is one of the great benefits of the digital economy. Apart from direct selling, the distribution, creation, marketing, buying, and selling, are now hassle-free due to the digital economy.

d) **Transparency:** Almost every transaction that happens in this digital economy era occurs online. Due to the reduction in cash transactions, the chances for black money and corruption in the market are also decreasing. Hence, the economy is becoming more and more transparent.

4.7 DISADVANTAGES OF THE DIGITAL ECONOMY

a) **Reduction in Employment:** More the people depend on digital technology; the lesser is dependence on human resources. The advancement of the digital economy in India may result in the loss of numerous jobs. The requirement for human resources will reduce with the automation of online processes.

b) **Not Cost-effective:** Digital economy requires high functioning internet, robust infrastructure, good mobile networks, and telecommunication. All of such requirements are not only time consuming, but also require high investment. In a developing country, network and infrastructure development are very slow, and even costly.

c) **Shortage of Professional Experts:** Digital economy requires advanced technologies and complex processes to work on. To build such innovative platforms, there is a need for professionally trained experts. Not everyone is an expert, especially in the rural and semi-rural areas.

LET US SUM UP

The digital economy is based on the digitization of information and communication technology as a key production factor. Through modern information and communication infrastructure, a virtual network is formed, which fundamentally changes the business processes and transaction methods of various industries, stimulates the development of e-commerce, and makes production and operation the digitalization of

management activities, and living consumption has also changed the economic structure and economic value. Successive governments have regarded the development of digital economy as an inevitable choice to promote their own economic growth. The digital economy has become the mainstream economic model in the world.

CHECK YOUR PROGRESS

Choose the Correct Answer:

1. _____ is the new business model aim to gain competitive advantage by using Information Technology.

a) Digital Economy

b) Digital Enterprise

c) Internet of things

d) E-Commerce

2. Digital business is similar to the term _____ which was first coined by IBM Corporation.

a) E-business

b) E-Commerce

c) Internet Business

d) Both A and B

3. The transformation of key business processes through the use of digital or Internet technologies is known as _____.

a) E-Business

b) E-Commerce

c) Digital Business

d) Both A and C

4. _____ includes digital wire line or wireless communication networks, computers, software and other related information technologies.

a) Internet Economy

b) Digital Economy

c) Both A and B

d) Social Economy

5. Digital economy is the _____ activity that results from billions of everyday online connections.

a) Political

b) Legal

c) Economic

d) Digital

GLOSSARY

ICT : Information and Communication Technologies (ICTs) is a broader term for Information Technology (IT), which refers to all communication technologies, including the internet, wireless networks, cell phones,

		computers, software, middleware, videoconferencing, social networking, and other media applications and services
Internet Economy	:	The digital economy, also known as the Internet economy, new economy, or the Web economy, refers to the economy that is based in a large part on digital technologies, including digital communications networks (Internet, intranets, etc.), computers, software, and other related information technologies.
Cyber Security	:	The technique of protecting internet-connected systems such as computers, servers, mobile devices, electronic systems, networks, and data from malicious attacks is known as cyber security.
Mobility	:	Mobility, in its broadest definition, is that smart and connected technologies can eliminate the friction in business processes and no doubt is the key enabler of digital transformation. It is evident that Mobility has emerged as a business-critical platform that is driving digital transformation.
Transparency	:	In the digital economy, major commercial transactions take place online, which eliminates cash transactions, and ultimately increases transparency and reduces corruption.

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ANSWER TO CHECK YOUR PROGRESS

1. b)   2. a)   3. d)   4. c)   5. c)

UNIT 5

BUSINESS STRATEGY IN NEW ECONOMY

STRUCTURE

Overview

Learning Objectives

5.1 Introduction

5.2 Business Strategy

      5.2.1 Levels of Business Strategy

5.3 Strategic Planning for the new economy

      5.3.1 Future New Economy

      5.3.2 Radically Different Global Monetary System

      5.3.3 The Struggle for Change

      5.3.4 Strategic Opportunities for Businesses

      5.3.5 Benefits and Efficiencies for Consumers

5.4 Adopting the Internet in an Established Business

5.5 Redefining the borders of the firm

5.6 Building a successful E-Business

Let Us Sum Up

Check Your Progress

Glossary

Suggested Readings

Web Resources

Answers to Check Your Progress

OVERVIEW

Economic strategy is a relatively new and rapidly developing area of economic consulting, involving the application of economic principles and methods to provide clients with unique insights aimed at addressing specific issues/problems and/or enhancing their long-term performance. The way scarce resources get distributed within an economy determines the type of economic system. There are four different types of Economic Systems; a traditional economy, a market economy, a command

economy, and a mixed economy. Each type of economy has its own strengths and weaknesses.

The development of the new economy through the advent of the Internet and the World Wide Web has created many threats and opportunities for firms in general and small businesses in particular. There appears to be an inextricable linkage among the new economy, new enterprise, and the new technology, which may have a potential effect on the way small businesses formulate their business strategies

LEARNING OBJECTIVES

After completing this unit, you will be able to;

- explain the features of the Business strategy
- explore the ways and means of building a successful e-business
- discuss the key features of Internet economy.

5.1 INTRODUCTION

A business strategy can be defined as the combination of all the decisions taken and actions performed by the business to accomplish business goals and to secure a competitive position in the market. It is the backbone of the business as it is the roadmap which leads to the desired goals. Any fault in this roadmap can result in the business getting lost in the crowd of overwhelming competitors.

A business objective without a strategy is just a dream. It is no less than a gamble if you enter into the market without a well-planned strategy. With the increase in the competition, the importance of business strategy is becoming apparent and there's a huge increase in the types of business strategies used by the businesses.

The new information and communication technologies of the last decade are fundamentally transforming the operating methods of most manufacturing and service companies and are provoking wholesale reappraisal of the nature of support functions. These technologies have become institutionalized in the new ICT (Information & Communications Technology) industry across the world and are now having an equally revolutionary effect on corporate strategy. Executives are rethinking the strategic fundamentals of business practices not just in technology and communications industries but also across the entire spectrum of industries.

The modern economy is based not only on capital and human resources, but above all on information that enterprises possess. The right information at the right time may determine the development and

strong competitive position of an enterprise on the market, whereas lack of such information may even lead to its failure. A properly developed electronic business strategy and tools that are well suited for the specificity of this type of business and appropriately used have a positive impact on an enterprise's success.

5.2 BUSINESS STRATEGY

Business strategy can be understood as the course of action or set of decisions which assist the entrepreneurs in achieving specific business objectives. It is nothing but a master plan that the management of a company implements to secure a competitive position in the market, carry on its operations, please customers and achieve the desired ends of the business.

In business, it is the long-range sketch of the desired image, direction and destination of the organization. It is a scheme of corporate intent and action, which is carefully planned and flexibly designed with the purpose of:

i) Achieving effectiveness,
ii) Perceiving and utilizing opportunities,
iii) Mobilizing resources,
iv) Securing an advantageous position,
v) Meeting challenges and threats,
vi) Directing efforts and behaviour and
vii) Gaining command over the situation.

A business strategy is a set of competitive moves and actions that a business uses to attract customers, compete successfully, strengthening performance, and achieve organizational goals. It outlines how business should be carried out to reach the desired ends.

Business strategy equips the top management with an integrated framework, to discover, analyze and exploit beneficial opportunities, to sense and meet potential threats, to make optimum use of resources and strengths, to counterbalance weakness.

5.2.1 Levels of Business Strategy

In business, there is always a need for multiple strategies at various levels as a single strategy is not only inadequate but improper too. Therefore, a typical business structure always possesses three levels.

a) Corporate level strategy

Corporate level strategy is a long-range, action oriented, integrated and comprehensive plan formulated by the top management. It is used to

ascertain business lines, expansion and growth, takeovers and mergers, diversification, integration, new areas for investment and divestment and so forth.
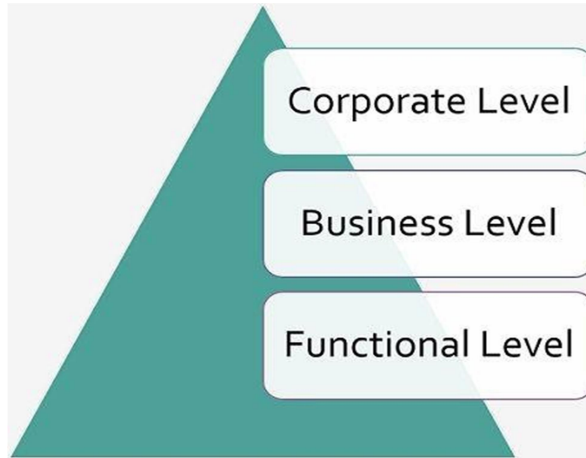
Figure 5.1 Levels of Business Strategy

b) Business level strategy

The strategies that relate to a particular business are known as business level strategies. It is developed by the general managers, who convert mission and vision into concrete strategies. It is like a blue print of the entire business.

c) Functional level strategy

Developed by the first line managers or supervisors, functional level strategy involves decision making at the operational level concerning particular functional areas like marketing, production, human resource, research and development, finance and so on.

5.3 STRATEGIC PLANNING FOR THE NEW ECONOMY

The new economy is an evolving system and strategic planning to position within it can help both businesses and consumers to prosper under the changing economic landscape. Increasing occurrences of systematic failure in the global monetary and economic infrastructure has invoked a growing desire for alternative methods for conducting business and consumer transactions. As the global economy advances through technological innovations, businesses and individuals can leverage from opportunities that arise if appropriate strategies are considered.

5.3.1 Future New Economy

The new economy has been often described as a state of functioning whereby capital has transitioned from manufacturing to service based industries. The new economy can also be considered as a fluid system constantly changing and adapting to market, environmental and political dynamics. This future new economy is likely to also challenge some fundamental economic principles that have been the basis for decision making since a long time.

The global economy is able to evolve over time as technology opens the way for new and alternative avenues for the flow of capital. The shift from manufacturing to service based activity has been greatly assisted by the ability to more easily communicate and share data remotely via the internet. Cross border capital flows are further facilitated as antiquated fiscal regulation fails to adapt to technological innovations in transaction payment methods. As a result, niche markets emerge and transform rapidly to meet trending demand and alternative investment opportunities.

5.3.2 Radically Different Global Monetary System

The current monetary system has been in place for many generations and, therefore, often viewed as the reliable norm. In recent history, however, we have seen the system fail and more frequently show serious signs of fracturing. Control of the system has moved progressively to centralized self-governance and away from any real form of underlying stability. The decoupling of the US dollar from the gold standard in 1971 and the relaxing of reserve requirements for bank lending in the 1990s were key catalysts to this instability in recent history. It is accepted for individuals and private businesses to declare bankruptcy, but a country unable to pay sovereign debt obligations brings the entire system down.

The internet enables alternative forms of transaction processing and financing that fall outside of many of the pitfalls of the established monetary system. Several evolving approaches are worth noting.

a) **Point system bartering** platforms revive ancient trading systems whereby services are exchanged without any form of monetary currency changing hands.

b) **Geo location of operations** can leverage from favorable sales and income tax regimes as well as available consumer mobile and online payment mechanisms.

c) **Alternative currencies** emerge as a method of exchange outside of the established banking system.

Philosophical questions arise around ethics, morality and even legality of business conduct outside of institutionally controlled systems. A common example of this is the tax evasive behavior of moving business capital through low tax geographical locations. However, in a free market economy, it should be governing authorities that adapt to changing dynamics and not economic evolution that is hindered by bureaucratic resistance to change.

Virtual forms of exchange are attractive for both businesses and consumers due to very low transaction costs, speed and security. It is not particularly relevant as to what form virtual exchange of value prevails in the future economy, so long as the supply from which it based is finite. Under the current system, the departure from a finite base value has resulted in boom and recession cycles as well as a ballooning of debt levels. Bitcoin is worth mentioning as a viable virtual method of value exchange and is growing in both popularity and unpopularity depending on the standpoint.

5.4.3 The Struggle for Change

The established closed circuit system between government, banking institutions and big business has vested interested in keeping the old system of money supply and transaction processing. The reason is simply that control is centralized to ensure profitability for a select few. The desire to cling to old ideals is not limited to institutions as we see factions of society also oppose change under the new economic dynamics, driven by fear of losing control. This phenomenon is by no means new and can also manifest to xenophobic tendencies as we often observe in national politics.

On the flipside, new generation thinking is pushing for change through new and future economy innovations that will take control away from the established system. This movement is not simply an idea but a reality for many new business models and Fintech startups that are embracing alternative transaction methods in new economy innovations. Individuals locked into perpetuating repressive debt structures and subject to unjustified banking fees also seek alternative systems for managing personal finances.

The struggle between the old-school system control and new economy desire for change relies primarily on the development of critical mass. Moving to the future new economy does not have to mean a collapse of

the current system, even though that is also a possible scenario. As businesses and consumers move to alternative forms of value transfer and establish critical mass, outmoded institutional systems can choose to adapt and introduce new mechanisms for the evolving system. The extent in which this can happen will rely on the willingness of traditional bodies to view new economy trends as an opportunity rather than threat.

A similar example can be likened to the postal service transformation. Many national and state run postal organizations fail to operate without the support of increasing taxpayer subsidies. As electronic messaging replaced traditional paper mail, many postal services were unable to envisage the offset growth of parcel delivery through e-commerce and, subsequently, missed the opportunity to compete effectively with private logistics businesses.

5.3.4 Strategic Opportunities for Businesses

Businesses can leverage opportunities from the new and future economy by analyzing viable options and alternatives for process management and sales channel growth. Several aspects of the new economy can be considered for business:

a) Operating and administrative costs can be lowered by outsourcing to cross-border and online freelance services. High skilled and competitive online marketplaces provide the ability to isolate relevant expertise to optimize the cost/benefit of business administration including IT, accounting, financial analysis and process management. Part fabrication to lower cost geographic locations is and will continue to be a driving factor of the future global economy.

b) Transaction costs and banking fees can be lowered dramatically by restructuring internal payment methods via unilateral agreements with trading partners. Service and material part exchange systems remove monetary currency from internal systems thereby removing transaction costs.

c) Targeting marketing efforts and retail points of sale to demographics that incline toward alternative payment methods can create new revenue stream opportunities. Accepting mobile payment methods and Bitcoin can open business to new consumer bases.

d) Investment into new economy technology and business startups can offer opportunities and strategic advantages later on. Choosing new economy businesses that fit into a potential future operational

advantage can provide critical options to adapt as economic dynamics evolve.

5.3.5 Benefits and Efficiencies for Consumers

Consumers and individuals benefit from new economy developments when banking oligopolies can no longer hold on to repressive personal finance product strategies. As businesses accept alternative forms of payment for goods and services, the shift moves to a more open market for financing lifestyles at a personal level. Other efficiencies for consumers include:

a) A higher level of privacy through encrypted value transfer and exchange that is outside of the traditional banking system.
b) Faster, easier and lower cost consumer transactions through secure exchange systems via mobile and internet connected devices.

5.4 ADOPTING THE INTERNET IN AN ESTABLISHED BUSINESS

The adoption of information technology represents a problem of magnitude to small business entrepreneurs. Situation they are facing is different from larger corporations, making technology adoption behavior different from them. A behavioral model of innovation acceptance was developed with its foundation on previous literature on technology acceptance and innovation adoption research focused on small businesses. The model posits relationships of relative advantage of using IT, compatibility, ease of use, computer self-efficacy, financial slack of the firm, innovativeness of the firm, image of IT, and competitive pressure against the adoption behavior of four different Internet technologies - email, business homepage, e-sales and e-procurement. The results confirm the strong association of these antecedents with the adoption behavior and reveal different patterns of adoption behavior across different technologies.

Information Technology (IT) adoption is an important field of study in a number of areas, which include small and medium-sized enterprises (SMEs). Due to the numerous advantages of IT, SMEs are trying to adopt IT applications to support their businesses. IT adoption by SMEs differs from larger organizations because of their specific characteristics, such as resources constraints. Therefore, this research aims to provide a better and clearer understanding of IT adoption within SMEs by reviewing and analyzing current IT literature.
Based on suggested categorization and reviewed influencing factors, and to come up with more systematic guidelines for effective IT adoption

by SMEs, the authors put forward a conceptual model that is believed to assist successful IT institutionalization in this context. This model has been conceptualized based on extant perspectives and theories, and uses the technological innovation literature as a reference discipline. As suggested by prior literature, initial IT adoption, IT implementation and post-implementation of IT are three different stages in the technology innovation cycle. Initial IT adoption refers to a stage in which decisions are made about whether to adopt a new IS/IT. If the decision is to go ahead with adoption, the IT implementation stage involves implementing the IT infrastructures (including hardware and software) in the organization.

Once the IT has been implemented successfully, the IT post-implementation stage is concerned with how much organizational learning takes place within the business so as to facilitate further IT adoption. Accordingly, our suggested model of the IT adoption process addresses all the three different stages and definitions of IT adoption in providing guidelines for successful IT adoption in SMEs. It is believed that the presented categorization of IT adoption issues and factors through the developed conceptual framework and conceptual model of effective IT adoption process can help governments, organizations, managers and IT consultants to achieve a clearer understanding of the IT adoption process. It may also increase the knowledge and literature bases by providing a clearer understanding of the reasons and methods that SMEs adopt IT, and establish the determinants that contribute to the success of the IT adoption process in these businesses.

SMEs now invest significant amounts of financial resources in IT to strengthen their competitive positions. Due to the large-scale application of IT among SMEs, they have been exposed to several associated risks within the adoption and development of IT solutions. Prior literature on IT adoption in SMEs shows that approximately most failures and most dissatisfaction resulted in one or more of the following reasons:

a) inappropriate connection between adopted IT and enterprise strategies,
b) Inadequate realization of organizational issues,
c) Inadequate realization of end user necessities,
d) Lack of manager and employee involvement in different stages of IT adoption,
e) Lack of required resources (knowledge, skills, finance, management),
f) Inadequate teaching and preparation of end users,
g) Business size and fund limitations to employ IT specialists,

h) Unqualified management in highly centralized CEO structures,

i) Inappropriate government assistance role and supportive regulation,

j) Dissatisfaction with IT-created competitive advantages due to improper interactions with competitors, suppliers and customers, and

k) The particular characteristics of organizations, their culture and family involvement in the business.

5.5 REDEFINING THE BORDERS OF THE FIRM

The most fundamental change that the advent and acceptance of the Internet has caused in the world of business is in terms of redefining the borders of the business firm. Increasingly today, there is a move towards the typical business firm becoming smaller and more focused and getting involved in myriad relationships with other similar business entities transforming the business landscape from that comprising rigid, well-defined, standard monoliths into that of an evolving, dynamic soup where business organizations are as fluid as the activities they are meant to accomplish.

However, large corporations tend to become hierarchical and bureaucratic, are often difficult to manage, are slow to react to new changes in the environment and tend to develop 'slack' leading to less than efficient use of time and resources. These are some of the 'diseconomies of scale' – the flipside of the 'economies of scale'. Consequently, they often lose out to new, more nimble competitors in environments characterized by rapid change. On the other hand, large corporations do tend to have advantages in terms of resources and often successfully thwart competition from new entrants particularly in industries with large set-up costs.

The value chain itself was well defined and linear and the competitors and collaborators interacted in a simple unidirectional fashion. In the information economy on the other hand, the value chains and markets are far more complex and open to modifications. Consequently, industry definitions and market characterizations are all being widened and changed from their traditional forms. Online strategy cannot be simply an extension of the traditional business thinking to the internet but has to be devised independently to suit the particular features and possibilities of the new environment.

5.6 BUILDING A SUCCESSFUL E-BUSINESS

As an entrepreneur, getting into ecommerce is a significant step

towards growing a business and increasing profits. For those who are just starting a business, E-commerce can potentially be the foundation of a profitable company. E-commerce is not simply putting up your products online and hoping for the best. E-commerce is now ubiquitous to business in developed countries, but developing countries have yet to catch up with its adoption. However, things have been coming along as electronic commerce has started to grow in a big way throughout Asia, especially in China.

The E-commerce industry is witnessing a tremendous growth in the world backed by increasing smart phone and internet penetration. With further increase in internet service providers and the launch of 3G and 4G services, at affordable prices. The E-commerce and M-commerce industries are set to record even higher growth. However, a lot of businesses aren't converting to m-commerce fast enough to make the most of the mobile user base. With the E-commerce market becoming more competitive than ever before, this may change down the line, as businesses continue to find new ways to gain an edge.

1. Regulation of product pricing

It's natural for customers to compare prices between brands. It's expected of entrepreneurs, as well, to be aware of how much competitors are charging for their goods. Fortunately, there are different tools available to easily see and compare prices of competing ecommerce websites.

Various pricing strategies are employed to get the sweet spot in attractiveness and earnings, depending on the market and the kind of products being priced. For instance, one of the most common pricing strategies is keystone pricing, which is basically the doubling of wholesale price. That usually works, but consider additional factors so the price is just right, not too high or too low. There is also discount pricing, psychological pricing, competitive pricing, value-based pricing, and so on.

2. Maintaining high quality products

For a long time, people had the notion that products from ecommerce sites were inferior quality when compared to products from physical stores. While much of that myth no longer exists these days, there is still a lot that must be done to convince customers that your products are comparable in quality as those found in malls and other stores. Make sure you procure your products from well-known and trusted suppliers of high quality goods as well.

3. Improving store accessibility

The design of your ecommerce website (online store) must accommodate all types of customers. The online store is your main tool of communicating and transacting with them. It must be able to relay information fast and concisely to evoke the trustworthiness of your business to your customers.

Accessibility is of utmost importance as it helps your business be within reach to all sorts of customers; i.e. people of different cultures, people with disabilities, etc. Have your online store set to other languages can potentially widen your customer base as long as they are a significant part of your audience. It may also be accessible to people with visual disabilities like color blindness and impaired vision, by using high-contrast visual theme and a larger font size for text.

There are also things you can do to make the online store viewed better by mobile devices, such as using responsive design and optimizing your images so they can load faster. The more you improve your website's accessibility, the more people can potentially view it.

4. Making a wonderful first impression

Users know if they like a website or not by just a glance and that first impression usually lasts. Making a good first impression is imperative in getting more customers in your online store. Make the best, eye-catching design possible, in order to entice people into coming in and making use of your ecommerce website. Good web design has principles you can follow that will help you convince people to take a look at what you have. It should not be too loud or too barren. Everything on it should be easy to understand, yet maintains its own personality.

5. Securing your shipments

One of the main concerns with ecommerce for both entrepreneurs and consumers is the issue of security. With personal and financial information being handled online, there is always the potential for ecommerce websites being compromised and customer data stolen for nefarious purposes. This is especially true for credit card information that gets entered in online every single day. Make use of SSL to secure your customers' online shopping experience. SSL ensures that transactions and data are encrypted so that there is less of a chance for them to be compromised. Two-factor authentication is also a good way to further secure your online store, and adding other verification methods (without making it too hard for your customers) should help as

well.

6. Taking advantage of M-commerce

The mobile user base has grown exponentially over the last few years; thereby the need for online stores to become mobile commerce ready has become virtually mandatory at this point. If your online store is not optimized for mobile devices, then you are missing out on a lot of business.

Some of the things that make an online store optimized for M-commerce are things like responsive design with easy-to-use navigation menus, solid mobile search features, and easy checkout and payment, all done over mobile. You need not have a mobile app to do it, just have your website optimized for mobile if possible. Initiatives aimed at developing national E-commerce strategies have been launched in most developed and many developing countries.

7. **Digital Marketing**

It is one of the best and most essential ways to market and publicize your products. Digital marketing could be done in several ways which include the following:

a) **SEO:** It is one of the most trusted ways of optimization of the website. Try using SEO strategies and keywords to rank among the top results of the search engine page.

b) **Social Media Marketing:** Promote and advertise your products on various social media platforms including Instagram, Facebook, and several others.

c) **Promotions and collaborations:** You can try and collaborate with several brands of the same niche which leads to your promotions as well.

d) **Word of Mouth and interaction with customers:** The most important aspect of marketing is trust. Try developing your trust and potential among the customers, which helps in the age-old tradition of the word-of-mouth method, resulting in the attraction of more customers.

LET US SUM UP

Economic strategy is a relatively new and rapidly developing area of economic consulting, involving the application of economic principles and methods to provide clients with unique insights aimed at addressing specific issues/problems and/or enhancing their long-term performance. Strengths in economic strategy consulting can add real value and

provide clients with new insights beyond those provided by traditional management consulting. Economic strategy consulting often involves combining the other areas of economic consulting, such as competition and public policy, imaginatively and innovatively.

CHECK YOUR PROGRESS

Choose the Correct Answer:

1. Which of the following is not considered to be a drawback of Internet auctions?

a) Market inefficiency

b) Trust risks

c) Fulfilment costs

d) Delayed consumption costs

2. _____ are networks that connect people within a company to each other and to the company network.

a) Bit streams

b) Extranets

c) Internets

d) Intranets

3. E-Commerce technologies have improved upon traditional commerce technologies in _____ .

a) richness

b) reach

c) Both A and B

d) None of the above

4. SMEs stands for _____ .

a) Small and Medium Entrepreneurs

b) Small Management of Enterprises

c) Small and Medium-sized Enterprises

d) Societies for Managing Exports

5. A strategy designed to compete in all markets around the globe is called a _____ strategy.

a) Scope

b) differentiation

c) cost

d) focus

GLOSSARY

ICT	:	Information and Communication Technologies (ICTs) is a broader term for Information Technology (IT), which refers to all communication technologies, including the internet,

		wireless networks, cell phones, computers, software, middleware, video-conferencing, social networking, and other media applications and services.
M-Commerce	:	M-commerce (mobile commerce) is the buying and selling of goods and services through wireless handheld devices such as smart phones and tablets. As a form of e-commerce, m-commerce enables users to access online shopping platforms without needing to use a desktop computer.
Digital Marketing	:	Digital marketing refers to advertising delivered through digital channels such as search engines, websites, social media, email, and mobile apps. Using these online media channels, digital marketing is the method by which companies endorse goods, services, and brands.
SEO	:	SEO stands for Search Engine Optimization. It is the process of getting traffic from the free, organic, editorial, or natural search results on the search engines.
SMEs	:	SME stands for Small and Medium Enterprises. The SME definition in India as per Section 7 of Micro, Small and Medium Enterprises Development Act, 2006 is based on the investment amount as per the sectors these cater to.

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ANSWER TO CHECK YOUR PROGRESS

1. a)   2. d)   3. c)   4. a)   5. a)

UNIT 6

E-RETAILING AND MARKETING ON THE INTERNET

OVERVIEW

Electronic retailing is the sale of goods and services through the Internet. E-tailing can include business-to-business (B2B) and business-to-consumer (B2C) sales of products and services. Amazon.com (AMZN) is by far the largest online retailer providing consumer products and subscriptions through its website. Retail

communication refers to the programs or schemes conducted by the retailers to inform the customers about their product, services and also about their Retail store. Retailers provide information about themselves and the products or services offered by them. Retailing involves all activities required to market consumer goods and services to consumers who are purchasing for individual or family needs through a point of purchase.

LEARNING OBJECTIVES

After completing this unit, you will be able to;

- discuss the difference between conventional and E-retailing
- describe about E-Commerce models
- describe the meaning of Internet marketing
- analyze the critical success factors for Internet marketing.

6.1 INTRODUCTION

The term retail refers to the sale of goods and services to the public for consumption. Retailing involves all activities required to market consumer goods and services to consumers who are purchasing for individual or family needs through a point of purchase.

The vocabulary electronic retailing, that used in internet discussions as early as 1995, the term seems an almost inevitable addition to e-mail, e-business and e-commerce, etc. e-retailing is synonymous with business-to- consumer (B2C) transaction model of e-commerce. Although e-retailing is an independent business model with certain specific constituents like; trust model, electronic transaction process, etc., but in reality, it is a subset of electronic commerce by nature.

E-Retailing stores sell online promotion only for goods that can be sold easily online, e.g., Amazon did for Books & CDs, etc. The online retailing require lots of displays and specification of products to make the viewers have a personal feel of the product and its quality as he gets while physically present in a shop.

E-Retailing refers to retailing over the internet. Thus an e-Retailing is a B2C (Business to customer) business model that executes a transaction between businessman and the final consumer. E-Retailers can be pure play businesses like amazon.com or businesses that have evolved from a legacy business such as tesco.com. The e-retailing is a subset of electronic commerce. Thus, e-commerce is the master domain defining the e-retailing operation.

6.2 ESSENTIALS OF E-RETAILING

Electronic retailing or e-tailing, as it is generally being called now, is the direct sale of products, information and service through virtual stores on the web, usually designed around an electronic catalogue format and auction sites. There are thousands of storefronts or e-commerce sites on the Internet that are extensions of existing retailers or start-ups. Penetration of computers and proliferation of the Internet has given rise to many new forms of businesses, such as business process outsourcing, call centre based customer relationship management, medical transcription, remotely managed educational and medical services and of course, electronic retailing.

There are certain essential ingredients for an electronic retailing business to be successful. One must consider these components well in advance before setting up an electronic storefront. These essential components are:

a) Attractive business-to-consumer (B2C) e-commerce portal
b) Right revenue model
c) Penetration of the Internet

E-Catalog It is a database of products with prices and available stock.

Shopping Cart The customers select their goodies and fill shopping cart. Finally, as in a real store, at the time of checkout, the system calculates the price to be paid for the products.

A payment gateway Customer makes payments through his/her credit card or e-cash. The payment mechanism must be fully secure.

6.3 SUPPORT SERVICES IN E-RETAILING

The electronic retail business requires support services, as a prerequisite for successful operations. These services are required to support the business, online or offline, throughout the complete transaction-processing phases. The following are the essential support services:

i) Communication backbone
ii) Payment mechanism
iii) Order fulfillment
iv) Logistics

6.3.1 Advantages of E-Retailing

E-Retailing, either as an extension of the existing retail/distribution business or an altogether new start-up, has many advantages.

Traditional brick-store retailers are placing more emphasis on their electronic channels and evolving into multi-channel retailers to increase their reach and support their retail channels. The new start-ups in e-retailing can be launched from a small room with one PC attached with the outside world through the Internet.

a) The electronic channel gives the existing brick-store retailers an opportunity to reach new markets.
b) For the existing retailers, it is an extension to leverage their skills and grow revenues and profits without creating an altogether new business.
c) E-Retailing overcomes some limitations of the traditional formats, for instance the customers can shop from the comfort of their homes.
d) The e-commerce software that also traces the customers' activities on the Net enables e-retailers to gain valuable insights into their customers shopping behavior.
e) The e-retail channels transcend all barriers of time and space. The retailer's server must be on 24*7. An order can come from any customer living any place at any time of the day.
f) E-Commerce channels are definitely efficient, and retailers do not have to pay a heavy price for brick-n-mortar shops in costly shopping malls.

6.3.2 Shortcomings of E-Retailing

The online retailing {e-retailing} process is not an ultimate in the field of retailing methods; it also suffers various drawbacks that are the qualifications of traditional marketing. Some of the drawbacks need mention.

a) It has no theatrical ambience which can be the customer.
b) It lacks an emotional shopping experience that the customer can get in a personal shopping store.
c) It being container of intangible merchandise (i.e., virtual display of merchandise) does not provide sensory support to the customer, these the customer cannot hold, small, feel, or try the product.
d) Online customers are reluctant to part with their credit card details on net, fearing they may be misused. It arises security issues. The customers are not yet convinced about the foolproof status of this method, especially in Indian environment.
e) It provides, to a large extent, impersonal services which the Indian customers are not exposed to; they are rather used to the tangible personalized services which they miss in online retailing services.

f) It is lacking in family shopping experience which the Indian customers enjoy at the weekends, and particularly during festive seasons and marriage marketing.

Success Factors for E-Retailing

The success of e-retailing depends on multiple factors that are required to be taken into consideration as prima-facie, missing even a single small consideration is quite liable to create a greater negative impact on entire business, since the customers and business both are far from each-other. The customer is aloof from reality of the business regarding with whom he is going to enter into a business relation; whether the relation will go for a short-term or for over a long-term, no matter.

The e-Retailing business pattern is sophisticated as well as quite delicate; rather it may be defined more correctly as fragile. Thus, every consideration requires equal importance in its own status. Following are some of the factors to be taken care of, however it is neither exhaustive nor the ultimate, since it may change according to the nature of business too. At the same time the business ambience, magnitude and type of competition, changing need of consumer and many more external factors may influence it to a larger extent. Thus, the early recognition of necessary current requirements and its implementation along with time is always a wise proposition. The important factors are:

a) Strong Branding
b) Unique Merchandising
c) Value Addition
d) Competitive Pricing
e) Better CRM
f) Better Distribution Efficiency
g) Soothing Website Design
h) Transparency in Services.

As e-retailer is alone in the e-Retailing market rather he is also surrounded with a number of competitors, thus, to ensure sale he has to think competitive pricing so that he can attract his customer. The competitive pricing finds scope from potential decrease in charges and expenditures that he had to bear while in brick-and-mortar mode of marketing. It is a matter of careful exercise to enclose a real competitive price to its products or services.

Finally, the transparency of services creates faith on the visitor of the site as well as on the customer of the business. Transparency of services is identified with the truth.

6.4 CHALLENGES OF E-RETAILING

1. Unproven Business Models

In the formative years of dot-com era, most of the businesses on the Net were experiments in new areas and did not provide enduring sources of profit. This was the primary reason behind closing down of 90 per cent of the purely e-commerce companies in the beginning of this century. Today, dot-com businesses have matured a little. Still some of the businesses are at experimental level and do not guarantee regular revenue.

2. Requirement to Change Business Process

The process of procurement, storage and logistics in e-businesses is different from that in traditional brick-store businesses. The e-retail organization has to carefully redesign and integrate various processes to suit the new e-business. Traditional sections of departments and management hierarchy may pose hindrances and bottlenecks in the process of order processing and shipments, for example, the traditional business may require the goods to be present at the warehouse and inspected before being shipped to the customer, but in electronic retailing, shipping of goods from one place to another to a customer would not be possible. The retailer may appoint a local supplier at the city where the customer resides and instruct the supplier to deliver the goods. This would require by passing certain business rules and a lot of faith on the local supplier. It would require business confidence that the supplier would follow the instructions and deliver the same product in good quantity and perfect quality. Merchandise planning and demand analysis is also difficult in e-retailing, as compared to traditional retail businesses.

3. Channel Conflicts

Companies selling through the Internet as well as through brick stores may find their interest conflicting at many places. In electronic storefront orders, the goods directly reach the end-consumer and so the distributors and sellers may feel the threat to their existence. Most of the time, it is seen that retailers tend to reduce price over the Net. The sale at the brick store may store may drop because the retailer may tend to sell more through the Internet as a result of reduction of prices.

4. Legal Issues

Proper laws have not yet evolved for Internet based transactions. Validity of e-mails, digital signatures and application of copyright laws is

being checked by various government authorities. E-mail and digital signatures are now being recognized as valid for any legal purpose. Value Added Tax (VAT) is yet another area that creates problems. Taxes on goods and services are still an issue. Since the taxes are levied and shared by multiple government agencies at local, state or federal level, there are no clear rules to guide retailers on that. In e-retailing, the place of billing, the place of dispatch of goods and the place of delivery all differ. If these three places fall in different jurisdictions of governments, levy and submission of taxes would be a problem.

5. Security and Privacy

Security is one of the major challenges in the digital world. Despite a lot of security arrangements, such as passwords and firewalls, we come across the news of website hacking and data pilferages. The Internet being on public domain is more susceptible to unauthorized peeping. People are wary of divulging information regarding their credit cards and personal details on the Net because they can be misused. Cyber criminals have exploited the Internet weaknesses and have broken into computer systems, retrieving passwords and banking information. Security of payment gateway is a major concern, which has to be taken care of by the retailer by putting up proper security layers.

6.5 TYPES OF ELECTRONIC COMMERCE MODELS

E-Commerce is the process of buying and selling of various products and services by businesses through the internet. Nowadays e-commerce has become very popular among the people who want to buy and sell different things because of the convenience it offers and the cost benefits to retailers and the cost savings to the customers, and also the secrecy it offers.

E-commerce draws on such technologies as electronic funds transfer, supply chain management, internet marketing, online transaction processing, electronic data interchange (EDI), inventory management systems, and automated data collection systems. Modern electronic commerce typically uses the World Wide Web at least at one point in the transaction's life-cycle, although it may encompass a wider range of technologies such as e-mail, mobile devices and telephones as well.

E-commerce business models can generally be categorized into the following categories.

   i)   Business - to - Business (B2B)

   ii)   Business - to - Consumer (B2C)

iii) Consumer - to - Consumer (C2C)

iv) Consumer - to - Business (C2B)

v) Business - to - Government (B2G)

vi) Government - to - Business (G2B)

vii) Government - to - Citizen (G2C)

a) Business - to - Business

A website following the B2B business model sells its products to an intermediate buyer who then sells the product to the final customer. As an example, a wholesaler places an order from a company's website and after receiving the consignment, sells the end product to the final customer who comes to buy the product at one of its retail outlets.
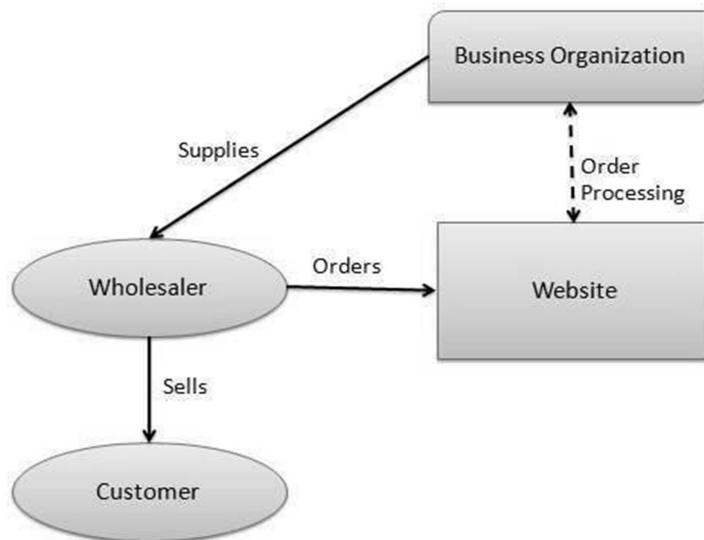
Figure 6.1 Business - to - Business

a) Business - to - Consumer

A website following the B2C business model sells its products directly to a customer. A customer can view the products shown on the website. The customer can choose a product and order the same. The website will then send a notification to the business organization via email and the organization will dispatch the product/goods to the customer.
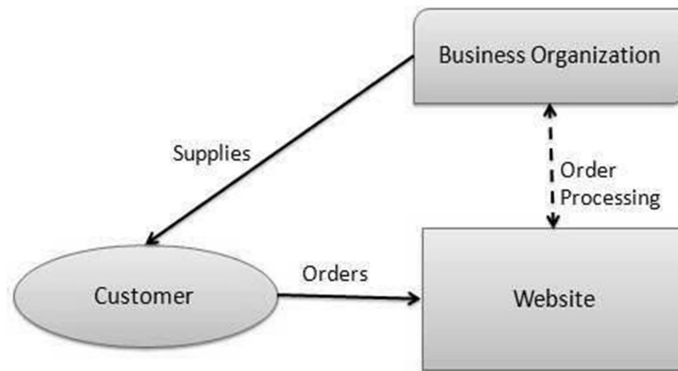
Figure 6.2 Business - to - Consumer

b) **Consumer - to - Consumer**

A website following the C2C business model helps consumers to sell their assets like residential property, cars, motorcycles, etc., or rent a room by publishing their information on the website. Website may or may not charge the consumer for its services. Another consumer may opt to buy the product of the first customer by viewing the post/advertisement on the website.
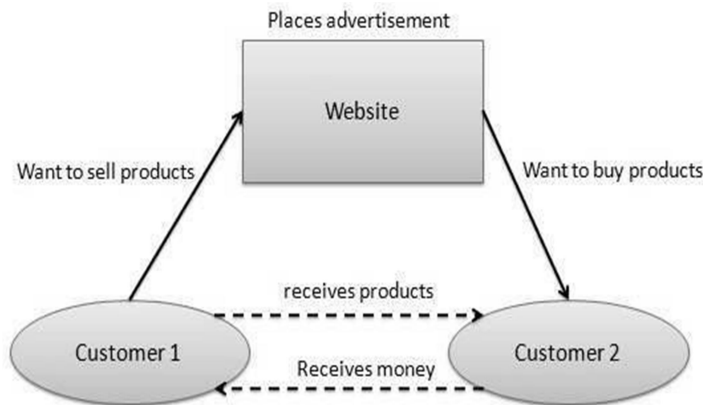
Figure 6.3 Consumer - to - Consumer

c) **Consumer - to - Business**

In this model, a consumer approaches a website showing multiple business organizations for a particular service. The consumer places an estimate of amount he/she wants to spend for a particular service. For example, the comparison of interest rates of personal loan/car loan provided by various banks via websites. A business organization who fulfills the consumer's requirement within the specified budget, approaches the customer and provides its services.

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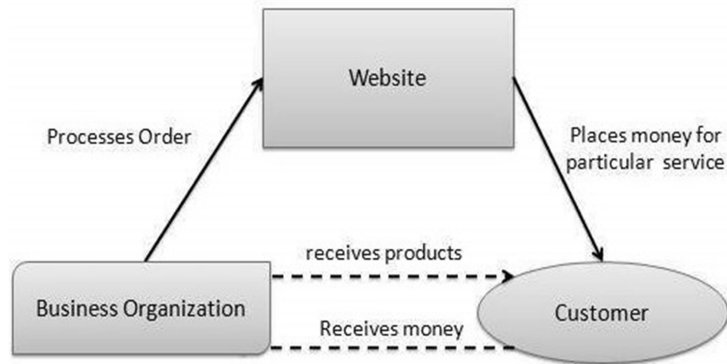
Figure 6.4 Consumer - to - Business

d) Business - to - Government

B2G model is a variant of B2B model. Such websites are used by governments to trade and exchange information with various business organizations. Such websites are accredited by the government and provide a medium to businesses to submit application forms to the government.

Figure 6.5 Business - to - Government

e) Government - to - Business

Governments use B2G model websites to approach business organizations. Such websites support auctions, tenders, and application submission functionalities.

Figure 6.6 Government - to - Business

f) Government - to - Citizen

Governments use G2C model websites to approach citizen in general. Such websites support auctions of vehicles, machinery, or any other material. Such website also provides services like registration for birth, marriage or death certificates. The main objective of G2C websites is to reduce the average time for fulfilling citizen's requests for various government services.

Figure 6.7 Government - to - Citizen

6.6 BUSINESS TO CONSUMER (B2C)

Business-to-consumer – "B2C" – refers to commerce between a business and an individual consumer. While it applies to any type of direct-to-consumer selling, it has come to be associated with online selling, also known as ecommerce or e-tailing. Ecommerce took off significantly in the late 1990s, with the 1998 holiday shopping season identified as the first "e-tail Christmas." That year, Amazon surpassed more than $1 billion in sales for the first time.

In recent years, the growth in business-to-consumer online sales has created significant challenges for traditional "brick-and-mortar" businesses and services that are losing in-person sales to online competitors. As a result, many brick-and-mortar businesses are establishing their own online presence to stay competitive. This has created opportunities for consumers, who can now enjoy the convenience of online ordering while saving on shipping expenses with certain retailers by picking up or returning orders to the online retailer's brick-and-mortar stores. In online business-to-consumer sales, there are generally five business models.

a. **Direct Sellers**

This is the type most people are familiar with – they are the online retail sites where consumers buy products. They can be manufacturers such as Gap or Dell or small businesses that create and sell products, but they can also be online versions of department stores selling products from a wide range of brands and manufacturers. Examples include Target.com, Macys.com, and Zappos.com.

b. **Online Intermediaries**

These "go-betweens" put buyers and sellers together without owning the product or service. Examples include online travel sites such as Expedia and Trivago and arts and crafts retailer Etsy.

c. **Advertising-Based**

This approach leverages high volumes of web traffic to sell advertising which, in turn, sells products or services to the

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consumer. This model uses high-quality free content to attract site visitors, who then encounter online ads. Media outlets that have no paid subscription component, such as the Huffington Post and Observer.com, are examples.

d. Community-Based

This model uses online communities built around shared interests to help advertisers market their products directly to site users. It could be an online forum for photography buffs, people with diabetes, or marching band members. The best-known example is Facebook, which helps marketers target ads to people according to very specific demographics.

e. Fee-Based

These direct-to-consumer sites charge a subscription fee for access to their content. They typically include publications that offer a limited amount of content for free but charge for most of it – such as The Wall Street Journal – or entertainment services such as Netflix or Hulu. Businesses selling directly to consumers should take into account how their target customers like to shop and buy products like theirs as they explore various business-to-consumer options, whether those possibilities involve in-person or online transactions.

6.6.1 Elements of Business to Consumers (B2c)

When customers evaluate a product or service, they weigh its perceived value against the asking price. Marketers have generally focused much of their time and energy on managing the price side of that equation, since raising prices can immediately boost profits. But that's the easy part: Pricing usually consists of managing a relatively small set of numbers, and pricing analytics and tactics are highly evolved.

The amount and nature of value in a particular product or service always lie in the eye of the beholder, of course. Yet universal building blocks of value do exist, creating opportunities for companies to improve their performance in current markets or break into new ones. A rigorous model of consumer value allows a company to come up with new combinations of value that its products and services could deliver. The right combinations, our analysis shows, pay off in stronger customer loyalty, greater consumer willingness to try a particular brand, and sustained revenue growth.

We have identified 30 "elements of value"—fundamental attributes in their most essential and discrete forms. These elements fall into four

categories: functional, emotional, life changing, and social impact. Some elements are more inwardly focused, primarily addressing consumers' personal needs. For example, the life-changing element *motivation* is at the core of Fitbit's exercise-tracking products. Others are outwardly focused, helping customers interact in or navigate the external world.

The Elements of Value Pyramid

Products and services deliver fundamental elements of value that address four kinds of needs: functional, emotional, life changing, and social impact. In general, the more elements provided, the greater customers' loyalty and the higher the company's sustained revenue growth.

SOCIAL IMPACT

Self-transcendence

LIFE CHANGING

Provides hope   Self-actualization

Motivation   Heirloom   Affiliation/belonging

EMOTIONAL

Reduces anxiety   Rewards me   Nostalgia   Design/aesthetics   Badge value

Wellness   Therapeutic value   Fun/entertainment   Attractiveness   Provides access

FUNCTIONAL

Saves time   Simplifies   Makes money   Reduces risk   Organizes   Integrates   Connects

Reduces effort   Avoids hassles   Reduces cost   Quality   Variety   Sensory appeal   Informs

Figure 6.8 Value Pyramid

6.6.2 B2C Marketing Strategies

B2C marketing strategies help you prepare for sales, anticipate responses, and track progress. All three of those factors can make your marketing campaigns more successful. Of course, you don't want to jump into any marketing strategy without fully understanding how it works. Bad marketing can have a negative impact on your business and its reputation for years to come.

That's why we recommend exploring as many B2C marketing channels and strategies as possible. Familiarize yourself with how they work and what they should accomplish. Use your Kajabi metrics to track your

progress and to make adjustments as needed. Remember, as well, that some marketing strategies work better for one business than they do another. Just because another entrepreneur has had great success with a particular strategy doesn't mean it will work for you. Always test everything. That's the only way to know what B2C marketing strategies will engender a positive response among your target audience.

6.7 INTERNET MARKETING

Marketing is the process of planning and executing the conception, pricing, promotion, and distribution of ideas, goods, and services to create exchanges that satisfy individual and organizational goals. Internet has irrevocably transformed the field of marketing through the introduction of new products, new audiences, and new strategies for reaching those audiences. The process begins with the formulation of corporate and business unit strategy, then moves to framing the market opportunity, formulating the marketing strategy, designing the customer experience, designing the marketing program, crafting the customer interface, and evaluating the results of the marketing program as a whole.

6.7.1 Seven Stages of Internet Marketing

The following figure provides an overview of the seven stages of Internet marketing.

Figure 6.9 Seven Stages of Internet Marketing

i) Stage One: Setting Corporate and Business-Unit Strategy

Corporate strategy addresses the interrelationship between the various business units in a firm, including decisions about which units should be kept, sold, or augmented. Business-unit strategy focuses on how a particular unit in the company attacks a market to gain competitive advantage. Consider, for example, Amazon.com. Corporate-strategy issues relate to the choice, mix, and number of business units such as kitchen, music, electronics, books, and tools/hardware. Once these business units are established and incubated in Amazon's corporate headquarters, the senior leadership team of each unit sets the strategic direction and steers the business unit toward its goals.

ii) Stage Two: Framing the Market Opportunity

Stage two entails the analysis of market opportunities and an initial first pass of the business concept that is, collecting sufficient online and offline data to establish the burden of proof of opportunity assessment. Let's say, for example, that you are running a major dot com business such as Amazon. The senior management team is continually confronted with go/no go decisions about whether to add a new business unit or develop a new product line within an existing business unit. In order for the firm to make an informed choice about the opportunity, the management team needs to obtain a sufficient picture of the marketplace and a clear articulation of the customer experience that is at the core of the opportunity.

iii) Stage Three: Formulating the Marketing Strategy

Internet marketing strategy is based upon corporate, business unit, and overall marketing strategies of the firm. The marketing strategy goals, resources, and sequencing of actions must be tightly aligned with the business- unit strategy. Finally, the overall marketing strategy comprises both offline and online marketing activities.

iv) Stage Four: Designing the Customer Experience

Firms must understand the type of customer experience that needs to be delivered to meet the market opportunity. The experience should correlate with the firm's and marketing strategy. Thus, the design of the customer experience constitutes a bridge between the high-level marketing strategy (step three) and the marketing program tactics (step five).

v) Stage Five: Designing the Marketing Program

The completion of stages one through four results in clear strategic

direction for the firm. The firm has made a go/no-go decision on a particular option. Moreover, it has decided upon the target segment and the specific position that it wishes to own in the minds of the target customer. Stage five entails designing a particular combination of marketing actions (termed levers) to move target customers from awareness to commitment.

vi) Stage Six: Crafting the Customer Interface

The Internet has shifted the locus of the exchange from the marketplace (i.e., face-to- face interaction) to the market space (i.e., screen-to-face interaction). The key difference is that the nature of the exchange relationship is now mediated by a technology interface. This interface can be a desktop PC, sub-notebook, personal digital assistant, mobile phone, wireless applications protocol (WAP) device, or other Internet enabled appliance. As this shift from people-mediated to technology-mediated interfaces unfolds, it is important to consider the types of interface design considerations that confront the senior management team.

vii) Stage Seven: Evaluating the Marketing Program

This last stage involves the evaluation of the overall Internet marketing program. This includes a balanced focus on both customer and financial metrics.

6.8 CRITICAL SUCCESS FACTORS FOR INTERNET MARKETING

Marketers have always been in the business of anticipating and managing change; technology has been their principle tool for managing it. The Internet presents an adaptive challenge for the marketing executive. Today's Internet marketing executives must have all the traditional skills of the offline marketing professional, but must place extra emphasis on some of them to account for the new economy. These critical new skills include

1. Customer Advocacy and Insight

An insatiable curiosity for customers and market places is a bare necessity for today's marketing professional. This innate curiosity fuels an individual's desire to transform mounds of customer data into meaningful and actionable insights, which in turn become a platform for advocacy. Because the Internet enables a much greater degree of interaction with customers, designing and promoting these interactions around customer's needs and progressively gaining deeper insights are critical components of creating positive customer experience.

A true customer advocate will be looking to provide demonstrable added value to each customer interaction to form the basis for a meaningful relationship. As both customer behaviors and enabling technologies simultaneously evolve, a deep understanding of customer needs should serve as the guide post driving marketing decisions. Marketing professionals will need to strategically collect information from many disparate sources, create insightful customer mosaics, and effectively translate them into marketing strategies and tactics.

2. Integration

The Internet represents both a new channel and a new communications medium. The new economy marketing professional needs to have an integrated or holistic view of the customer and the enterprise in order to create a uniquely advantaged strategic plan. In today's multi-channel environment, a consistent message and experience must be maintained across customer touch points in order to create a consistent brand image.

Beyond strategy, a marketing manager must fundamentally understand how to integrate these new tools into the overall marketing mix. Managers who are able to hone their marketing plan in a highly integrated fashion are more likely to capitalize on the synergies between marketing elements and thus drive greater effectiveness.

3. Balanced Thinking

An Internet marketing professional needs to be highly analytical and very creative. Culling specific customer insights from avertable fire hose of data is critically important for new economy managers. It requires understanding the dynamic tension between one-to-one marketing and mass marketing and being able to strike a strategic balance between them. It also requires determining the appropriate customer data requirements.

4. Passion and Entrepreneurial spirit

Although very hard to objectively assess, passion, or fire in the belly, is what will differentiate leaders from followers in the new economy. Trying to change the status quo is never easy and only people with conviction and passion will be heard over the din of the inevitable naysayers. Successful marketing managers use this passion to fuel their entrepreneurial instincts and vision, creating "bleeding edge" tools as they lead their teams to success.

5. Willingness to Accept Risk and Ambiguity

In the new economy, Internet marketing professionals need to retool themselves and their companies to enter into a whole new era of customer-centric marketing. The Internet has enabled customers to have much more information and many more choices than ever before, thus shifting the balance of power toward the customer and creating the need for a whole new set of "pull" based marketing tools. Successful Internet professionals need to rely on a whole new set of marketing tools that work in an extraordinarily dynamic environment.

Having the courage to try new things is the key to developing break-through Internet marketing. The risk and ambiguity of managing in such uncharted territory is tremendous, and the most successful Internet marketers will be willing to play at the edges.

LET US SUM UP

Internet marketing refers to marketing that occurs only online. Internet marketing involves several methods to drive traffic to the advertiser's website. It also includes marketing efforts to drive traffic to websites where consumers can purchase the advertiser's products. Digital marketing is similar, but also includes some non-Internet electronic marketing. Online marketing is the practice of leveraging web-based channels to spread a message about a company's brand, products, or services to its potential customers. The methods and techniques used for online marketing include email, social media, display advertising, search engine optimization, Google AdWords and more. Marketing objectives are a brand's defined goals. They outline the intentions of the marketing team, provide clear direction for team members to follow, and offer information for executives to review and support. Marketing objectives are a pivotal part of a marketing strategy.

CHECK YOUR PROGRESS

Choose the Correct Answers:

1. Which segment do eBay, Amazon.com belong?

a) B2B   b) B2C

b) C2B   d) C2C

2. _____E-Commerce consists of the sale of products or services from a business to the general public.

a) B2G   b) B2E

c) B2B   d) B2C

3. Which among the following is an example of C2C?

a) e-Bay

b) Amazon.com

c) Both A and B

d) None of the above

4. Compared to B2C E-commerce, B2B e-commerce is _____

a) Of equal size

b) slightly smaller

c) Slightly larger

d) much larger

5. Which of the following refers to buying and selling of goods or service through the use of Internet enabled wireless device?

a) Internet

b) M-Commerce

c) M-Banking

d) WWW

GLOSSARY

E-Retailing	:	Electronic retailing (e-tailing) is a buzzword for any business to consumer (B2C) transactions that take place over the Internet. E-tailing refers to the sale of goods online.
B2C	:	The B2C E-Commerce model is one of the most popular forms of E-Commerce. As the name suggests, it involves a business relationship between a business and its customers. Hence, most of these businesses are retail in nature. Some of them can be service providers.
Internet Marketing	:	Internet marketing refers to the strategies used to market products and services online and through other digital means. These can include a variety of online platforms, tools, and content delivery systems, such as: Website content and design.
Direct Selling	:	Direct selling is a business model that offers entrepreneurial opportunities to individuals as independent contractors to market and/or sell products and services, typically outside of a fixed retail

| establishment, through one-to-one selling, in-home product demonstrations or online. |

| e-catalog | : | An electronic catalog, or e-catalog, is understood to be a data set consisting of information to describe products or services. In particular, e-catalogs include product descriptions, data about supply chain and logistics, prices, technical features and multimedia data. |

| Shopping Cart | : | A shopping cart is an essential part of a retailer's online store that streamlines the online shopping experience. It's software that allows website visitors to select, reserve, and purchase a product or service from an eCommerce interface. |

SUGGESTED READINGS

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2. Anup K. Ghosh, (2012), E-Commerce Security and Privacy, Kindle Edition
3. Peter G W Keen, (1994), Every Manager's Guide to Information Technology, 2nd Edition, Harvard Business School Press, Boston.
4. Rajesh Chakrabarti and VikasKardile, (2002), The Asian Manager's Handbook of E-Commerce (paperback edition), Tata McGraw – Hill Publishing Company Limited, New Delhi.

WEB RESOURCES

1. E- Commerce, E- Business, E- Marketing (Tamil) - YouTube
2. Every Ecommerce Business Model Explained And Reviewed - Bing video
3. 6 eCommerce Business Models Explained With Examples - Bing video
4. What are B2B, B2C, C2C, C2B and B2B2C Business Models || Terms In Commerce - Bing video

ANSWER TO CHECK YOUR PROGRESS

1. b)   2. d)   3. c)   4. d)   5. b)

UNIT 7

EMERGING TRENDS IN E-COMMERCE

OVERVIEW

Electronic commerce or e-commerce consists primarily of the distributing, buying, selling, marketing, and servicing of products or services over electronic systems such as the Internet and other computer networks. The e-commerce is one of the biggest things that has taken the business by a storm. It is creating an entire new economy, which has a huge potential and is fundamentally changing the way businesses are done. Electronic commerce is related to social media and other new online platforms because it utilizes the internet for marketing communication. Electronic commerce refers to the development and maintenance of a company's website and the facilitation of commerce on the website, such as the ability for customers to order products online, to get questions answered about products, and for the company to introduce new products and ideas. E-commerce can

include special components designed specifically for separate target market segments, such as information boxes or games. Anything associated with an actual company website related to marketing can be considered e-commerce.

LEARNING OBJECTIVES

After completing this unit, you will be able to;

- expose yourself to the Emerging trends in E-Commerce
- explain about the functions and significance of e-commerce
- discuss the key features of 7 E-Commerce technology trends
- explore the E-Commerce trends uses in India.

7.1 INTRODUCTION

Electronic commerce or e-commerce consists primarily of the distributing, buying, selling, marketing, and servicing of products or services over electronic systems such as the Internet and other computer networks. The information technology industry might see it as an electronic business application aimed at commercial transactions. It can involve electronic funds transfer, supply chain management, e-marketing, online marketing, online transaction processing, electronic data interchange (EDI), automated inventory management systems, and automated data collection systems. It typically uses electronic communications technology such as the Internet, extranets, e-mail, e-books, databases, and mobile phones.

The ease of use and ability to comparison-shop is driving millions of people to the internet to purchase goods and services. Major retailers such as Walmart are quickly increasing their web presence in an effort to stay relevant in this ever-changing business environment and to attract even more loyal customers who have made the switch to doing most of their shopping on line.

7.2 FUNCTIONS OF ELECTRONIC COMMERCE

The four functions of e-commerce are:

1 Communication
2 Process management
3 Service management
4 Transaction capabilities

Communication Function	• Aimed at the delivery of information and/or documents to facilitate business transactions. e.g. E-mail
Process Management Function	• Covers the automation & improvements of business processes e.g. Networking two computers together
Service Management Function	• Application of technology to improve the quality of service. e.g. Federal Express website- to track shipments & schedule
Transaction Capabilities	• Provides the ability to buy/sell on the Internet or some other online services e.g. Amazon.com

Figure 7.1 Functions of Electronic Commerce

7.3 SIGNIFICANCE OF E-COMMERCE

The electronic market place participants are not limited only to digital product companies' e.g. publishing, software and information industries. The digital age and the digital revolution affect all by virtue of their process innovations: Web-TV and digital television is going to affect TV news and entertainment programs. Changes in telecommunication will affect the way the information is received, product announcements, orders etc. Phones, Fax machines, Copiers, PCs and Printers have become essential ingredients in doing business, so are E-mail, websites and integrated digital communication.

Today's office business machines are not integrated (e.g. Faxed orders have to be typed in on computers), the much talked about convergence will drive all these equipment into 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.

7.4 E-BUSINESS CHALLENGES

The rapidly changing business environment has led several companies to adopt e-commerce. Electronic Business brings about a lot of changes in the way firms work. It also throws up challenges that they have to meet in order to reap the benefits of e-commerce. The various challenges to businesses include technological challenges, legal and

regulatory challenges, behavioral and educational challenges, and other miscellaneous challenges. Challenges associated with legal and regulatory framework include the difficulty in regulating and enforcing standards, due to lack of consistent rules and policies; customs and taxation uncertainties; and government intervention changes in attitudes of consumers result in behavioral challenges to businesses.

These challenges include lack of trust of customers and their fear of intrusion of privacy which makes them reluctant to involve in e-transactions. In addition, the rampant frauds taking place over the Internet and lack of awareness of customers about the availability of services poses a challenge to businesses. Miscellaneous challenges such as channel conflict, the problem of attracting and retaining a critical mass of customers, and the need to improve the order fulfillment process, are the other aspects that have become a cause of worry to businesses. Followings are some of the major e- business challenges:

a. **Outdated distribution models**

Many businesses are operating on an outdated distribution model. Traditional distribution models aren't always the best way to go for ecommerce businesses; they need a flexible model with seamless technological integration. Integration is important – it helps manage inventories accurately, ensuring high operational efficiency.

b. **Lack of process efficiency**

Efficiency is all about seamless operations and a commitment to data analysis. Adding value to customers is all about refining retail processes. Inefficiencies lead to stagnation and frustration. In B2B, merchants often struggle let go of legacy systems like paper purchase orders; we need to embrace automation in order to hold onto valued customers.

c. **Ethical consumer choices**

In the hectic world of automation and mass production, consumers are going back to more local, authentic brands who offer them a more genuine experience. Mission statements, values, corporate social responsibility, and working with ethical suppliers are going to become increasingly important in the ideological battle for the consumer.

d. **Not investing in the future**

Following e-business is an exciting place full of emerging technology. Brands who want to stand the test of time need to be prepared for the technologies impacting customer experience,

marketing, operations etc. The technology of today is tomorrow's tool – companies need to invest in new ways of doing things in readiness for the paradigm shift.

7.5 FACILITATORS OF E-COMMERCE IN INDIA

a) Information directories

The products and services are listed with appropriate sub-headings to make it easy for a serious information-seeker to find what he wants. Allied services provided by them: Message boards, chat rooms, forums, etc.

b) Banks

i) Net banking/Phone banking

This is an online banking facility available for savings account holders as well as current account holders. Some of the special Net banking services are: Demat accounts for sale/purchase of stocks and shares, Foreign Exchange services, Direct/Instant payment of bills on the account-holder's behalf, Financial Planning & advice, Electronic Funds Transfer, Loans to accountholders.

ii) Credit/Debit Cards

Banks facilitate E-commerce by providing the most vital trade instrument, namely the Credit or Debit Card, without which electronic commerce would be impossible.

7.5.1 Category of E-Commerce and Its Trendy Uses in India

Today, E-commerce is an essence in Indian society and it has become an integral part of our daily life. There are websites providing any number of goods and services. There are those, which provide a specific product along with its allied services Multi-product e-commerce. Indian Electronic commerce portals provide goods and services in a variety of categories. To name a few: Apparel and accessories for men and women, Health and beauty products, Books and magazines, Computers and peripherals, Vehicles, Software, Consumer electronics, Household appliances, Jewelry, Audio/video, entertainment, goods, Gift articles, Real estate and services. Single-product e-commerce Some Indian portals/websites deal in a specialized field, for example:

a) Automobiles and E-commerce

On these sites, we can buy and sell four wheelers and two-wheelers, new as well as used vehicles, online. Some of the services they provide are Car research and reviews, online evaluation, technical specifications, Vehicle Insurance, Vehicle Finance.

b) Online Trading in Stocks & Shares and E-commerce

Online stock trading activity is gaining momentum in India. Services offered by the online stock trading companies include online buying and selling of stocks and shares, market analysis and research, details of companies, comparison of companies, and research on equity and mutual funds, customer services through email and chat. Online trading also has an added advantage of real time stock trading without calling or visiting the broker's office. Major online stock trading websites in India include: ICICIDirect.com, Sherkhan.com, Indiabulls.com, 5Paisa.com, Motilal Oswal Securities, HDFC Securities, Reliance Money, IDBIPaisaBuilder, Religare, and Kotak Securities.

c) Real estate and E-commerce

There are a number of real estate portals and sites that provide information to users regarding the property they wish to buy/sell. This information includes properties available for sale/purchase, the cost, location, etc. They provide information on new properties as well as properties for resale. One can deal directly with developer through consultant. Allied services: Housing Finance, Insurance companies, Architects & Interior Designers, NRI services, Packers &Movers. Some of the popular real estate portals include: Indiaproperty.com, 99acres.com, Magicbricks.com, and Makaan.com.

d) Travel & tourism and E-commerce

Use of e-commerce in India is increasing in the travel segment. India has a rich history and heritage, and e-commerce is instrumental, to a large extent, in selling India as a product, encouraging Indians as well as foreigners to see its multifaceted culture and beauty. The tourist destination sites are categorized according to themes like: Adventure - trekking, mountain climbing etc., Eco-Themes pertains to jungles, flora and fauna. IRCTC is the most successful e-Commerce initiative in India. The Indian Travel Ministry has introduced a travel portal called Incredible India. This portal is a big success as tourists can easily contact travel agents, tour operators and hoteliers easily. This portal has also caused a surge in medical tourism to India.

e) Gifts and E-commerce

In the bygone days, one had to plan what to gift a loved one, trudge across to your favorite shop, and browse for hours before purchasing a gift. The gifts are categorized as: Collectibles like paintings and sculptures, Luxury items like leather goods,

perfumes, jewelry boxes, etc., household curios and carpets, etc., Toys & games, Chocolates, Flowers, Woodcraft & metal-craft.

f) Hobbies and E-commerce

The most popular hobbies from time immemorial are reading, music and films. The book's cover a wide range of topics like Business, Art, Cookery, Engineering, Children's Stories, Health, Medicine, Biographies, Horror, Home & Garden, etc.

g) Matrimony and E-commerce

Matrimony e-Commerce portals provide the seekers appropriate information regarding the prospective matches, region of their residence, their religion, caste, etc. Allied services are also provided to the listed members. It is said that marriages are made in heaven, but in the world of E-commerce they are made on marriage portals. One can search for a suitable match on their websites by region of residence (India or abroad), religion or caste. Allied services for registered members: Astrological services, Information on Customs and Rituals, Legal issues, Health & Beauty, Fashion & Style, Wedding Planners. These services include astrology, information on customs and rituals, legal issues, health and beauty, fashion, wedding planners, etc.

h) Employment and E-commerce

Another area where e-Commerce is widely used is that of employment. Internet has simplified the process of search for 'right people on the right job'. There are a number of web portals and sites that match a prospective employer's requirements with that of candidates applying for that job. Two major portals like www.Monsterindia.com and www.naukri.com (meaning job.com in Hindi) are instrumental in providing job seekers with suitable employment at the click of a mouse. The service for job seekers is free and for Employers they charge a nominal fee. Jobs are available online in fields ranging from secretarial to software development, and from real estate to education.

i) E-Tailing or Online Retailing and E-commerce

Due to improved broadband connections and increased penetration of credit card facilities to a wider population, e-Tailing or online retailing is witnessing a substantial growth. Internet retailers provide a wide range of facilities to the consumers, including discounted prices, comparison of product features offered by various vendors, areas where the products can be procured, etc. Currently, the online retail industry in India is

estimated to be worth Rs. 110 million. By 2013, India is expected to have the third largest internet user base, which improves the prospects of online purchases.

j) Online Advertisements and E-commerce

The Indian population accesses the internet from home, office, and cyber cafes. There is a large segment of population that is fast adapting to internet. Advertisers have identified the internet as a medium for enhancing the awareness for their business activities. Online advertising in India is expected to cover all organizations and their products.

7.5.2 Barriers to E-Commerce in India

Some of the infrastructural barriers responsible for slow growth of e-Commerce in India are as follows. Some of these even present new business opportunities.

1) **Payment Collection**

When get paid by net banking, one has to end up giving a significant share of revenue (4% or more) even with a business of thin margin. This effectively means one parting away with almost half of profits. Fraudulent charges, charge backs etc. all become merchant's responsibility and hence to be accounted for in the business model.

2) **Logistics**

Businesses have to deliver the product, safe and secure, in the hands of the right guy in right time frame. Regular post doesn't offer an acceptable service level; couriers have high charges and limited reach. Initially, one might have to take insurance for high value shipped articles increasing the cost.

3) **Vendor Management**

However advanced system may be, vendor will have to come down and deal in an inefficient system for inventory management. This will slow down drastically. Most of them won't carry any digital data for their products. No nice-looking photographs, no digital data sheet, no mechanism to check for daily prices, availability to keep your site updated.

4) **Taxation**

Octroi, entry tax, VAT and lots of state specific forms which accompany them. This can be confusing at times with lots of exceptions and special rules.

5) **Excessive pricing in E-commerce markets**

Over the short term, excessive pricing is unlikely to be a major issue for e-commerce companies. Few e-commerce operations are currently making any profits, let alone excessive profits. Over the longer term, however, excessive pricing may become a serious concern for those e-commerce companies that develop dominant positions in their relevant markets.

6) **Collusion**

One of the most widely held competition concerns relating to e-commerce is that it may facilitate such collusive behavior. Much of the recent discussion of this issue has focused on the development of B2B online marketplaces that are co-owned by a number of significant market participants. More generally, there are a number of characteristics of e-commerce that might be expected to facilitate collusion, even in the absence of joint ventures and online marketplaces.

7) **Cybercrime in E-Commerce**

Cybercrime is a key alarm that consumers have regarding e-commerce. No one wants to become a victim of cybercrime, which is a real hazard to electronic commerce. Cybercrime is an e-crime. Cybercrime is a criminal act that involves computers and networks. Cybercrime includes criminal acts such as computer viruses, phishing, and denial of service attacks that cause e-commerce websites to lose revenues. Understanding and defending against cybercrime is critical for companies involved in e-commerce.

7.6 TOP SEVEN E-COMMERCE TECHNOLOGY TRENDS

Ecommerce Technology Trends will be ruling this throat-cut competitive world as the proliferation of the INTERNET has surged various online activities to newer heights. This is one of the reasons why many of the existing customers have started shopping more online rather than going to offline stores made up of bricks-and-cement. The seven trends below mentioned for assisting you a lot in making your online store a great source of income.

(1) **Voice and Image Search :** Consumers are utilizing voice and image searches for shopping online in growing numbers. The most obvious reason for the same is that such searches are organizing their lives with much accuracy and lesser hustles. Furthermore, voice-and-image-enabled distribution of services is engaging more and more customers because they may now photograph the products which fascinate them a lot, and later, those customers can

potentially find similar examples on other electronic commerce websites just by sitting on their beautiful couches. Indeed, these types of searches are heightening themselves in the list of E-Commerce trends thereby creating a lot of e-commerce business opportunities through their smart and solution-oriented course of action.

(2) AI Chatbots for Enhancing Customer Communications: AI Chatbots is capably representing a positive future of the e-Commerce Industry. Even these multi-purpose and dynamic Virtual Assistants for example Amazon Echo, Alexa, and Google's Home are integrating well with a sudden boost in brand image and improvised results in online shopping. From scheduling their flights to purchasing the clothes, groceries that will match their interest, all this has been made easier by those Artificially Intelligent Chatbots.

(3) ROPO/ROBO are the Pinnacles of the Ecommerce Industry ROPO is well-relatable with research online then purchase the entity searched offline. On the other side, ROBO shouts out loud and supports the notion of research online then buy the entity offline. It may also help a business owner track the marketing strategies and conversions offline. Note worthily, both these terminologies are the strengthened pinnacles of the E-commerce industry as they are backed by the metrics like shopping history, optimized reporting features, and easy-to-understand-and-use content.

(4) Personalization for Recreating Extensive Shopping Experience Personalization is a sort of marketing technique, or we may say another swing in the electronic commerce Industry. Thinking about whether or not personalization can potentially create an extensive shopping experience!! Such a thought must be appreciated and can be answered well with big data. Nowadays, any of the customers discovering the required products from the ones available are captured on the databases in the form of a huge pool of information called big data. Then, through appropriate filtering and analysis of that information, businesses estimate the patterns that customers are following or have followed. This lets the businesses understand the perspective of a customer and deliver the services/products he/she is expecting in the form of recommendations.

(5) Omnichannel Presence & Support Omnichannel means multiple channels for Ecommerce like a store, phone, social media, or web are readily available to customers but in a circularly connected approach (this approach connects all the channels as if they are

moving in a circular motion like one after the other round-and-round). Curious to analyze if they, the OMNICHANNEL, support commercial transactions primarily conducted over the internet electronically!! Yes, such channels are encouraging a lot of customers to showcase their presence in various online purchasing or selling activities which always help business giants like Amazon, Google, and eBay flourish themselves in terms of sales, satisfied customer engagement, and better knowledge about the parameters at times customers become distressed. So, on an overall basis, e-Commerce companies must make the right use of the available omnichannel.

(6) **AR (Augmented Reality) and VR (Virtual Reality)** AR i.e., Augmented Reality and VR – Virtual Reality, are acting as an amalgamated game-changing trend in the ever-growing electronic commerce industry. AR is helping shoppers across the globe to visualize the products from the online stores solving a lot of their real-world problems whereas VR has enabled those online stores to provide exact and up-to-date details of the products for helping the customers make better purchasing decisions. As per the predictions agreed by Michael Push, more than 30 percent of buyers will do shopping online if they are allowed to try the product virtually before they make a plan of buying any of them. These types of predictions obtained from some recent polls are eradicating known or unknown hurdles in online shopping thereby attracting a lot of ventures to adopt AR/VR as standard technologies for the products they have been dealing with!!

(7) **Fast & Secured eWallet Functionality** A eWallet (or Electronic Wallet) facilitates secured and speedier checkout process. This is the stage where the money changes its address i.e. from the customer's account to the account of the business running online. No doubt, cart abandonments (it is a sort of activity during which a customer unexpectedly moves out of the checkout process from its final stage) occur at times when a potential customer has almost finished the checkout procedure. Such abandonment is due to reasons like unexpected rise in the shipping costs, doubt on the security of payment processed, and not satisfactory return policy. The award-winning solution is an e-Wallet. E-COMMERCE trend as it has increased the efficiency in the checkout process thereby declining cart abandonment rate at a global level with functionalities like the range of payments offered, one-page plus hassle-free

checkouts, speedier payment solutions, an option of saving the essential details of your card (either DEBIT or CREDIT).

7.7 FUTURE PROSPECTS ON E-COMMERCE

The report of the United Nations Conference on Trade and Development (UNCTAD) on electronic commerce and Development makes the point that although world economic growth has slowed, and in spite of the difficulties in which the information technology and telecommunications sectors are mired, the rapid growth of internet use and electronic commerce continues.

Estimates show that internet use is increasing by around 30 per cent annually, and although the rate of growth of transactions through the internet is much slower, e-commerce could represent up to 18 per cent of worldwide business-to-business (B2B) and retail transactions in 2006. Segments such as B2B have shown rapid growth. And in certain sectors, such as finance, travel services, software, information and other electronic services, online transactions have been growing at a much faster pace. For instance, in the developed countries, online banking already represents between 5 and 10 per cent of total retail banking transactions. Much of the growth has occurred in Asia.

The Report classifies India as a rising star in this regard, pointing out that India's IT services exports have almost doubled in two years and now account for more than 16 per cent of total exports and 8 per cent of all foreign exchange earnings. But the overall message of the Report is a very positive one despite the current slowdown, the internet and online services are poised to grow, and India will be one of the main beneficiaries.

LET US SUM UP

The e-commerce is one of the biggest things that has taken the business by a storm. It is creating an entire new economy, which has a huge potential and is fundamentally changing the way businesses are done. It has advantages for both buyers as well as sellers and this win-win situation is at the core of its phenomenal rise. Though there are some weak links, with improvements in technology, they will be ironed out, making the e-commerce easy, convenient and secure. The e-commerce is certainly here to stay. The e-business from the perspective of a business process as the application of technology towards the automation of business transactions and work flow. The e-business is the new form of Commerce of internet, without borders, with a fresh approach to, global customers, business models, innovative strategies

and fresh payment systems. The "e-business" is part of the process through limited to web services and the marketing of product. Though e-business involves the entire organization, but not just the e-commerce to reduce their entire value chain, relying on the use of the Internet.

CHECK YOUR PROGRESS

Choose the Correct Answers

1. E-business is defined as the conduct of industry, trade and commerce using the _____.

    a) Internet   b) Social Network

    c) Society   d) All of the above

2. E-Business includes _____

    a) E-Commerce   b) HR Management

    c) Inventory Management   d) All of the above

3. Which one is not an E-payment method used in India?

    a) Debit Card   b) Credit Card

    c) E-Cheque   d) None of the above

4. _____ is the buying and selling of goods and services through wireless handled devices such as cellular phone and personal digital assistants.

    a) E-Commerce   b) Mobile Commerce

    c) Both A and b   d) None of the above

5. E-Tailer revenue model is _____ revenue.

    a) Advertising   b) Subscription

    c) Sales   d) Affiliate

GLOSSARY

| Net Banking | : | Internet Banking, also known as net-banking or online banking, is an electronic payment system that enables the customer of a bank or a financial institution to make financial or non-financial transactions online via the internet. Net banking portals are secured by unique User/Customer IDs and passwords. |

E-Tailing	:	Electronic retailing (E-tailing) is the sale of goods and services through the Internet. E-tailing can include business-to-business (B2B) and business-to-consumer (B2C) sales of products and services.
Cyber Crime	:	Cybercrime, also called computer crime, the use of a computer as an instrument to further illegal ends, such as committing fraud, trafficking in child pornography and intellectual property, stealing identities, or violating privacy.
Chatbots	:	A chatbot (derived from "chat robot") is a computer program that simulates human conversation, either via voice or text communication. Organizations use chatbots to engage with customers alongside the classic customer service channels of phone, email, and social media.
Augmented Reality	:	Augmented reality (AR) is an enhanced version of the real physical world that is achieved through the use of digital visual elements, sound, or other sensory stimuli delivered via technology. It is a growing trend among companies involved in mobile computing and business applications in particular.
Virtual Reality	:	Virtual reality is a simulated experience that can be similar to or completely different from the real world. Applications of virtual reality include entertainment, education and business.
e-Wallet	:	E-wallet is a type of electronic card which is used for transactions made online through a computer or a smartphone. Its utility is same as a credit or debit card.

SUGGESTED READINGS

1. Alexi Leon and Mathews Leon, (2004), Introduction to Information Systems, McGraw-Hill Education (India) Pvt Limited, New Delhi.
2. Anup K. Ghosh, (2012), E-Commerce Security and Privacy, Kindle Edition
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4. Peter G W Keen, (1994), Every Manager's Guide to Information Technology, 2nd Edition, Harvard Business School Press, Boston.
5. Rajesh Chakrabarti and VikasKardile, (2002),The Asian Manager's Handbook of E-Commerce (paperback edition), Tata McGraw – Hill Publishing Company Limited, New Delhi.

WEB RESOURCES

1 Ecommerce Application using Redux in React JS | Redux in Tamil | Recent Poll | Tamil Skillhub - Bing video
2 How to start Ecommerce Business | Ecommerce Business in Tamil - Bing video
3 Major Mistakes Done Ecommerce Beginners | Eommerce Business in tamil - Bing video

ANSWER TO CHECK YOUR PROGRESS

1. a)   2. d)   3. d)   4. b)   5. c)

BLOCK 3

BUSINESS – TO – BUSINESS

Unit 8 : An Introduction to Business to Business (B2B)

Unit 9 : Business To Business Marketing

Unit 10 : Online Advertising & Concept of M-Commerce

Unit 11 : Concept of M-Commerce

Unit 8

AN INTRODUCTION TO BUSINESS TO BUSINESS (B2B)

STRUCTURE

Overview

Learning Objectives

8.1 Introduction

8.2 Business to Business (B2B)

       8.2.1 Key Technologies

       8.2.2 B2B E-Commerce Buyers

       8.2.3 B2B Categories

       8.2.4 Examples of B2B Model

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8.4 B2B E-Commerce Business Model Advantages

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8.7 B2B Marketplace

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       8.7.3 Online B2B Marketplaces

8.8 Types of B2B Marketplaces and their Business Models

8.9 Benefits for Suppliers of being part of a B2B Marketplace

8.10 How to Succeed in a B2B Marketplace

Let Us Sum Up

Check Your Progress

Glossary

Suggested Readings

Web Resources

Answers to Check Your Progress

OVERVIEW

Mentioning the significant presence of the e-Commerce world, people are familiar with many big names such as Amazon or eBay, which are Goliaths of the B2C e-Commerce business. However, the development of e-Commerce will not just stop at this version since there are a plethora of B2B e-Commerce companies that are now growing around the clock. Statistics have shown that B2B e-Commerce sales are expected to reach more than $6.6 trillion worldwide by 2020. So, for people who are clueless about every aspect of B2B e-Commerce platforms, this article is going to take you through to a deeper understanding of this huge potential market. For any B2B business owner, staying up-to-date to the global B2B e-Commerce movements is totally needed. B2B, which stands for business-to-business, is a way of doing commerce, specifically companies doing business with other companies.

LEARNING OBJECTIVES

After completing this unit, you will be able to;

- discuss the features of the B2B E-Commerce buyers and categories.
- explain about the advantages and disadvantages of B2B Model
- discuss the key features of trends in B2B E-Commerce
- explain the different phases of B2B Marketplace
- gain knowledge about B2B websites and online marketplaces

8.1 INTRODUCTION

E-commerce is a business model that focuses on doing business online, i.e., on the Internet. 'E-commerce' stands for 'electronic commerce'. "B2B is short for business-to-business. It refers to companies – or salespeople – who sell products chiefly to other businesses, rather than selling them to consumers". Business to Business or B2B refers to e-commerce activities between businesses. An E-Commerce company can be dealing with suppliers or distributers or agents. These transactions are usually carried out through Electronic Data Interchange (EDI). EDI is an automated format of exchanging information between businesses over private networks. For e.g. manufacturers and wholesalers are B2B Companies. By processing payments electronically, companies are able to lower the number of clerical errors and increase the speed of processing invoices, which result in lowered transaction fees. In general, B2Bs require higher security needs than B2Cs. With the help of B2B E-commerce, companies are able to

improve the efficiency of several common business functions, including supplier management, inventory management and payment management.

8.2 BUSINESS - TO - BUSINESS (B2B)

B2B e-Commerce is short for business-to-business e-Commerce, which is defined as the sales of goods or services between businesses via online channels. Instead of receiving orders in the traditional ways (by telephone or mail), transactions are carried out digitally, which helps reduce a great amount of overhead costs. Some people believe they are not selling B2B, and that is one of the B2B e-Commerce misconceptions. In fact, they might at least do it once or twice but not know about it. Selling B2B exists in many forms such as wholesale, selling to resellers, large or chain retailers' distributors, selling to organizations. This is the reason why there are many brands out there selling both B2B and B2C. A good example which should be mentioned is even giant like Amazon is now expanding into B2B e-Commerce, and it could grow faster than the retail unit.

Business - to - Business (B2B) is a transaction that occurs between two companies, as opposed to a transaction involving a consumer. This term may also describe a company that provides goods or services for another company. Business - to - Business (B2B) is a transaction that exists between businesses, such as those involving

- a manufacturer and wholesaler, or,
- a wholesaler and a retailer.

Website following B2B business model sells its product to an intermediate buyer who then sells the product to the final customer. As an example, a wholesaler places an order from a company's website and after receiving the consignment, sells the end product to final customer who comes to buy the product at wholesaler's retail outlet.

A website following the B2B business model sells its products to an intermediate buyer who then sells the products to the final customer. As an example, a wholesaler places an order from a company's website and after receiving the consignment, it sells the end product to the final customer who comes to buy the product at the wholesaler's retail outlet.
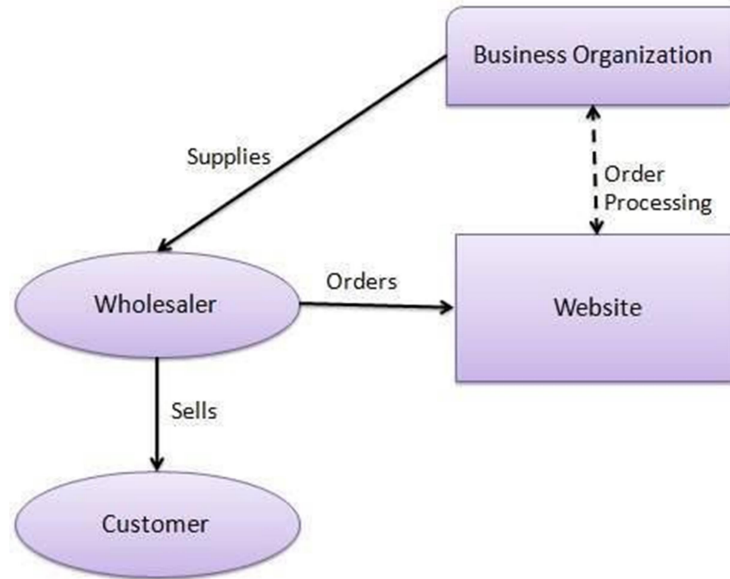
Figure 8.1 Business to Business (B2B) Model

B2B identifies both the seller as well as the buyer as business entities. B2B covers a large number of applications, which enables business to form relationships with their distributors, re-sellers, suppliers, etc. Following are the leading items in B2B e-Commerce.

a) Electronics
b) Shipping and Warehousing
c) Motor Vehicles
d) Petrochemicals
e) Paper
f) Office products
g) Food
h) Agriculture

8.2.1 Key Technologies

Following are the key technologies used in B2B e-commerce

a) Electronic Data Interchange (EDI) − EDI is an inter-organizational exchange of business documents in a structured and machine process able format.

b) Internet − Internet represents the World Wide Web or the network of networks connecting computers across the world.

c) Intranet − Intranet represents a dedicated network of computers within a single organization.

d) Extranet − Extranet represents a network where the outside business partners, suppliers, or customers can have a limited access to a portion of enterprise intranet/network.

e) Back-End Information System Integration − Back-end information systems are database management systems used to manage the business data.

8.2.2 B2B E-Commerce Buyers

Remember that B2B customers are different from B2C ones. Some strategies work with average consumers but are not effective when applied to B2B buyers. By saying so, it does not necessarily mean that business owners should build separate websites for each type of customers, but they should pay attention to what may work with the B2B customers to adjust their plans and websites.

B2B buyers are potential loyal customers, as well, since the B2B sales cycle is long and more complex. Once a B2B customer find their proper supplier, they will maintain the relationship in a certain period of time (months or over a year, for instance). Also, when it comes to placing orders in B2B selling, there will be higher in quantity of products or services and much more complicated requirements for shipping or payment in comparison with individual consumers' orders, not to mention that the price is expected to be highly variable.

8.2.3 B2B Categories

The top three categories of B2B commerce are:

a) **Web development** More and more companies have decided to migrate to the digital world. Subsequently, more companies are looking for other businesses that specialize in web development, web design, and SEO. They are also looking for businesses that specialize in site building software and databases.

b) **Supply and procurement exchanges** Companies pay to have access to a site or portal that has information on different supplies. They also pay to have access to price listings, forums about a specific industry, and other features.

c) **Intermediaries** These are sites that gather and provide specialized data on certain industries or commerce to companies. Usually, this type of company acts as an intermediary between companies that provide the information and companies that get it.

8.2.4 Examples of B2B Model

Let us take an example of www.amazon.com. As we know, www.flipkart.com is an online store that sells various products from various companies. Assume that the skyward publishers want to sell the books online. In this case, the publishers have the option of either developing their own site or displaying their books on the Amazon site (www.flipkart.com), or both. The publishers mainly choose to display their books on www.flikart.com at it gives them a larger audience. Do Now, to do this, the publishers need to transact with flipkart, involving business houses on the both the ends, is the B2B model.

Consider another example. ABC Company sells automobile parts and XYZ Company assembles these parts and then sells the automobile to customers. XYZ Company comes across the website of ABC and finds it suitable. XYZ therefore, a request for more information about ABC and finally, decides to purchase automobile parts automobile from ABC. To do this, XYZ places an order on the website of ABC. After ABC receives the order details, it validates the information. As soon as the order is confirm, the payment procedures are settled. Finally, ABC sends an acknowledgement of payment to XYZ and delivers the goods as per the shipment details decided between the two organizations. Following are the leading items in B2B r-Commerce:-

- i) Electronics
- ii) Shipping and Warehousing
- iii) Motor Vehicles

8.2.5 Examples of some of the B2B Websites

www.Getrespons.com: It is an innovative B2B service based company that has revolutionized the small business email marketing niche. Providing a web based email marketing platform aimed at the small business owner wanting to market their own business online.

www.Incorporate.com: Incorporate.com who have reduced the cost and streamlined the process of creating, limited liability companies. In a few easy steps online, anyone can create their own company for a fraction of the cost a corporate lawyer would charge.

8.3 IMPACT OF B2B MARKETS ON THE ECONOMY

B2B E-Commerce have a significant impact on the economy as they help to lower various cost involved in business transactions. There are the cost areas that are significantly reduced through the conduct of B2B E-Commerce:

(a) **Search costs:** Buyers need not go through intermediaries to search for information about suppliers, products and prices as in a traditional supply chain. Internet is more efficient information channel then its traditional counterpart. So effort, time and money can be saved. In B2B, buyers and sellers are gathered together into a single online trading community and reducing search cost even further.

(b) **Processing cost:** Reduction in the costs of processing transactions (e.g. invoices, purchase orders and payment schemes), as B2B allows for the automation of transaction processes and therefore the quick implementation of the same compared to telephone and fax.

(c) **Avoid intermediaries:** Through B2B e-markets, suppliers are able to interact and transact directly with buyers there by eliminating intermediaries and distributors.

(d) **Transparency in pricing:** The gathering of a large number of buyers and sellers in a single e-market reveals market price information and transactions processing to participants. Thus increases the price transparency.

8.4 B2B E-COMMERCE BUSINESS MODEL ADVANTAGES

1. Market Predictability

Compared to the other business strategies, the B2B e-Commerce business model has more market stability. B2B sectors grow gradually and can adapt to various complex market conditions. This helps to strengthen the online presence and business opportunities and get more potential clients and resellers.

2. Better Sales

An improved supply chain management process along with a collaborative approach increase customer loyalty in the B2B e-Commerce business model. This, in turn, leads to improved sales. It helps businesses to showcase product recommendations and unlock effective up selling and cross-selling opportunities.

3. Lower Costs

Due to an effective Supply chain management process, this online business model leads to lower costs for businesses. In most cases, the work is done through automation that eradicates the chances of errors and undue expenditure.

4. Data Centric Process

One of the main advantages of the model is that it relies on effective and factual data to streamline the whole process. In this way, errors can be avoided and proper forecasts can be made. With an integrated data-driven approach, you can calculate detailed sales statistics.

8.5 B2B ECOMMERCE BUSINESS MODEL DISADVANTAGES

Just like the other business models, the B2B e-Commerce Business model has some flaws too, which are:

1. Limited Market

Compared to the B2C model, this type of business has a limited market base as it deals with transactions between businesses. This makes it a bit of a risky venture for small and medium e-Commerce businesses.

2. Lengthy Decision

Here, the majority of the purchase decisions involve a lengthy process as there are two businesses involved. The process may involve dependence on multiple stakeholders and decision makers.

3. Inverted Structure

Compared to the other models, consumers have more decision making power than sellers in the B2B business model. They may demand customizations, impose specifications and try to lower price rates.

Figure 8.2 Disadvantages of Business to Business (B2B) Model

8.6 TRENDS IN B2B E-COMMERCE

B2B e-Commerce trends are something all B2B businesses need to know to catch up with the development and meet customers' demands. Such trends change gradually every year due to the changes in customers' expectations. B2B is now much more common than in the past, especially in the B2B electronic Commerce market. Along with

B2C, the B2B model brings about great profit for businesses and creates relationships between enterprises.

a) **Younger Buyer Segment** Recent market statistics suggest that nearly half of the B2B buyers are young, tech-savvy and sophisticated. These buyers expect more ease of use just like on the customer-driven websites. The unique purchasing preferences of the younger buyer segments will help B2B businesses grow in the long term.

b) **Mobile Commerce** Mobile commerce is here to stay as a trend in major business sectors. It is changing the face of B2B marketing since 42% of the B2B customers use mobile devices during the purchase process Right from comparing prices to viewing a plethora of other features as well, new age buyers are using more and more mobile devices for making a purchase.

c) **Personalization** On the task of making purchases more mobile friendly and optimized, personalization is yet another trend that will help B2B businesses succeed in the long run. Plenty of companies around the world are already implementing sophisticated personalization in the form of price optimization algorithms to deliver dynamic pricing. Ultimately creating personalized experience will be the one reaching more profitable B2B sales in the coming years.

8.7 B2B MARKETPLACE

A B2B marketplace is a type of e-Commerce platform that brings together B2B sellers and buyers and enables them to do business in one place online. Just like its B2C counterpart, businesses sell their products (usually in bulk with B2B) and other value-added services, but on a B2B marketplace, the sellers are brands, manufacturers, suppliers, and wholesalers, and the customers are other businesses. These transactions are processed online by the marketplace operator. Depending on the different natures of B2B selling, a B2B marketplace can also be called other names, including a B2B trading platform, B2B procurement or sourcing website, B2B portal, multi-vendor marketplace, B2B catalog and directory, and more.

In the traditional supply chain, buying and selling materials means establishing long-term relationships with vendors, distributors and retailers. With the advent of Internet it is easy for the buyers and suppliers to meet, buy and sell across cyber market places and collaborate more quickly than the traditional way. It offers them a wide spectrum of advantages like Online ordering and tracking, managing

their logistics, sharing the forecast, demand and POS information etc. The B2B market places are classified as Net market places or private market places. Also they are classified based on Buyer or Seller launched B2B market places.

8.7.1 Net Market Place

The Net market is independently owned marker place that brings thousands of suppliers and buyers to cyber space in a dynamic real time environment. The buyers may not know the vendors and the Net market place connects this anonymous buyers and sellers according to the requirements of both. They could be a horizontal like Tradeout.com or vertical market place like esteel.com. Vertical market places serve specific industries like food, steel, automobile etc. Horizontal market places serve all types of products serving different types of supplying firms as well as buyer firms like apparels, finance, cars, and other category of products together.

Figure 8.3 Electronic Market Place

8.7.2 Private Market Place

Private market place is a trading exchange in which membership is closed or by invitation only. The company that owns the market place launches it. Sometimes they are also called as Collaborative Commerce. Private market places bring business firms that collaborate to develop highly efficient and responsive supply chains to cater the needs of customers.

 For example, Wall-Mart has connected all its point of sale and its point of sale and its 75,000 suppliers. Once the customer sales are captured at the POS, Wal-Mart conveys the information and replenishment orders to the warehouse and distributor. Also it conveys this information to manufacturers like P&G. This helps in better inventory management. This also tells Wal-Mart and its suppliers the exact level of demand for thousands of products. This process is also called the demand-pull system. Some very successful companies have formed their own

private exchanges - Dell, for instance, has built Valuechain.dell.com, while Cisco has created its famous eHub. This brings aggregation capabilities to their customers and suppliers and strengthens the whole value chain.

8.7.3 Most Well–known Online B2B Marketplaces

There aren't a lot of notable B2B marketplace platforms out there today, mainly due to the intricacies of building the technology and gaining a trustworthy reputation over years. In no particular order, here are some of the top B2B multi-vendor marketplaces:

    a) Alibaba.com
    b) Amazon Business
    c) eWorldTrade
    d) Global Sources
    e) ThomasNet
    f) EC21
    g) IndiaMart

It is worth doing more research to see if any of those top marketplaces have the buyer base and popularity, technology and tools, and other value-added services that serve your specific selling goals. Or, you may find other types of marketplaces in your niche.

8.8 TYPES OF B2B MARKETPLACES AND BUSINESS MODELS

There are different types of B2B marketplaces depending on the structure of the participants and other diverse factors.

1. Vertical versus Horizontal marketplaces

Vertical marketplaces, also called "vortals" (vertical portals), specialize in a single category of products or a particular industry. Horizontal marketplaces sell products and services of different kinds, appealing to the needs of buyers across different segments or sectors.

2. One-to-many versus many-to-many marketplaces

A one-to-many marketplace is managed by a single purchasing company. For example, huge automobile companies like Nissan can set up an e-Commerce marketplace where their suppliers can be granted access and submit bids and quotations for what they are requesting.

Many-to-many marketplaces may be more familiar to you, where buyers and suppliers are of different entities and the marketplace is managed by a third party. Alibaba.com and Amazon Business fall into this category.

3. Local versus global marketplaces

In terms of geography, we differentiate between local and global B2B marketplaces. While on local marketplaces, companies supply only to their local market, whereas global marketplaces facilitate the exchange of goods and services unrestrained by geographic boundaries. This poses a greater risk and challenges to run a successful global marketplace, as it has to tackle additional issues related to international payment, cross-border trade and logistics, language and communication barriers, and more.

Whether you intend to venture on your own B2B marketplace or sell with big B2B platforms, other important things to know about are the business models and sources of revenue for such a business. Here we list the three most common business models in B2B marketplaces:

4. Commission-based business model

For every successful order a seller gets from the platform, they pay a percentage as commission to the marketplace operators. The marketplace may charge different cuts depending on the type of products, category of products, order volume, value of the cart, and other trade variables.

5. Subscription-based business model

The marketplace charges a membership fee from the sellers to let them use its platform for business. This model is more common in gigantic B2B trade marketplaces with lots of repeat customers. The marketplace may offer some additional value in the subscription packages to attract more memberships. This could include dedicated account management services, greater visibility into products in catalog, access to exclusive categories, advertising features, logistics assistance, and more.

6. Listing fee business model

This model is more like pay-per-view, as is seen in video streaming platforms. The B2B wholesale marketplaces that follow this model ask sellers to pay an extra amount as a listing fee for posting a product to sell.

8.9 BENEFITS FOR SUPPLIERS

Currently, 75% of B2B purchases are already made online, and more and more businesses are leveraging online channels to conduct product sourcing and procurement. For suppliers, being part of a B2B marketplace represents a huge potential to take your sales and business to the next level.

a) **Build your online presence**

Digitizing your entire catalog already gets you ahead of a lot of your competitors who still adhere to the traditional in-person ways of B2B sales. By showcasing your products online, it increases your chances of reaching qualified buyers and closing big deals. It is also similar to being in a global trade fair which runs 24/7 and 365 days per year, and you are always present and visible.

b) **Capitalize on existing buyer demand and expand your network**

Millions of B2B procurement professionals are already actively shopping on top B2B marketplaces. The B2B marketplaces offer B2B buyers the convenience and confidence of engaging and purchasing from many verified and trusted suppliers on one centralized platform. If you don't have the time and resources to invest in reaching customers across offline and online channels on your own budget, choosing to sell on a B2B marketplace can take the work off your plate and help effectively expand your network.

c) **Low costs**

The access to a B2B marketplace usually includes a low initial cost that any company of any size can afford, regardless of the business model of the platform, as in the structures of seller fees. It also gives suppliers the opportunity to decrease operating cost. They no longer need to update lengthy printed catalogs or spend money on traditional marketing channels.

d) **Easy set-up**

B2B marketplaces feature a standardized user interface and easy-to-use seller portal, where you can simply load your business and product information to get your online business up and running. Marketplaces integrate product management, CRM, shipment, and payment solutions or services. The development and integration of such sophisticated systems to your own website, instead, could be expensive and time-consuming.

e) **Test out new products**

Managing your products in a centralized online portal makes it easier than ever to get rid of obsolete inventory and SKUs. With a B2B marketplace, your own sales data can be readily accessible to help inform your product development or selection decisions. The marketplace portals often provide sales-trend insights and aggregated data for different segments or industries, so you may

adapt to the sales trends and enjoy "first mover" benefits, especially in times of crisis.

f) Expand your customer base globally

Modern B2B trading marketplaces support localization settings and configurations. For example, they can display your products in different languages and integrate translation tools or services to the platform. They also offer solutions and services to take care of the complexities of international transactions and logistics. In this way, wholesalers and manufacturers can have the ease to access a wider range of audiences and develop new contacts all over the world, without the need for becoming an expert in cross-border trade themselves.

g) Access to foreign markets for SMEs

The low start-up costs of B2B marketplace platforms have allowed SMEs to start selling their goods and services internationally as no other has in the history of the business. Using a B2B e-Commerce marketplace is an economical way to promote your products. Small businesses no longer have to take expensive trips around the world to secure business deals and can also display a wide array of products.

h) Increase customer service and loyalty

Good online B2B platforms help you facilitate connection and conversation with your buyers and let you own your business relationships. Digitized solutions allow you to manage your relationship in a more efficient way and timely manner. Less time spent on fielding leads and orders over phone and email will allow for more time to drive your business growth.

8.10 HOW TO SUCCEED IN A B2B MARKETPLACE

We've talked about the definition and types of B2B marketplaces. We've also explored the benefits of selling on a B2B marketplace. Now, let's outline some strategies you can apply to ensure you sell successfully in a B2B marketplace.

i)　Build trust

Do all steps necessary so the buyer on the other side of the globe who never meet you in person will believe in you. This includes:

   a) Completing your company profile

b) Verifying yourself through verification or authentication processes

c) Showcasing other information that authenticates your business, such as certificates, licenses, awards, or photos of your factory, office, and employees.

ii) Post and manage products

High-quality product posting helps you stand out from the crowd. Use descriptive keywords in your product name/title and descriptions to optimize for rankings within the marketplace platform. Use well-designed images and videos to attract buyers and help them develop a holistic understanding of your products.

iii) Be flexible and adaptive

Flexibility will enable your business to thrive and evolve. Staying in touch with and adapting to your customer's needs will give you a unique advantage. Such flexibility may include offering product customization, price modification, and personalized responsive services.

iv) Offer logistics and customs clearance advice

Make sure that you can advise your customer on the best way that you can ship/ freight the delivery. Also, you can help customers gain knowledge of the rules and regulations required for the products to be exported into certain countries.

v) Respond to inquiries

Without inquiries, there can be no orders. So always make sure that you deal with inquiries in a professional, organized, and timely fashion.

vi) Use feedback to optimize your offer

Positive feedback and testimonials can allow your business to gain trust and help to build your client base. Encourage your customers to leave feedback. Even negative feedback can help you understand what went wrong.

vii) Offer sample products

Potential customers may prefer to check the quality of a product before making a bulk order. You can facilitate this by offering a product sample.

viii)   Respect your potential buyers

You will have to show respect, professionalism, and interest to any business regardless of the size of the company that contacts you. After all, if you serve them well you will grow together!

LET US SUM UP

Unlike business-to-consumer commerce where companies cater their products to typical individuals, business-to-business commerce involves companies selling just to other companies. In addition to selling finished goods that companies can resell or use for their operations, B2B enterprises will offer parts, materials and even services that businesses need. In traditional B2B e-Commerce, one seller engages in digital commerce with many buyers. B2B marketplaces bring together many buyers and sellers on a single website. The marketplace operator may sell their own products and services in addition to serving as the marketplace operator, simply running the marketplace. A B2B electronic Commerce marketplace can be global, offering a wide variety of products (Amazon); vertical, offering many of the same types of products; or horizontal, offering different products but with similar characteristics.

CHECK YOUR PROGRESS

Choose the Correct Answers:

1. Which form of e-Commerce currently account for about 97% of all electronic Commerce revenues?

a) B2B   b) B2C

c) C2B   d) C2C

2. Which of the following are advantages normally associated with B2B e-Commerce?

a) Shorter cycle times   b) Reduction in costs

c) Reaches wider audiences   d) all of the above

3. A _____is the set of planned activities designed to result in a profit in a marketplace.

a) Business Model   b) Profit Model

c) Business Plan   d) Revenue Model

4. Both sellers and buyers are business firms, under _____ type of e-Commerce transaction.

a) B2B

b) C2B

c) B2C

d) C2C

5. A _____ is a B2B trading network that links a particular seller with its own trading partners.

a) Bit stream

b) Virtual Network

c) Web Community

d) Private Trading Network

GLOSSARY

Supplier	:	A supplier is an entity that supplies goods and services to another organization. This entity is part of the supply chain of a business, which may provide the bulk of the value contained within its products..
Websites	:	A website is a collection of web pages and related content that is identified by a common domain name and published on at least one web server.
Marketplace	:	An online marketplace is a type of electronic Commerce website where product or service information is provided by multiple third parties. Online marketplaces are the primary type of multichannel e-Commerce and can be a way to streamline the production process.
Resellers	:	Resellers are companies that sell goods and services produced by other firms without materially changing them. They include wholesalers, brokers, and retailers.
Sales	:	Sales are activities related to selling or the number of goods sold in a given targeted time period. The delivery of a service for a cost is also considered a sale.

SUGGESTED READINGS

1. Alexi Leon and Mathews Leon, (2004), Introduction to Information Systems, McGraw-Hill Education (India) Pvt Limited, New Delhi.
2. Anup K. Ghosh, (2012), E-Commerce Security and Privacy, Kindle Edition
3. HYPERLINK "https://www.google.co.in/search?tbo=p&tbm=bks&q=inauthor:%22P.T.JOSEPH,+S.J.%22&source=gbs_metadata_r&cad=4"P.T. Joseph, S.J. (2015) E-Commerce: An Indian Perspective, Fifth Edition, Prentice Hall India Pvt., Limited, New Delhi
4. Peter G W Keen, (1994), Every Manager's Guide to Information Technology, 2nd Edition, Harvard Business School Press, Boston.
5. Rajesh Chakrabarti and VikasKardile, (2002),The Asian Manager's Handbook of E-Commerce (paperback edition), Tata McGraw – Hill Publishing Company Limited, New Delhi.

WEB RESOURCES

1. [What is B2B (Business to Business)? - Bing video](#)
2. [Describe Trends in Business English - Describing Statistics, Sales and Market Trends - Bing video](#)
3. [B2B Definition | Business-to-Business Model (2 Minutes!) | Finance Strategists - Bing video](#)
4. [What is B2B Selling? - Bing video](#)
5. [B2B Vs B2C Marketing: Difference between them with definition & Comparison Chart - Bing video](#)

ANSWER TO CHECK YOUR PROGRESS

1) a	2) d	3) a	4) a	5) d

UNIT 9

BUSINESS TO BUSINESS MARKETING

STRUCTURE

Overview

Learning Objectives

9.1 Introduction

9.2 The Evolution of B2B Marketing

      9.2.1 Eras in Marketing

9.3 B2B Marketing

      9.3.1 Types of B2B Marketing

9.4 Difference between B2B and B2C Marketing

9.5 Online Marketing

9.6 B2B Internet Marketing Strategies

9.7 Benefits and Opportunities in B2B

9.8 Challenges and Risks of B2B

Let Us Sum Up

Check Your Progress

Glossary

Suggested Readings

Web Resources

Answers to Check Your Progress

OVERVIEW

Business-to-Business International Internet Marketing (B2B IIM) has emerged as one of the key drivers in sustaining an organization's competitive advantage. Market entry and communication via the Internet have affected the dynamics and traditional process in B2B commerce. The critical question for companies today is what should be done to find leverage points that could result in greater success of this kind of business and how are market-oriented activities affected by the use of the internet. However, few empirical studies have been done regarding B2B IIM that are affected by the use of the Internet, and the effect of that on B2B marketing efficiency. By studying the practice of

123 UK B2B companies, it has been found that the use of the Internet positively influences B2B international marketing by its two dimensions, B2B international marketing activities and B2B marketing activities which reflect positively on the marketing efficiency.

LEARNING OBJECTIVES

After completing this unit, you will be able to;

- explain the features of the B2B marketing and its types
- discuss about the evolution and era in B2B Marketing
- explain the differentiate between B2B and B2C marketing
- gain knowledge about online marketing
- explain the benefits, opportunities, challenges and risks in B2B

9.1 INTRODUCTION

The use of the Internet to facilitate commerce among companies promises vast benefits: dramatically reduced costs, greater access to buyers and sellers, improved marketplace liquidity, and a whole new array of efficient and flexible transaction methods. But if the benefits are clear, the path to achieving them is anything but. The B2B market is still in its infancy, and its structure and players remain in rapid flux. Despite breathless press coverage, very little is known about how business-to-business commerce will evolve on the Internet. The high level of uncertainty is causing widespread anxiety among executives and for good reason. Whether as buyers, sellers, or both, all companies have substantial stakes in the business-to-business marketplace. Their supply chains, their product and marketing strategies, their processes and operations even their business models will be shaped by the way B2B relationships are formed and transactions are carried out.

9.2 THE EVOLUTION OF B2B MARKETING

For decades, B2B marketing techniques relied on the same basic principles as consumer marketing. But over the last 20 years, B2B marketing has gone through an evolution and emerged as its own discipline with unique strategies, practices and metrics of success. The way marketing and business has changed over the years mimics the ways our values change as a society. If we compare the two, we discover greater insights into why we make the purchase decisions we do. The following is a timeline of the evolution of B2B marketing:

a) **Early 1800s:** Trade journals were introduced and many of them ran advertisements. For example, the American Railroad Journal, established in 1831, was a weekly publication directed to iron

manufacturers and miners that included a limited number of advertisements.

b) **Late 1800s:** Montgomery Ward & Company was founded and introduced a catalog which targeted rural farmers with limited access to dry goods. This revolutionary mail-order business cut out the middleman (local general stores) and put the commercial consumer in direct contact with a wholesaler. John Deere introduced *The Furrow*, a magazine designed to provide farmers with timely information about the trends affecting America's farmers. Born generations before the term "content marketing" was introduced, The Furrow is a marketing legend and is still published today.

c) **1920s:** As publishing grew, print advertising became the most effective way for business to reach their target markets. B2B marketing existed primarily through advertising in trade catalogs.

Figure 9.1 Evolution of B2B Marketing

d) **1930s:** Following the Great Crash of 1929, B2B or industrial marketing began to gain traction. The Great Depression had a dramatic impact on the average consumer's ability to purchase products. Companies began to recognize the need for market research to identify prospective buyers as well as competitors. B2B marketing consisted of trade advertising, sales manuals, in-person presentations, and direct mail and slide presentations. This era is associated with aggressive selling, often involving door-to-door salesmen.

e) **1950s:** As mega-corporations were established, marketing emerged as a discipline. Companies sought to learn more about their customers' needs, wants and behaviors. Marketing efforts were

integrated with customer profiles, and products were introduced only after extensive marketing analysis and product testing.

f) **1960s and 1970s:** B2B marketing was born as a stand-alone specialty. Businesses developed marketing plans and strategies that targeted other business. The most common initiatives including telemarketing, direct mail and event marketing.

g) **1980s and 1990s:** Computers and the internet transformed business and B2B marketing. E-commerce was introduced and email enabled frequent and regular communication with prospects and customers. Desktop publishing enhanced advertising as well as sales and marketing collateral. Spam became a household word, websites developed into an organizational necessity and the concept of content marketing was introduced. Google entered and quickly transformed the online landscape.

h) **2000s to today:** Integrated marketing plans gained widespread acceptance. The internet became a mainstay and made it essential for every company to create and maintain a website. Face book, YouTube, Twitter and LinkedIn were launched, and social media transformed the way companies communicated with their customers. New forms of corporate communication (such as blogs) and marketing channels emerged. Many print publications shifted to digital distribution. Traditional marketing morphed to digital marketing and marketing automation helped companies streamline their communication with prospects and customers.

9.2.1 Eras in Marketing

A review of this timeline reveals certain patterns. There is, of course, consistent innovation in technology, which enables continued growth in marketing and other areas of business. But there is also a pattern in methodology that changed over time.

i) **1800–1920s - Production Method Era:** In this era, the focus was mainly on production. Essentially, once an item is produced, it will sell itself. Trades were more specialized, so competition wasn't as fierce.

ii) **1920–1950s - Sales Method Era:** After the Great Depression, consumers were tighter with their money, so companies utilized more pushy tactics to generate greater sales. This resulted in increased self-promotion, heavy advertising and more aggressive selling techniques.

iii) **1950–2000s - Marketing Method Era:** Following the more "hard sell" approaches of the previous era, the 1950s brought in a

subtler and more professional approach to sales and marketing. The focus turned to producing a quality product and promoting that quality to customers through attractive advertising or trustworthy brand development.

iv) **2000–present - Social/Relationship Method Era:** Changes in technology (particularly communications technology) are the foundation for the emphasis on social influence and relationship management. Reputation, expertise and reliability play leading roles.

9.3 B2B MARKETING

Business-to-business marketing refers to the marketing of products or services to other businesses and organizations. It holds several key distinctions from B2C marketing, which is oriented toward consumers. In broad sense, B2B marketing content tends to be more informational and straightforward than B2C. This is because business purchase decisions, in comparison to those of consumers, are based more on bottom-line revenue impact. Return on investment (ROI) is rarely a consideration for the everyday person at least in a monetary sense but it's a primary focus for corporate decision makers.

In the modern environment, B2B marketers often sell to buying committees with various key stakeholders. This makes for a complex and sometimes challenging landscape, but as data sources become more robust and accurate, the ability to map out committees and reach buyers with relevant, personalized information is greatly improving.

Any company that sells to other companies. This can come in many forms: software-as-a-service (SaaS) subscriptions, security solutions, tools, accessories, office supplies, you name it. Many organizations fall under both the B2B and B2C umbrellas. B2B marketing campaigns are aimed at any individual(s) with control or influence on purchasing decisions. This can encompass a wide variety of titles and functions, from low-level researchers all the way up to the C-suite. Competition for customers, and even for attention, is high. Building out a B2B strategy that delivers results requires thoughtful planning, execution, and management.

9.3.1 Types of B2B Marketing

Here are a few of the most common B2B marketing types and channels:

a) **Blogs:** A mainstay for almost any content team. Regularly updated blogs provide organic visibility and drive inbound traffic to your site.

Your blog can house any number of different content formats: written copy, info graphics, videos, case studies, and more.

b) **Search:** SEO best practices change as often as Google's algorithm (a lot), making this a tricky space to operate in, but any B2B marketing strategy needs to account for it. Lately the focus has been shifting away from keywords and metadata, and more toward searcher intent signals.

c) **Social Media:** Both organic and paid should be in the mix. Social networks allow you to reach and engage prospects where they're active. B2B buyers increasingly use these channels to research potential vendors for purchase decisions.

d) **Whitepapers/eBooks:** Standalone assets containing valuable information, these downloadable documents can either be gated (meaning a user must provide contact information or perform another action to access) or ungated. Often used as a B2B lead generation tool.

e) **Email:** While its effectiveness is waning somewhat in the age of spam filters and inbox shock, email won't disappear anytime soon. To work around overloaded inboxes, some sales and marketing professionals use LinkedIn In Mail for lead generation.

f) **Videos:** This content type can be applied in several of the previous categories mentioned here (blogs, social media, and emails) but is worth singling out because it is growing so important to B2B strategies.

9.4 DIFFERENCE BETWEEN B2B AND B2C MARKETING

Table 9.1 Difference between B2B Vs B2C Marketing

	B2B	**B2C**
Target Audience	Markets to other companies	Markets to consumers directly
Examples	Ad agencies, Office furniture manufactures, etc.,	Restaurants, hotels, retail stores, etc.,
Communication	Uses special industry jargon and terms	Provides consumers with easy to understand information
Audience Needs	Audience is looking for	Audience is looking for entertainment and a

	professional expertise	good deal
Decision Making Process	Decision Making process can take a lot of time	Consumers don't need a lot of time to make decision

As you can see, in B2B marketing, you work with specific individuals or small groups of people within a given industry. Your main goal is to establish relations with office managers or other higher-level employees of the business you want to cooperate with. After all, these are the people that decide whether the company will purchase your products.

Additionally, take into consideration that, as a rule, B2C customers want to get valuable information about this or that service or product as quickly as possible. When choosing a company, they rely on reviews and social proof. At the same time, in B2B marketing, people learn more about the services or products that interest them. As soon as they discover the potential benefits, they start searching for more specific details about your company and compare it with competitors. Also, these people may look for third-party reviews and similar products provided by your competitors.

9.5 ONLINE MARKETING

Online marketing is an interactive and dynamic process and consists of several parts that are interconnected. Below you will find activities that are important for B2B online marketing. It must be said that every company is different, and hence the online marketing activities that fit the company also differ.

a) **Analysis** Analysis is, as many parts of the company, a very important component of B2B online marketing. There is a lot of activity on your website every day. Visitors come to your website and they leave your website. Data that shows the behavior of your website visitors is crucial for effective online marketing and has an impact on the health of your company. A website that is not functioning properly will result in frustrated visitors who are quickly inclined to quit.

b) **B2B Content Marketing** Content marketing is especially important in the B2B sector. Business purchases are made less quickly than purchases made by consumers. It often takes a longer period of time before business purchases are made. Also, there are often more people involved in the purchase process and the purchases cost on average more money. Buyers of

business products often read themselves carefully into the company and the products before making a decision. It is therefore crucial that good and clear content about your products and your business is available. Good content also ensures better organic find ability.

c) **B2B Search Engine Advertising (SEA)** Successful advertising via Google with SEA (Search Engine Advertising) is a profession itself. Knowledge and skills of Google Ad words are important to get the most out of it. SEA goes hand in hand with attractive landing pages. Advertising ensures that the traffic to your website is increased enormously but landing on irrelevant pages has the opposite effect on your company's reputation. The effectiveness of SEA is closely related to the knowledge of the advertisers.

d) **B2B Search Engine Optimization (SEO)** When you produce content it is important to take into account search engine optimization (SEO). Good SEO ensures that you are organically (and for free) at the top of the search results in Google and this is important. Research has shown that 60% of visitors click on position 1-3 in Google, the remaining 40% click on lower positions. It should be emphasized that 92% of all clicks in Google take place on the first page. If your website does not rank on the first page the chance of a visit is very low.

e) **B2B Video Marketing** Video marketing fits well with content marketing. A video can easily and interactively visualize the operation of a product, explanation or large pieces of text. B2B video marketing and video advertising is becoming increasingly important in B2B online marketing. Research has also shown that content enriched with visual images gets 94% more views. Visual content is also more often shared (40 times more) and 600.000 times better absorbed by the brain than plain text.

f) **Conversion Optimization** Analyzing data is step 1. But after the data has been collected it must be interpreted and applied. Small adjustments can do a lot for the natural 'flow' of your website. Websites that are difficult to navigate only cause difficulties. This has negative consequences for your conversion. Through interpreting and applying user data, conversion optimization can take place.

g) **Data Driven Marketing** Data driven marketing is also very important for B2B online marketing. This means that online

marketing strategies are purely driven by data and not by feeling. Data tells the facts. This can sometimes (strangely) deviate from feeling but it is actually how your target group behaves on the website. Data driven marketing is a discipline that can ensure the successful execution of online marketing activities.

h) **Dealer Marketing** Specifically suitable for certain companies is dealer marketing. Marketing activities for this purpose concentrate on increasing the sales of your products at your dealers. This also includes online marketing activities for the dealer himself. A win-win situation.

i) **Design** A good design is very beneficial for the user-friendliness of your website. The important thing about design is the effect it has on your sales. Research has shown that if visitors have to choose between two similar companies online, 80% of the visitors go for the website that has the more beautiful design. After all, a beautiful design conveys quality.

j) **Development** Good online marketing goes hand in hand with a website that works well. Of course, this all has to do with development. Development must focus on the business operations of the company. A well-built site is the basis of a healthy online business.

k) **Digital strategy** In order for B2B online marketing to run smoothly, a well thought-out digital strategy is crucial. A digital strategy consists of several components that fall under online marketing. Think of analysis, content marketing, SEA, SEO, design and development. A good strategy is based on data from your company. Competitors, opportunities and behavior on the website are all included in a digital strategy.

l) **E-Commerce** Maintaining and optimizing your web shop is also part of B2B online marketing. The main goal of companies doing e-commerce is to obtain more online transactions. There are a number of things that ensure a successful web shop. Think of product content, good product images and a simple check-out process.

m) **E-mail marketing** E-mail marketing is an aspect of online marketing that is not suitable for everyone. If you want to communicate a lot with your (potential) customers, have interesting content or offers, e-mail marketing is a good tool. Important when sending e-mails is the privacy legislation and the

frequency of sending the e-mails. Too much is not good but too little is also ineffective.

n) **Feed marketing** If you have a web shop, feed marketing is indispensable. Feed marketing consists of the automatic transfer of product data to platforms and comparison websites. Google Shopping, Bol.com and Amazon are examples of this. Each platform has different requirements for the descriptions and columns that have to be filled in. Feed marketing is not always easy. Setting up a feed properly is crucial for the success of feed marketing. It is also important to set up your Google My Business correctly and to update it regularly.

o) **Inbound marketing** Inbound marketing is a strategic choice in driving B2B online marketing. This is not about chasing after unwilling customers, calling cold leads and approaching people who may not be interested. Inbound marketing is all about having the lead come to you and not the other way around. This is achieved by offering interesting and relevant content, great products and good service.

p) **Lead generation** The generation of leads is an important indicator of the success of B2B online marketing efforts. Lead generation is all about bringing products and interesting content into the spotlight in order to entice potential buyers to leave their contact details behind by, for example, filling out a contact form or a form to download a white paper.

9.6 B2B INTERNET MARKETING STRATEGIES

Having a well-defined strategy is the key to improving the effectiveness of your B2B digital marketing efforts.

a) **Educate Your Prospects**
   It is really essential to make your client feel important. Remember you will have a tough time dealing with an uneducated and confused client. Always educate your client and share all the necessary information with him/her for maximum output and increased productivity. Never push your client to purchase your organization's products and services. Share each and every detail with the client and let them take their own decision. Don't rely only on verbal communication.

b) **Creating a New Framework**
   Gone are the days when marketers used to push their brands among their customers by simple ways of promotion i.e.

advertising, banners, pamphlets and so on. Make your clients aware how your organization's products and services can benefit their operations and bring in revenue. Share online brochures, pamphlets with your client.

c) **Communication**

Communication is one of the most essential ways through which an organization shares information about its products and services with the client. In today's scenario ordinary communication does not help, communication needs to be effective. Marketing representatives must not attend any business meeting without his/her business card. Keep your business cards either in your wallet or laptop bag which you carry daily to work. Make sure your business card carries all the necessary information about you (contact number, email id) and your organization. Sharing your visiting

d) **Don't Speak the Same Language**

Always personalize your emails as per the designation and responsibilities shared by the individual representing your client. Address your client by his or name. Do not share information with a single person in loop and everyone else in cc. You just can't send the same mail to the CEO as well as the CFO as their requirements would be different. Understand the requirement first before sending mails.

e) **Online Training Portals**

Train your clients through web based trainings. Ask the clients to create their own login id and passwords. Share necessary information about your product and services in the portal itself for the client to login and go through necessary information. Arrange online trainings where the trainer addresses even the minutest query of the client. Web meeting is one of the most cost effective ways of communicating with the clients

f) **Product Feedback**

It is essential to take regular feedback of your products and services. The clients can give their valuable feedback on your website only. The feedbacks and reviews must be regularly monitored. Assign a single resource for the same.

g) **Good Relationship**

Share a good and healthy relationship with your client. Don't forget to wish your client on important occasions through email. It works

9.7 BENEFITS AND OPPORTUNITIES IN B2B

Some benefits of B2B for buyers and sellers include the following:

a. **Convenience:** While companies can sell through physical storefronts or take transactions by phone, B2B commerce often takes place online, where companies advertise their products and services, allow for demonstrations and make it easy to place bulk orders. Sellers also benefit from efficient order processing thanks to this digital transaction model.

b. **Higher profits:** B2B companies often sell their items in wholesale quantities so that buyers can get a good deal and need to restock less often. Larger order numbers lead to higher potential sales and more cash coming in for B2B sellers. At the same time, the ease of advertising to other businesses through B2B websites can help cut marketing costs and boost conversion rates.

c. **Huge market potential:** From business software and consulting services to bulk materials and specialized machinery, B2B sellers can target a large market of companies across industries. At the same time, they have the flexibility of specializing in an area like technology to become a leader in the field.

d. **Improved security:** Since contracts are a common part of B2B commerce, there's some security for both buyers and sellers in that there's less concern that one will pay and the other will deliver goods as promised. Since sales usually get tracked digitally, it's also more secure in that B2B sellers can track and monitor their financial results.

9.8 CHALLENGES AND RISKS OF B2B

Some important B2B disadvantages that buyers and sellers should know include:

a. **More complex setup process:** Getting started as a B2B retailer takes work to figure out how to get customers who stay dedicated and make large-enough orders. This often requires thorough research to advertise to potential businesses, set up a custom ordering system and adapt quickly when sales are underwhelming.

b. **Limits to sales:** While B2B companies can sell a lot, they do miss out on potential sales to individual customers. The smaller pool of business buyers and the need to negotiate contracts can put some limits on profits, especially when the company loses key buyers to other competitors.

c. **Need for B2B sellers to stand out:** At the same time, the B2B market has many companies competing and selling similar products and services. Sellers often need to cut prices and find special ways to grab companies' attention to succeed in the market.

d. Special ordering experience needed: B2B companies selling online need to put much effort into designing a website and ordering system that buyers find easy to use. This means presenting product and service information clearly, offering online demos or consultations and using order forms with appropriate options for quantities and any special customization needed.

LET US SUM UP

An approach to the business transformation will let you connect with the prospects at a more profound level. For B2B marketers, complexity will be the daily ingredient, so you have to overcome the challenges by adopting the new opportunities. To stay in the long-run, marketers should know the challenges and opportunities they'll experience for different businesses. Any business selling to another business uses B2B marketing. Any company trying to sell to other companies uses B2B marketing to help promote its products or services. While these companies aren't as diverse as all those using B2C marketing, there's still quite a range of products, services, and industries involved. There are almost as many approaches to B2B marketing as there are B2B companies themselves. Every B2B product or service, as well as the target audience, is a little different. Marketers have to adjust their approaches accordingly.

CHECK YOUR PROGRESS

Choose the Correct Answers:

1. SEO stands for _____.

a) Site Efficiency Optimization   b) Search Efficiency Optimization

c) Search Engine Optimization   d) Search Engine Organization

2. Customer is _____, if customer's expectations and products performance matches.

a) Satisfied   b) Dissatisfied

c) Delighted   d) None of these

3. _____ are networks that connect people within a company to each other and to the company network.

a) Internets   b) Intranets

c) Extranets   d) None of the above

4. _____ includes all electronics based information exchanges within or between companies and customers.

a) E-Commerce   b) E-Marketing

c) E-Communication   d) E-Business

5. Within e-Markets, marketplaces have become _____

a) Market Regions   b) Market Zones

c) Market Spaces   d) Market Dynamos

GLOSSARY

B2B International Internet Marketing (B2B IIM)	:	B2B IIM efficiency not directly, but indirectly, through B2B marketing and customer relations activities, international marketing targeting activities and marketing performance.
Return on Investment (ROI)	:	Return on investment or return on costs is a ratio between net income and investment. A high ROI means the investment's gains compare favorably to its cost.
Software-as-a-Service (SaaS)	:	Software as a service is a software licensing and delivery model in which software is licensed on a subscription basis and is centrally hosted.
Search Engine Optimization (SEO)	:	Search engine optimization is the process of improving the quality and quantity of website traffic to a website or a web page from search engines.
Search Engine Advertising (SEA)	:	Search engine advertising allows you to directly display your paid ads among the search results on various search engines, like Google, Bing, and Yahoo.

SUGGESTED READINGS

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3. HYPERLINK "https://www.google.co.in/search?tbo=p&tbm=bks&q=inauthor:%22P.T.JOSEPH,+S.J.%22&source=gbs_metadata_r&cad=4"P.T. Joseph, S.J. (2015) E-Commerce: An Indian Perspective, Fifth Edition, Prentice Hall India Pvt., Limited, New Delhi

4. Peter G W Keen, (1994), Every Manager's Guide to Information Technology, 2nd Edition, Harvard Business School Press, Boston.

5. Rajesh Chakrabarti and VikasKardile, (2002),The Asian Manager's Handbook of E-Commerce (paperback edition), Tata McGraw – Hill Publishing Company Limited, New Delhi.

WEB RESOURCES

1. Evolution of B2B business in India (for students of Business Marketing) - Bing video

2. Gary Vaynerchuk Shares 13 Minutes Of B2B Marketing Strategies | INBOUND - Bing video

3. 12 B2B Marketing Strategies For 2023 - Bing video

4. B2B vs B2C Marketing (What Are The Differences?) - Bing video

ANSWER TO CHECK YOUR PROGRESS

   1. c)   2. a)   3. b)   4. d)   5. c)

UNIT 10

ONLINE ADVERTISING

OVERVIEW

Organizations that provide well-known Web sites have come to realize that it is possible to charge a recurring fee to companies wishing to have pointers to their own information placed before the public. There are

several advantages to advertising on the Internet. One of the most significant is that the sponsor can measure how many people see the information and can interact with them. This is superior to television or other forms of passive advertising. Some Internet news services use filters to collect desired news information for the customer, and then use this demographics information to narrowcast or point cast ads to the user/consumer.

LEARNING OBJECTIVES

After completing this unit, you will be able to;

- explain the features of the Online advertising and its types
- discuss about the publishing and online advertisement
- explore the key features of E-Branding
- describe the different types of portals
- gain knowledge about search engine
- explain about the Mobile Commerce and its uses.

10.1 INTRODUCTION

In the era of Internet, people can get a lot of information online, which increases their awareness about lifestyles, products, and services. For them, the Internet serves as a channel for not only communication but also for transaction and distribution. People can visit the website and can pay online for what they purchase. You can increase the business profit in multifold by online advertises of your products and services. Building an effective e-Commerce advertising strategy is no simple task. The issue is that despite the billions of online shoppers, competition is fierce for e-Commerce stores. Online advertising is a type of business promotion which uses Internet to deliver marketing messages to attract customers. With the rapid growth of Internet users and Internet technology, a number of businesses started to advertise their products and services online.

10.2 ONLINE ADVERTISING

Online advertising, also known as online marketing, Internet advertising, digital advertising or web advertising, is a form of marketing and advertising which uses the Internet to deliver promotional marketing messages to consumers. Online advertising is any type of marketing message that shows up with the help of the Internet. That means it could appear in a web browser, search engine, on social media, on mobile devices, and even in email. Savvy advertisers are increasingly making use of this forum for reaching consumers, for a number of reasons:

a) It's relatively inexpensive
b) It reaches a wide audience
c) It can be tracked to measure success (or failure)
d) It can be personalized for a target audience

Indeed, online advertising is only growing in scope, as new avenues for marketers pop up. But, while some of the ads are less common or just gaining traction, there are plenty that we're exposed to multiple times every day. Online advertising is an emerging form of advertising which has grown with the rapid development of Internet and gradually becoming one of the most important advertising medium. Berthona, Pitt and Watson (1996) mention Internet as a virtual place where consumers interact with different advertisers. From Internet, advertisers can sustain and enhance the relationship with customers who come from worldwide, and "represent a remarkable new opportunity for businesses to communicate with new and existing markets in a very integrated way". According to Smith and Chaffey (2005), online advertising is "the use of a company web site in conjunction with online promotional techniques such as search engines, banner advertising, direct e-mail and links or services from other web sites to acquire new customers and provide services to existing customer".

10.2.1 Advantages of Internet Advertising

A number of advantages of the online advertising can be cited as depicted in Figure 10.1 and explained as under:

1 **Target marketing** a major advantage of advertising through Web is the ability to target specific groups of individuals with a minimum of waste coverage. Through internet advertisements can be targeted to specific customers as per their age, sex, income, education, hobbies, interests and geographic locations.

2 **Message tailoring** as a result of precise targeting, messages can be designed to appeal to the specific needs and wants of the target audience. The interactive capabilities of the Net makes it possible to carry on one-to-one marketing with increased success in both the business and the consumer markets.

3 **Interactive capabilities** because the Internet is interactive, it provides strong potential for increasing customer involvement and satisfaction and almost immediate feedback for buyers and sellers.

4 **Information access** perhaps the greatest advantage of the internet advertising is its availability as an information source 24 X 7. Internet users can find a plethora of information about almost any topic of their choice merely by clicking on the ad. They can gather a

wealth of information regarding product specifications, costs, purchase information, and so on. Links will direct them to even more information, if it is desired.
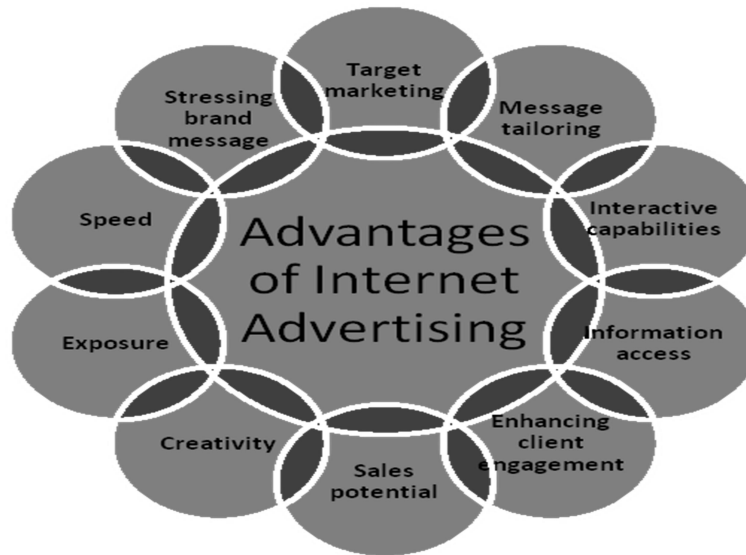
Figure 10.1 Advantages of Internet Advertising

6. **Enhancing client engagement** marketer's aim is to interact effectively with their customers and to improve their experience with their brand. This is made possible through interactive internet ads.

7. **Sales potential** Internet advertising campaigns focus on growing sales through the brand's website and partner networks. Such campaigns can also simultaneously pursue conversion and branding objectives. The sales potential of this medium is increasing over the years.

8. **Creativity** creatively designed internet ads can enhance a company's image and positively position the company or organization in the consumer's mind.

9. **Exposure** for many smaller companies, with limited budgets, the World Wide Web enables them to gain exposure to potential customers that would have been impossible. For a section of the investment that would be required using traditional media, companies can gain national and even international exposure in a timely manner.

10. **Stressing brand message** many marketers supplement a traditional ad campaign with a digital one in order to increase the likelihood that the message will resonate with their audience and add to their brand image.

11. **Complements IMC** the net both complements and is complemented by other IMC media. As such, it serves as a vital link in the

integrative process.

10.2.2 Disadvantages of Internet Advertising

While it is a potentially effective medium, the Internet advertising also has its disadvantages as shown in Figure 10.2 and explained as under:

1. **Measurement problems** one of the greatest disadvantages of the Internet is the lack of reliability of the research numbers generated. A quick review of forecasts, audience profiles, and other statistics offered by research providers will demonstrate a great deal of variance-leading to a serious lack of validity and reliability.

2. **Websnarl** at times, downloading information from the Internet ads takes a long time. When there are a number of users, the time increases, and some sites may be inaccessible due to too many visitors. For many users who expect speed, this is a major disadvantage. Broad band is helping to reduce this problem.

3. **Clutter** as the number of ads proliferates, the likelihood of one's ad being noticed drops accordingly. The result is that some ads may not get noticed, and some consumers may become irritated by the clutter.

4. **Potential for deception** the Centre for Media Education has referred to the Web as "a web of deceit" in regard to attempts of advertisers to target children with subtle advertising messages. In addition, data collection without consumers' knowledge and permission, hackers, and credit card theft are a number of problems confronting the Internet.

5. **Privacy** like their direct marketing counterparts, Internet marketers must be careful in not impinging upon the privacy of users.

6. **Limited production quality** although it is improving, net advertising does not offer the capabilities of many competitive media from a production standpoint. While the advent of advanced technologies and rich media, it is narrowing the gap, the net still lags behind some traditional media in this area.

7. **Poor reach** while the Internet numbers are growing in leaps and bounds, its reach is still far behind that of television. Majority of Indians do not have an excess to Internet and are computer illiterate. So, the medium is not able to reach to the masses.
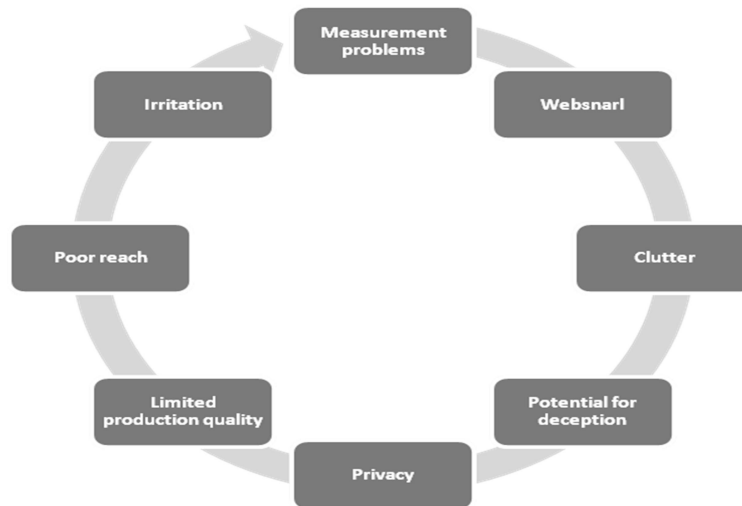
Figure 10.2 Disadvantages of Internet Advertising

8. **Irritation** Numerous studies have reported on the irritating aspects of some Web tactics. These studies have shown consumers' discontent with clutter, e-mail spam, and pop-ups and pop-unders. These irritating aspects will deter visitors from coming to the websites and looking at internet ads.

Overall, the Internet offers marketers some very definite advantages over traditional media. At the same time, disadvantages and limitations render this medium less than a one-stop solution. However, as part of the marketing communications program, the Internet is a very valuable tool.

10.2.3 Types of Internet Advertising

Internet advertising is a new advertising medium. Internet advertising or online advertising is a form of promotion that uses the Internet and World Wide Web for the expressed purpose of delivering marketing messages to attract customers. It is a way for retailers to advertise their products and services online. Ads can target people with particular hobbies or interests, or they can even focus on customers in a specific country or state. One major benefit of online advertising is the immediate publishing of information and content that is not limited by geography or time. Another benefit is the efficiency of advertiser's investment. Online advertising allows for the customization of advertisements, including content and posted websites.

Online advertising has the major advantage of immediate publishing of information that is not limited by geographic or time constraints. Online advertisers can customize advertisements making consumer targeting more efficient and precise. For example, AdWords, Yahoo! Search

engine and GoogleAd Sense enable ads to be shown on relevant web pages or alongside related search results. On the other hand, consumers have greater control over the content they see, affecting the timing, placement and visibility of online advertisements. Within the scope of Internet marketing, online advertising includes display advertising, mobile advertising, affiliate marketing, search engine optimization and social networks.

Ad formats are changing over the years, reflecting the intense competition for audience attention in an environment where consumer is in-charge. Still, some of the important formats, commonly used by advertisers online are discussed as under:

1. Display ads

The ads contain graphics, whitespace and text placed in an interesting manner. These ads are an extension of the traditional banners and they come in various sizes. Such ads are used widely by advertisers because they help in building brand awareness, when viewed by site visitors. Moreover, carefully targeted display ads can generate high click-through rates, such as, a local Facebook ad presented only to people with profiles matching the target market description. Rectangles, pop-ups, banners, buttons, and skyscraper display ads occupy various amounts of pixels of dedicated space for rent on web pages. Pop-ups usually appear in a separate window that overlays or is behind the current browser window. Many people are irritated by Pop-ups because users must close them, so this format has declined in use. Newer sizes and formats break through the online clutter and grab the user attention better than the standard sizes, so things keep changing in display ads.

2. Rich media Ads

All ads in this category are interactive in nature as they offer click through option to the consumers. By clicking on the ad, the consumer is transported to the advertiser's website, where the transaction or any other objective is actually achieved. According to Wikipedia editors, rich media ads often use Flash animation and many other elements to attract attention. All of the following formats can be rich media:

a) **Banner ad** an advertising graphic image or animation displayed on a website, in an application, or in an HTML email. This form of online advertising is older than the search engines themselves. In this case marketers put some sort of banner on a relevant website. Users who choose to click the banners will end up on marketer's website and hopefully will make a purchase. The problem is that these days, web

users have developed "banner blindness" so only a small percentage of people actually click on the ad.

b) **Interstitial ad** the display of a page of ads before the requested content.

c) **Floating ad** an ad which moves across the user's screen or floats above the content.

d) **Expanding ad** an ad which changes size and which may alter the contents of the webpage.

e) **Polite ad** a method by which a large ad will be downloaded in smaller pieces to minimize the disruption of the content being viewed.

f) **Wallpaper ad** an ad which changes the background of the page being viewed.

g) **Trick banner** a banner ad that looks like a dialogue box with buttons.

h) **Pop-up** a new window which opens in front of the current one, display an advertisement, or entire webpage.

i) **Pop-under** similar to a pop-up except that the window is loaded or sent behind the current window so that the user does not see it until they close one or more active windows.

j) **Video ad** similar to a banner ad, except that instead of a static or animated image, actual moving video clips are displayed.

k) **Video game ad** ads appearing in online games.

3. Contextual ads

Ad servers, such as Face book or Google's double click, maintain an inventory of ads from clients and serve them into websites as appropriate users are viewing particular pages. For example, a user searches for fashion garments on an electronic retail site that works with double click, users might get the ads for fashion garments on their email page. This is called offering specific ad targeting based on profile information. This is good for micro-segmentation for marketers and good for users who receive relevant ads at the precise moment they want information. This process is also the basis for Google's Ad Sense program, where online marketers can bid for keywords and have their ads appear on Google search engine result pages or web sites allowing them. This makes contextual ads, the largest category of online advertising included in the category of keyword search.

4. E-mail advertising

It is one of the least expensive type of online advertising. It is just a few sentences of text embedded in the firm's content. Advertisers purchase

space in the email sponsored by others. They generally prefer sending e-mail newsletters to them informing about the product. It is one of the oldest methods used till date. This makes it much simpler to reach an audience that wants to read the email with their website content information included.

5. Sponsorships

Sponsorships also called advertorials. They try to integrate editorial content and advertising messages. This practice pleases advertisers because it gives them additional exposure and creates the impression that the publication endorses their product. Sponsorships are important on the web because display ads are generally overlooked by users, sponsorships allow great interactivity because many firms build synergistic partnerships to provide useful content.

6. Mobile advertising

Mobile advertising as we all know, smart phones and cell phones are acquiring high penetration rates. Mobile internet usage is growing day by day. More and more people are accessing internet through their mobile devices. In order to take the advantage of this popular medium, advertisers can use various formats available to them for mobile advertising, such as, display ads of banners, short message service (SMS), video ads, voice ads etc.

7. Social Network Advertising

Social network advertising is a form of online advertising found on various social networking sites such as Facebook, Instagram, and Twitter etc. Advertising on such networks can take the form of direct display ads posted on social networks. Facebook and Instagram does have its advantages as it uses an advertising system that is very simple to implement and offers a wide scope of coverage. Only Facebook and Instagram users that are within the specific demographic selected will be able to see the advertisement. This helps to narrow down the specific target audience, who will be interested in advertisements and helps marketers in not wasting their money on people who are not going to be interested in what their website has to offer.

8. Affiliate Marketing

Whether it is for physical products or in digital information products like e-books and other courses, affiliate marketing is a great form of online advertising. In this case marketers affiliate with other websites and promote their goods from there. The major advantage is that they don't

actually have to pay their affiliates a commission until the sale is made. If marketers succeed in promoting their affiliate program in the appropriate marketplaces, then these affiliates can do most of the legwork for their associates like using pay per click advertising, and ultimately driving traffic to their product in a number of ways.

9. Pay-per-click (PPC) Advertising

Pay per click advertising is a new form of advertising online. In this case, a relevant text ad with a link to a company page is displayed when the user types in a specific phrase at search engines. A series of text ads usually labelled as 'sponsored links' are displayed on the right-hand side of the search engines, pages. Unlike conventional advertising, an advertisers doesn't pay when the ad is displayed, they only pay when the ad is clicked on which then leads to a visit to the advertiser's website- that is why this is called` pay per click. Most clicks result in a visit to the site, although there may be a small attrition, that cannot be controlled but marketers have to be aware of it.

Pay per click advertising is an excellent alternative for companies who have the financial resources and can make an investment in order to bring targeted traffic to their websites. Like SEO traffic, Google AdWords is considered targeted because people are actually typing in keyword phrases that are relevant to the products and services they are searching for before clicking on their advertisement. This can bring a flood of traffic to the online business very quickly, and this is an excellent choice as long as marketers are able to turn it into profit.

10.3 PUBLISHING AN ONLINE ADVERTISING

Online advertising is a type of business promotion which uses Internet to deliver marketing messages to attract customers. With the rapid growth of Internet users and Internet technology, a number of businesses started to advertise their products and services online. Publishing an online Ad is a sequential process. The following diagram shows the basic steps an Ad publisher takes to create and post the Ad online
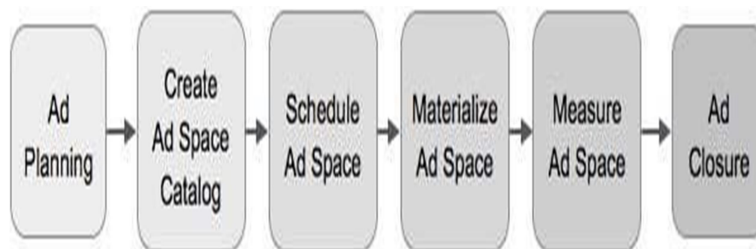
Figure 10.3 Publishing on Online Ad

a) Ad Planning

The marketing team conducts analysis of various domains.

a) Marketing analysis
b) Product targeting analysis
c) Audience analysis
d) Customer targeting analysis

Based on the analysis results, the advertiser decides on

a) Selecting a publisher
b) Ad presentation approach
c) Approach of posting the Ad
d) Ad posting schedules

b) Creating Ad Space Catalog

Ad space list is created to record Ad space availability status, space profile, location, presentation, scheduling method, frequency, etc. Advertisers and Publishers interact to determine online Ad space. There are three types of Ad space trading

i) **Buy and Sell** − Publishers sell the Ad space schedule to Advertisers on first-come-first-serve basis.

ii) **Space Auction** − Ad space bidding is conducted to settle the trade.

iii) **Space Exchange** − Multiple publishers interact with each other to sell the space schedules available with them, which have not been sold.

c) Scheduling the Ad Space

The online publishers create and maintain advertising schedules for the online Ad space. They help the advertisers for booking, purchasing, and confirming various schedules for online advertisements.

d) Materializing the Ad Space

The online publishers collect advertisement from the advertiser and materialize the specified ad spaces by displaying the advertisement as per the specified schedules.

e) Measuring an Ad Space

All active Ad spaces in the publishing websites are monitored and measured. After the Ad is actually visible and accessible online, it is evaluated regularly for performance. The analyzers collect data and evaluate the effectiveness on the viewers, its popularity, Ad space management, etc.

f) Ad Closure

The advertisers pay the publishers by pre-decided terms of payment for the published online Ad.

10.4 EMERGENCE OF INTERNET AS A COMPETITIVE ADVERTISING MEDIA

Interviews with marketers reveal that few believe the Internet will change their approach to advertising. Most see it as little more than a complement to traditional marketing practices, and don't expect it to reduce expenditure on broadcast and print media or change the form, pricing, or delivery of advertisements. It is probably a reaction to the early type of Internet and the World Wide Web.

Internet Advertising will account for a growing proportion of overall advertising expenditure. Moreover, advertising and marketing in general will adopt practices first developed or deployed on the Internet. As the technology improves, the impact of internet advertising will increase and become easier to measure, and the gap between the new precise, interactive marketing capability and conventional "fizzy" passive media will widen. Over the next few years, advertising agencies and consumer marketers will be under pressure to change their whole approach to marketing communications.

Marketers will become more accountable for their results, and they will pay more attention to building a total customer relationship. Offering consumers value in return for information will become vital in eliciting their preferences. Companies' entire marketing organizations will be progressively redesigned to reflect interactions with consumers on the Internet. For ad agencies, fees based on results will become standard. The economics of Internet advertising are likely to make current business models obsolete.

Classical advertising strategies such as positioning, brand essence, and niche marketing are much more important when advertising on the Internet. The strength and weakness of the medium should be considered for advertising on the net. Internet advertising is always easier than the real world advertising. Web banner displays and mass emailing cost almost nothing. Space for advertising on the Internet can be bought very cheaply. A company should take advantage of the fact that there are so many opportunities to reach potential customers, and come up with a diverse advertising strategy. They should maximize hits to websites offering to sell whatever product they market. They should place references to their product wherever they can. Most of all,

advertising on the Internet should incorporate a wide range of different fields meant to appeal to different possible customers.

10.5 E- BRANDING

E- Branding is an important marketing Strategy for creating new markets and securing repeated customers. It is the creation and development of communicating strategies specifically for brands to have meaning and context to the WEB.

10.5.1 Importance of E-Branding

a) Good advertising asset
b) Acknowledgement
c) Reputation
d) Familiarity and Loyalty
e) Successful marketing Strategy
f) Expand customer relationship
g) Deepen the market penetration
h) Lead generation

10.6 PORTALS

A Web portal, also known as links page, presents information from diverse sources in a unified way. Portals provide a way for enterprises to provide a consistent look and feel with access control and procedures for multiple applications and databases, which otherwise would have been different entities altogether. A web portal is a web site that provides a gateway, or portal, to other resources on the Internet. Portals are often the first page when we start up our web browser like Netscape Navigator or Internet Explorer. The scope and coverage of the portals are very wide and hence the term search engine is not sufficient to describe the multi offerings provided by portals. Eg.Yahoo, MSN, ALO, iGoogle etc. Sites listed as portals contain the following features: -

- Search Engine/ Directory
- E-mail Accounts
- News
- Sports and Weather

10.6.1 Types of Portals

The portals can be differentiated on the basis of their content and intended users. There are different types of portals; it is important to know what type of portal you want to build. They can be categorized into:

a) **Vertical Portal** These are web portals which focus only on one specific industry, domain or vertical. Vertical portal simply provides tools, information, articles, research and statistics on the specific industry or vertical. A Vertical information Portal [VIP] is a specializes entry point to a specific market place and or industry niche.

b) **Horizontal Portal** They are general interest portals covering a wide range of topics and features such as yahoo or Google. These are mega portals dealing in a wide range of topics.

c) **Enterprise Resource portals or corporate portals** It provides personalized access to an appropriate range of information about a particular company. Big corporations may set up their own portals in order to meet their various requirements ranging from planning to control of various functions. Initially called Intranet portals enterprise portals existing for the benefit of the company own employees, this set of technologies has developed to assist and provide access to a company's business partners as well.

d) **B2B Portals** A portal that helps to establish relations and to conduct transactions between carious organizations is termed as B2B portals. Large volume of business is being undertaken through these channels, a company which maintains a portal can earn profit if they participate in the ownership of the website or charge a transaction fee for business done through the portal.

e) **Application Centric Portals** These portals function as a one of tying together back end systems to support user's application driven business processes. Users could be viewing the information as read only or able to create, modify, delete, expire information based on rights and permissions, but they are essentially using the portal to attach a number of applications into one view, so that rather than having to open a number of different applications to drive their business processes they are able to access them all from one point.

f) **Content Centric Portals** These portals function as one of obtaining information from a wide variety of sources and displaying that content to users in a way that is based upon user's role and segmented information needs. These are designed to improve the access to and sharing of information stored within an organization.

g) **Knowledge Portals** These portals increase the effectiveness of knowledge workers by providing easy access to information that is necessary or helpful to them in one or more specific roles.

Knowledge portals are not mere intranet portals since the former are supposed to provide extra functionality such as collaboration services, sophisticated information discovery services and knowledge map.

10.7 SEARCH ENGINES

A search Engine is an Internet based interactive search device that enables a user to search for information on the Internet. Web search Engines are actually database that contain references to thousands of resources. A search Engine is software that scours the Internet collecting data about every website and every web page within a web page that it can. The database of most Internet Search Engines contains web documents. A web search Engine provides an interface between the user and database.
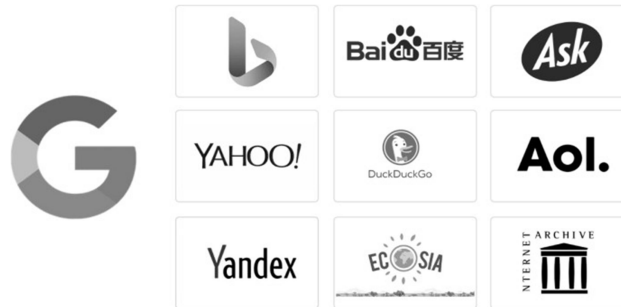
Figure 10.4 Top 10 Search Engines in the World

A search Engine is interactive, and it asks a user to type a search string, which may be a word, a phrase, a date or some relevant item associated with the information. The search begins the searching operation with these key words and continues searching it comes across a list of resources that matches the keyword. Many search engines include instructions and tips to search the databases more effectively.

10.7.1 Brief History of Search Engines

Ever since the World Wide Web became the engine of our lives, search has been the Holy Grail for developers and companies. Beginning with Archie in 1990, considered the first search engine, moving on to Excite and Lycos and Info seek, by the mid-90s there was a veritable flood of search engines, particularly after Google showed how it should be done in 1996. The complexity of the algorithms was now matched only by the voracious appetite of searchers as the number of pages to be indexed ran into billions. Invariably, a lot of them positioned themselves as

specialized engines—for kids or jobs or tech or entertainment. It's hard to imagine the days before search engines had our answer for everything. Let's go back in time, before Bing, Google, Yahoo, Ask Jeeves, AltaVista or even WebCrawler. Let's go back to 1990 when the first search engine was born.

Although the internet was technically invented back in 1969 by a U.S. government agency called ARPA, the first stages of what we now know as the World Wide Web was developed around 1990 by Tim Berners-Lee, when he hooked up hypertext with the internet, making pages accessible to people from all over the world. Archie, the very first tool used for searching on the internet, stands for "archive" without the "v". It was created by computer science students at McGill University, and it downloaded the directory of listings of all the files located on public FTP sites, creating a searchable database of file names. Following Archie, Veronica (Very Easy Rodent-Oriented Net-wide Index to Computerized Archives) and Jughead (Jonzy's Universal Gopher Hierarchy Excavation and Display) worked to search file names and titles stored in the Gopher protocol, which was used to retrieve documents over the internet. However, it wasn't until 1993 when the first widely acclaimed search engine, the World Wide Web Wanderer, made its debut.

10.7.2 Search Engines Timeline

It provides a full timeline of web search engines, starting from the Archie search engine in 1990. It is complementary to the history of web search engines page that provides more qualitative detail on the history.

- **1990:** The first search engine is Archie. A year after they invented the World Wide Web (WWW), the early search engine crawled through an index of downloadable files. However, the limited data made only the listings available, not the content.

- **1991:** Tim Berners-Lee, the inventor of the WWW, created a virtual library to help users find URLs for different websites. The CERN webservers hosted the library at the beginning of the internet.

- **1993:** JumpStation brought a new leap with their linear search which showed a page's title and header in the same results. The search engine ranks results in the order they were found.

- **1994:** David Filo and Jerry Yang create Yahoo! Search. The site was the first collection of web pages across the internet. They include man-made descriptions for the URLs. Site owners can add Informational sites for free, but commercial sites had to pay $300/year.

- **WebCrawler** the same year that Yahoo! Search launched, saw the launch of Web Crawler. They create the first search engine to index entire pages. The amount of data required to do the search engine too slow to use during the day.
- **1995:** Lycos search engine also launched in 1994. The search engine cataloged over 394,000 documents by August. By January 1995, they had over 1.5 million documents cataloged.
- **1996:** Larry Page and Sergey Brin created the predecessor to Google BackRub. The initial idea used backlinks to help rank websites for better search.
- The backlinks show you how one website that links to another site counts as a vote. This idea is the basis of a website's authority. Today's algorithm still relies on the same initial concept. It has advanced tremendously in the past 20 years, but back linking still plays a part in the ranking.
- *Lycos:* Still the largest search engine. Lycos now has over 60 million documents indexed.
- **1998:** Google officially launches.
- **1999:** Sequoia Capital and others invest in Google. Also, AOL selects Google as a search partner.
- **2000:** The Teoma engine is released
- **2001:** The search engine Excite goes bankrupt and is bought by for $10 million.
- **2002:** Yahoo! acquires other search engines to find search results for customers organically. Previously, they outsourced the service to third-party vendors.
- **2003:** Overture bought by AllTheWeb for $70 million and Inktomi bought by Yahoo! for $235 million. Yahoo! then buys Overture for $1.63 billion.
- **2004:** Microsoft launches their new MSN search engine.
- **2005:** Microsoft's MSN search engine starts to use its in-house technology in favor of Yahoo! results.
- **2007:** Google created "Universal Search." Instead of the traditional 10-listings, they added features for News, Video, Images, Local, and other verticals.
- **2008:** "Google Suggest" launch provides dropdowns of suggested topics.
- **2009:** MSN/Live Search becomes Bing.
- **2010:** Google improved their web indexing system to enhance fresh search results by 50%. They call the update Caffeine.

- **2011:** To create a more structured internet, Google, Yahoo!, and Microsoft (Bing) create Schema.org.
- **2012:** Following the Panda release, Google launched the Google Penguin algorithm update. This update penalizes sites buying links or using link networks to boost their search rankings.
- **2013:** Google revolutionizes their search algorithm again with their Hummingbird update. The algorithm is the first attempt by a search engine to understand the human intent behind a search query. The history of search until then focused on how to improve language queries.
- **2014:** Yahoo! becomes the default search engine for Mozilla Firefox in the US.
- **2015:** Google unleashes Mobilegeddon to force websites to add mobile-friendly websites. The change acknowledges the rapid rise in mobile search use.
- **2016:** Google Possum attacks local spam sites just like the "nofollow" tag a decade earlier removed spammy websites.
- **2017:** Google penalized sites using interstitial and pop-up ads that destroy the mobile experience.

10.7.3 Most Popular Search Engines in the World

List of the 10 best search engines, ranked by popularity.

a) Google

No need for further introductions. Google holds first place in search with a stunning difference of 89.43% from second in place Bing. According to statistics from statista and statcounter. Google is dominating the market in all countries on any device (desktop, mobile, and tablet). What made Google the most popular and trusted search engine is the quality of its search results. Google is using sophisticated algorithms to present the most accurate results to the users.

Figure 10.5 Google

Google's founders Larry Page and Sergey Brin came up with the idea that websites referenced by other websites are more important than others and thus deserve a higher ranking in the search results. Over the

years the Google ranking algorithm has been enriched with hundreds of other factors (including the help of machine learning) and still remains the most reliable way to find exactly what you are looking for on the Internet.

b) Microsoft Bing

Bing was renamed to Microsoft Bing in October 2020. The best alternative search engine to Google is Microsoft Bing. Bing's search engine share is between 2.83% and 12.31%. Bing is Microsoft's attempt to challenge Google in search, but despite their efforts, they still did not manage to convince users that their search engine can be as reliable as Google. Their search engine market share is constantly low even though Bing is the default search engine on Windows PCs. Bing originated from Microsoft's previous search engines (MSN Search, Windows Live Search, Live Search), and according to Alexa rank is the #30 most visited website on the Internet.

Figure 10.6 Microsoft Bing

c) Yahoo

Yahoo is one of the most popular email providers and its web search engine holds third place in search with an average of 1% market share. From October 2011 to October 2015, Yahoo search was powered exclusively by Bing. In October 2015 Yahoo agreed with Google to provide search-related services and until October 2018, the results of Yahoo were powered both by Google and Bing. As of October 2019, Yahoo! Search is once again provided exclusively by Bing.

Figure 10.7 Yahoo

Yahoo is also the default search engine for Firefox browsers in the United States (since 2014). Yahoo's web portal is very popular and ranks as the 11 most visited website on the Internet (According to Alexa).

d) Baidu

Baidu has a global market share between 0.68% and 11.26%. Baidu was founded in 2000 and it is the most popular search engine in China. Its market share is increasing steadily and according to Wikipedia, Baidu is serving billions of search queries per month. It is currently ranked at position 4, in the Alexa Rankings. Although Baidu is accessible worldwide, it is only available in the Chinese language.

Figure 10.8 Baidu

e) Yandex.ru

Figure 10.9 Yandex

Yandex, Russian's most popular search engine has a global market share between 0.5% and 1.16%. According to Alexa, Yandex.ru is among the 30 most popular websites on the Internet with a ranking position of 4 in Russian. Yandex presents itself as a technology company that builds intelligent products and services powered by machine learning. According to Wikipedia, Yandex operates the largest search engine in Russia with about 65% market share in that country.

f) DuckDuckGo

DuckDuckGo's search engine market share is around 0.45%. According to DuckDuckGo traffic stats, they are serving on average 47 million searches per day but still their overall market share is constantly below 0.5%. Unlike what most people believe, DuckDuckGo does not have a search index of their own (like Google and Bing) but they generate their search results using a variety of sources.

Figure 10.10 Duckduckgo

In other words, they don't have their own data but they depend on other sources (like Yelp, Bing, Yahoo, StackOverflow) to provide answers to users' questions. This is a big limitation compared to Google that has a set of algorithms to determine the best results from all the websites available on the Internet. On the positive side, DuckDuck Go has a clean interface, it does not track users and it is not fully loaded with ads.

g) **Ask.com**

Figure 10.11 ASK

Formerly known as Ask Jeeves, Ask.com receives approximately 0.42% of the search share. ASK is based on a question/answer format where most questions are answered by other users or are in the form of polls. It also has the general search functionality but the results returned lack quality compared to Google or even Bing and Yahoo.

h) **Ecosia**

Figure 10.12 Ecosia

Ecosia is a Berlin-based social business founded by Christian Kroll in 2009. The main reason ecosia was created was to help in financing planting trees and restoration projects. It is thus known as the "tree planting search engine". Ecosia is a Bing partner, meaning that it's search results are powered by Bing. Ecosia makes money to support the planning of trees by displaying ads in their search results. Every time an ad is clicked, ecosia gets a small share. It is estimated that it takes approx. 45 searches to finance the planting of one tree. In terms of search engine market share, Ecosia's share is around 0.10%.

i) **AOL.com**

Figure 10.13 AOL

The old-time famous AOL is still in the top 10 search engines with a market share that is close to 0.05%. The AOL network includes many

popular web sites like engadget.com, techchrunch.com, and huffingtonpost.com. On June 23, 2015, AOL was acquired by Verizon Communications.

j) Internet Archive

archive.org is the internet archive search engine. You can use it to find out how a web site looked since 1996. It is a very useful tool if you want to trace the history of a domain and examine how it has changed over the years.

Figure 10.14 Internet Archive

10.7.4 Working of Search Engine

Search Engines for the general web do not really search the World Wide Web directly. Each one searches a database of the full text of web pages selected from the billions of web pages out there residing on servers. When you click on the links provided in a search Engine's search results, you retrieve from the server the current version of the page. Search Engines databases are selected and built by computer robot programs called spiders. They crawl the web in their hunt for pages to include. They find the pages for potential inclusion by following the links in the pages they already have in their database. They cannot think or type a URL or use judgment to decide to go look something up and see what's on the web about it.

If a web page is never linked to in any other page, search engine spiders cannot find it. The only way a brand new page – one that no other page – one that no other page has ever linked to – can get into a search engine is for its URL to be sent by some human to search engine companies as a request that the new page be included. All search Engine companies offer way to do this. After spiders find pages, they pass them on to another computer program for "indexing". This program identifies the text, links and other content in the page and stores it in the search engine's databases files so that the database can be searched by keyword and whatever more advanced approaches are offered, and the page will be found if your search engine matches its content. Some types of pages and links are excluded from most search engines by policy.

Figure 10.15 Search Engines

Others are excluded because search engine spiders cannot access them. Pages that are excluded are referred to as the "Invisible Web" – what you don't see in search engine results. The invisible web is estimated to be two to three or more times bigger than the visible web. When you enter the key word search engine examines its database and gives a listing of sites that match the search criteria. The hundreds or thousands of search engine results are referred to as Hits. Some popular search Engines include Google, Alta vista, Yahoo, Lycos, MSN, Ask.com.

LET US SUM UP

Online advertising can be one-to-many or many-to-many model. Compared with traditional advertising, online advertising has the benefit of being interactive. Through this medium consumers are not passive recipients anymore; they become the partners of the advertiser. If they get interested in online advertising, they will read the advertisement carefully, click on the advertisement, move on to advertiser's website, and get more information about the product, and even place the order online. Therefore online advertising is better referred to as logical and convincing advertising. Nowadays, there is lots of work which we do with the help of mobile phones.

CHECK YOUR PROGRESS

Choose the Correct Answers:

1. Which of the following is not specifically required by the search engines?

a) Poor user experience   b) Keyword stuffing

c) Buying links   d) All of the above

2. The main advantage of online advertisement is _____.

a) Low cost promotional strategy

b) Online advertising is promotional as well as informational

c) Trackable

d) All of the above

3. Digital marketing is often referred to as _____ .

a) Online Marketing   b) Internet Marketing

c) Web Marketing   d) All of the above

4. Search Page engine optimization refers to _____ .

a)   Programming keywords into a website

b)   Each page of a website for design

c)   Amount of links coming into your website

d)   The number of search engine sites a website

5. Search engine which is most famous in China is _____ .

a) Baidu   b) Bing

c) Google   d) Yahoo

GLOSSARY

Online Advertising	:	Online advertising, also known as online marketing, Internet advertising, digital advertising or web advertising, is a form of marketing and advertising which uses the Internet to deliver promotional marketing messages to consumers.
E-Branding	:	E-branding refers to the sum total of a company`s values, attitudes, vision, mission, personality and appearance that is projected to the audience online.
Search Engine	:	A search engine is a software system that is designed to carry out web searches. They search the World Wide Web in a systematic way for particular information specified in a textual web search query.
Portal	:	Portals are online platforms that allow businesses to conduct interactions and transactions with customers and suppliers instantly, facilitating a more intuitive and connected operation.
Archie	:	Archie is a tool for indexing FTP archives, allowing users to more easily identify

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specific files.   It is considered the first Internet search engine.

SUGGESTED READINGS

1. Alexi Leon and Mathews Leon, (2004), Introduction to Information Systems, McGraw-Hill Education (India) Pvt Limited, New Delhi.
2. Anup K. Ghosh, (2012), E-Commerce Security and Privacy, Kindle Edition
3. Peter G W Keen, (1994), Every Manager's Guide to Information Technology, 2nd Edition, Harvard Business School Press, Boston.
4. Rajesh Chakrabarti and VikasKardile, (2002),The Asian Manager's Handbook of E-Commerce (paperback edition), Tata McGraw – Hill Publishing Company Limited, New Delhi.

WEB RESOURCES

1. [HOW TO MAKE ADVERTISEMENT WITH TAMIL EXPLANATION - Bing video](#)
2. [A to Z about Digital Marketing in Tamil | Social Media Marketing, Google Ads, SEO, Youtube Marketing - Bing video](#)
3. [Digital Marketing Full Course 2022 | Digital Marketing Course | Digital Marketing | Simplilearn - Bing video](#)
4. [SEO Tutorial For Beginners | SEO Full Course | Search Engine Optimization Tutorial | Simplilearn - Bing video](#)
5. [What is SEO in tamil ? - YouTube](#)

ANSWER TO CHECK YOUR PROGRESS

   1. d)   2. d)   3. d)   4. a)   5. a)

UNIT 11

CONCEPT OF M-COMMERCE

OVERVIEW

Mobile Commerce refers to wireless electronic commerce used for conducting commerce or business through a handy device like cellular phone or Personal Digital Assistant (PDAs). It is also said that it is the next generation wireless e-commerce that needs no wire and plug-in devices. Mobile commerce is usually called as 'm-Commerce' in which user can do any sort of transaction including buying and selling of the goods, asking any services, transferring the ownership or rights, transacting and transferring the money by accessing wireless internet service on the mobile handset itself. The next generation of commerce would most probably be mobile commerce or m-commerce.

LEARNING OBJECTIVES

After completing this unit, you will be able to;

- describe the features of the Mobile commerce and its frameworks
- explain about the important applications of mobile commerce
- explain the key features of trends in mobile commerce
- explore the characteristics and benefits of M-Commerce
- gain knowledge about difference between e-commerce and m-commerce
- describe the drawbacks and uses of Mobile Commerce.

11.1 INTRODUCTION

The term mobile commerce was originally coined in 1997 by Kevin Duffey at the launch of the Global Mobile Commerce Forum, to mean "the delivery of electronic commerce capabilities directly into the consumer's hand, anywhere, via wireless technology. Mobile commerce, also called m-commerce or ecommerce, includes any monetary transaction completed using a mobile device. It is used in wireless handheld devices like cellphones and tablets to conduct commercial transactions online, including the purchase and sale of products, online banking, and paying bills. Presuming its wide potential reach all major mobile handset manufacturing companies are making WAP enabled smart phones and providing the maximum wireless internet and web facilities covering personal, official and commerce requirement to pave the way of m-commerce that would later be very fruitful for them.

11.2 MOBILE COMMERCE

Mobile commerce or M-commerce refers to transactions that are carried out with the help of an electronic device like cell phone. M-commerce is the buying and selling of goods and services through wireless handheld devices such as cellular phone and Personal Digital Assistants [PDAs]. Mobile commerce is any transaction, involving the transfer of ownership or rights to use goods and services, which is initiated and/or completed by using mobile access to computer mediated networks with the help of an electronic device.

Figure 11.1 Mobile Commerce

Mobile commerce was born in 1997 when the first two mobile phone enabled Coco Cola vending machines were installed in the Helsinki area in Finland. They use SMS text messages to send the payment to vending machines. Mobile commerce has two distinctive advantages of flexibility and ubiquity. Through this, consumers can conduct business transactions without being fixed at a computer terminal or being physically present at the shop. This provides a secure and convenient channel to link the existing credit cards, debit cards or bank accounts and carry out commerce transactions, including paying postpaid bills, recharging prepaid, paying Fixed Line and Broadband Bills, buying movie or Air tickets, Paying Insurance premiums and much more.

The combinations of more powerful mobile devices, much innovative mobile operators and change in the mobile network infrastructure (such as 3G and 4G which are able to carry large amounts of data at a high speed as broadband connections do for computer) is setting the stage for an huge change in an already fast moving sector. The mobile phone of the future is a device that enables users to communicate, connect, transact and innovate. The products and services available through M-commerce includes:

a) Mobile ticketing
b) Mobile vouchers, coupons and loyalty cards
c) Content purchase and delivery
d) Location based services
e) Information services
f) Mobile banking
g) Mobile brokerage
h) Auctions
i) Mobile purchase
j) Mobile marketing and advertising

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11.3 HISTORY OF M-COMMERCE

M-commerce, just like E-commerce, is also the act of selling and buying through online means. E-commerce stands for Electronics commerce while M-commerce stands for Mobile commerce. It is a form of E-commerce that enables users to access online shopping websites or applications without needing to use a computer or a laptop. So in simple words, M-commerce is the buying and selling of products and services via wireless handheld devices such as smartphones or tablets. M-commerce is known as next-generation E-commerce as it allows using the features of E-commerce without needing to find a place to plug in.

M-commerce can be divided into types by the kind of functions such as Mobile shopping through shopping applications, mobile payments or banking via E-wallets or payment apps, etc. With the fast traveling generation, who has the time to sit on a table and open their computers, there is always someplace to reach. Mobile commerce allows people to handle business, perform Transactions, and prepare financial data while on the go.

The term M-commerce was first used by the CEO of Global Mobile Commerce Forum, Kevin Duffey back in November 1997. The beginning of mobile shopping is traced back to the idea of paying for soda, namely, coco-cola via SMS and it gained popularity very rapidly. It then went on to inspire the future development of Mobile payments. It is said that mobile ringtones were the first thing to be sold through M-commerce platforms in Finland in the year 1998. It took M-commerce two years for its fandom to begin and since then, it hasn't lost its popularity, just kept on increasing with time.

11.3.1 History of M-Commerce – Timeline

a) **1971-** Modern-day mobile-phone system set in place by AT&T, the first company to divide cities into "cells".

b) **1973-** The first personal handset is invented by Dr. Martin Cooper. The first portable mobile-phone was called the Motorola DynaTac.

c) **1974** - The Federal Communications Commission (FCC) tries to have cell phone companies take the next step in cellular ideas. Unfortunately, terminal and network phone systems cannot be manufactured together this is to prevent monopolies from forming.

d) **1975** - AT&T forms its own cellular plan in Chicago. FCC has doubts about the success of this new plan.

e) **1977**- Cell phone testing is permitted in Chicago by the FCC. The Bell Telephone Company receives the license for the cellular plan and they partner up with AT&T.

f) **1981-** FCC forms strict rules on manufacturing in the cell phone industry. Western Electric gets the permission to manufacture both cellular and terminal products.

g) **1988-** The Cellular Technology Industry Association is established. This association created TDMA phone technology, a highly evolved cell phone.

h) **2001**- BellSouth leaves the pay phone business due to the competition from cell phones.

i) **2002**- Mobile broadband is a substitute to fixed-line technologies. HSPA, High Speed Packet Access, use shared-channel transmission strategies. HSPA still has to work our problems in its long round-trip packet.

j) **2008**- A breakthrough in long-term evolution. Even though this technology is advanced it still cannot comply with a 4G network, it is considered a 3.9G technology.

k) **2011**- Finally, the first 4G mobile technology that has long-term evolution is in the finalizing process.

11.4 CHARACTERISTICS OF MOBILE COMMERCE

Mobile commerce, sometimes called "M-Commerce," is the process of purchasing or selling items using mobile devices. The buyer can use a variety of electronic devices, such as cell phones, smart phones or portable Net books to browse and process orders. There are a few characteristics of this type of business that make it a viable choice, even for very small business owners who may have limited resources.

a) Fast Processing

One important characteristic of mobile commerce is that it allows the user to process a transaction fast. Not only does the customer receive his item almost instantly via download, e-mail or another form of electronic delivery, the business owner receives payment for his product or service more quickly compared to traditional methods. The customer must set up a payment option, such as a credit card or an agreement to pay using a specified account, to process the payment immediately before downloading the item. Of course, the speed of delivery is dependent on the reliability of the Internet and network services.

b) **Reduced Business Costs**

Mobile commerce also helps reduce costs for the seller. It is rarely needs to pay for a separate office space, overhead costs or employees. In some cases a small business owner who sets up a mobile commerce operation doesn't need an office at all. The seller can monitor sales online or by receiving statements from a processing service. The main expense for this type of business owner is advertising to disseminate information on how users can access the product or service. The lowered cost allows the business owner to take advantage of a higher per-sale profit. It is also can offer the product at a lower price compared to delivery in other formats.

c) **Little Need for Maintenance**

Another characteristic of mobile commerce is that it requires very little maintenance from the seller. The owner sets the product up for mobile delivery one time and then receives payment for sales automatically. From time to time, he may need to perform a few maintenance duties, such as correcting a technology error or updating the product, but overall it is a selling format that requires very little management compared with other selling strategies.

11.5 BENEFITS OF M-COMMERCE

Here are eight key benefits that m-commerce for business:

i) **Ease of Access**

Customers can use mobile applications to quickly access their preferred retail stores, offering one of the fastest shopping experiences to date. There's no need to travel to a store while mobile apps and websites are generally much quicker desktop sites, saving the customer time and effort that is invaluable to the modern consumer. There are few things more convenient than having access to online shopping the tip of your fingers.

ii) **Usability**

Mobile applications typically offer a better user experience for customers. They're optimized to offer a fast and streamlined shopping experience that is easy to navigate and only requires a few clicks, making sales and leads easier to achieve as the consumer has a much more enjoyable experience compared to other methods.

iii) Marketing

M-commerce platforms offer a new marketing channel that should be taken advantage of. For instance, with a mobile application you have a direct connection to end users, giving an invaluable marketing channel where you can sell products directly to the consumer via their mobile device. From push notifications with the latest deals to creating a newsfeed with information above the latest products and prices, there are various tailor-made marketing functions available on m-commerce platforms that allow you to better target customers.

iv)   Fast Transactions

In general, most mobile applications are faster than a traditional website, meaning m-commerce offers faster transactions for your customers. Time is money in the world of e-commerce, so giving customers the chance to buy things quicker than normal can be very lucrative. Quicker browsing and a better user experience have resulted in a massive surge in online sales through mobile devices - it's a huge benefit of m-commerce and one of the driving forces behind its growth.

v)   Helping Traditional Retail Sales

M-commerce doesn't just benefit online sales but also in-store sales. This is because consumers are using their mobile devices to check products they browse in store, looking for things like product reviews, pricing options, and whether nearby stores have certain items in stock. With the right m-commerce platform, businesses can expect to drive sales both in-store and online, ensuring they're accommodating a wider market.

vi)   Lower Costs and Higher Productivity

Using a mobile app to connect to customers quickly can save money on marketing campaigns with less impressive results. Better still, social media integration can further reduce social media marketing costs, utilizing customers to help spread the brand. Moreover, the costs of developing and maintaining an application are typically much lower compared to other e-commerce platforms, saving more money and freeing up resources.

vii)   Attracting New Customers

The great thing about ecommerce is that you can always target new customers. Anyone that comes across the website may be converted into a sale, and this is no different with m-commerce platforms. People are using their phones to search online these days, so with a mobile

optimized site you can increase the likelihood of attracting new customers.

viii) Insightful Data Analytics

M-commerce platforms such as mobile applications provide businesses with insightful analytics that let them better target their customers and increase sales. Data such as name, sex, location, email, buying history can be easily gathered with user-analytics integrated into the mobile software, although to what degree depends on your budget and the overall quality of the application.

11.6 IMPORTANT APPLICATIONS OF M-COMMERCE

a) **Banking** Mobile is an application that was developed by each Bank that allows users to complete all internet banking transactions through their mobile phone. Users can transfer money from bank accounts to cheques, pay bills, and more. This is a very useful app that allows users to use completely all their mobile banking needs in one easy to access space.

b) **M-Commerce for Retail** Companies are using mobile commerce for more and more retail applications as well. If you own a business and are looking to break into M-commerce, you can always create an online catalog of items that you have for sale so that customers can access it and then purchase the items. This is a great way for businesses to use M-Commerce to get the most in terms of retail and mobile phones.

c) **Mobile Marketing** This is another fantastic application for mobile commerce. You can send messages on phones for new products or services, you can send out promotional rewards, and you can send out correspondence to help get customers on board. M-commerce is a great way to market and to reach more people. Most people always have their smartphones on them, which means that you are going to be able to get to these potential customers and to bring them to your business.

d) **Mobile Ticketing** Another great application is to purchase tickets with the help of mobile devices. Airlines have mobile ticket kiosks, movie theaters, concerts and more all offer mobile purchase of tickets. You can also then show your electronic ticket to the event or the place where the ticket is to be redeemed, working to eliminate paper tickets altogether.

e) **Reservations:** Reservations are a fantastic use of M-commerce. This could mean hotel rooms, parking spots, restaurant reservations and more. Customers can now reserve their spot with their mobile phone which is easier for everyone involved. This means that both the customer and the company involved can help to reduce the amount of work and effort that is needed to book various reservations.

f) **Entertainment** You can also use M-commerce in terms of mobile entertainment as well. From applications that show movies and television shows, to those that show videos like YouTube, even music applications, you can use your phone for all sorts of mobile entertainment. Mobile entertainment is one of the best uses for M-commerce and for your mobile phone in terms of using it for something other than making calls.

g) **Healthcare** Mobile phones can also be used in terms of Healthcare and medicine. A mobile phone can be used for accessing health records, for paying medical bills, for accessing the medical records of patients and more. In a healthcare setting a mobile phone can be used by a doctor or a practitioner to access the health record of a patient, to send in a prescription, or to make clinical decisions. It helps doctors and other healthcare professionals to remain connected to the main database of the hospital or the medical facility and helps doctors and healthcare professionals provide patients with a better experience overall.

h) **Office Communication** M-commerce applications can also help to promote communication within offices and other areas where you may be working with a team. With those professionals that are in the field such as a real estate agent or an insurance agent, it is often necessary to get back in touch with the office or to access information that might be back at the office

11.7 M-COMMERCE DRAWBACKS

Everything has its own disadvantages as well. Here are some of the major drawbacks of M-Commerce:

1. Security Concerns

Security Concerns are one of the most crucial aspects of M-Commerce. There are still doubts about the security of M-Commerce. People fear their loss of personal data. They are always concerned about their credit card's number and bank account number which they use while using mobile commerce. There are several issues of trust ranging from

personal information to business information. Confidentiality and security issues are still questioned.

2. Habituate of People

Conservative people are a constant rebel for any kind of new technology and they deny to get into it. Many people ignore to adopt the new technologies as they do not want to come out of their comfort zone, and for many people, it is difficult and takes a lot of time to adopt new technologies. Some people are still unaware of online payments and markets.

3. Limitations of Smart Phones

It becomes a bit difficult for people to navigate on a small screen. The mobile is not as titanic as a computer screen or a TV screen. It can exhaust people plus it consumes time and affects the business.

4. Connectivity Issues

For M-Commerce you need a fast internet connection. Access to the internet through mobile phones is interrupted by slow transmission speeds. For M-Commerce slow transmission speeds can be a big barrier. And even if one person has a speedy connection then the problem it that it is not available in every geographical area which makes it difficult for the people of that area to take the benefits of M-Commerce.

5. Fraud Risk

The risk of fraud in M-Commerce is big. Many marketers are not prepared enough to deal with it.

6. Lack of Services in Rural Areas

There is still a lack of availability of mobile devices and internet connections in rural areas. Remote areas don't even know about these things as they are isolated from the world. You can now assume on your own that if they don't know what internet is how they are supposed to have any kind of understanding about Mobile commerce.

11.8 SCOPE OF MOBILE COMMERCE IN INDIA

In India, the majority of the people, irrespective of their ages, are using a smartphone. Especially during the coronavirus pandemic, the few people who didn't use a smartphone probably started using one. From children in their nappies to grannies in their chairs are using a smartphone for multiple reasons. On average, the age group between 25 and 34 are using these smartphones to shop online. The m-commerce niche is to be completely explored and utilized in its full

potential and India is actively working in that regard. Following are a few initiatives taken by the Government of India in order to encourage m-commerce:

- Unified Payment Interface
- GST Implementation
- Mobile Wallets
- The Digital India Makeover
- Startup India
- Skill India

Apart from the above-mentioned initiatives, the Prime Minister of the country has quite supported and encouraged digital transactions with the use of mobile banking and e-banking for cashless transactions. One instance for this initiative is the launch of the BHIM app that facilitates digital transactions directly through the banks using UPI. When we say m-commerce, here we refer to the transaction of goods and services using mobile devices. There have been evidently great impacts in the m-commerce market with the ever-increasing sales of smartphones, not only in India but across the world. In the past few decades, the development of mobile applications has turned out to become a boon for the m-commerce industry.

If we compare the time spent by an individual on a web browser to the time spent on mobile phones, there is a huge difference and that clearly signifies the dominance of mobile apps in the mobile commerce industry. Researches state that mobile apps can boost sales by over 50% for a regular ecommerce business.

11.9 DIFFERENCE BETWEEN E-COMMERCE AND M-COMMERCE

As the world moves toward convenience, the topic of m-commerce succeeding e-commerce is all that much more relevant. But let's slow down a bit. E-commerce refers to a way of selling and purchasing goods. Where the transaction takes place electronically via the internet. Whereas Mobile Commerce also known as m-commerce is an extension of E-commerce, but now, the transaction happens via a mobile device.

Figure 11.2 Difference between E-Commerce Vs M-Commerce

Table 11.1: Difference between E-Commerce and M-Commerce

S.No.	E-Commerce	M-Commerce
1	Electronic Commerce in short it is called as e-commerce.	Mobile Commerce in short it is called as m-commerce.
2	In general, e-commerce activities are performed with the help of desktop computers and laptops.	M-Commerce activities are performed with the help of mobile devices like smartphones, tablets, PDA's (Personal Digital Assistant), etc.,
3	E-Commerce is an older concept.	M-Commerce is a newer concept.
4	It is broad term which refers doing shopping and making payments online with the help of electronic devices like Laptop and computers.	It is subcategory of E-Commerce which does the same this via mobile devices.
5	In E-Commerce the use of internet is mandatory.	But it case of M-Commerce some activities can be performed without internet also.
6	E-Commerce devices are not easy to carry and portability point of view it is not so good.	M-Commerce devices are easy to carry and portability point of view it is good.
7	E-Commerce developed in 1970's.	M-Commerce developed in 1990's.
8	Its reachability is comparatively low than the M-Commerce as it is not so good in portability.	Its reachability is more than that of E-Commerce only due to the use of mobile devices.
9	In E-Commerce location tracking capabilities are limited due to the non-portability of devices.	In M-Commerce location tracking capabilities is so good as mobile apps track and identify user locations with the help of GPS technology, Wi-Fi, and so on.
10	E-Commerce fails in push notification.	In M-Commerce push notification can be achieved.

LET US SUM UP

Mobile commerce is an increasingly large subset of electronic commerce, a model where firms or individuals conduct business over the internet. The rapid growth of mobile commerce has been driven by a number of factors, including increased wireless handheld device computing power, a proliferation of m-commerce applications, and the broad resolution of security issues.

The range of devices capable of mobile commerce is growing. For example, digital wallets like Apple Pay and Android Pay let customers make in-store purchases without the inconvenience of swiping cards. And during the mid-2010s, social media platforms, such as Facebook, Twitter, Pinterest, and Instagram launched "buy buttons" on their mobile platforms, enabling users to conveniently make purchases from other retailers, directly from these social media sites.

M-Commerce comes with a lot of advantages such as a rapid expansion of business, better consumer data, easy store access, creates a new marketing channel, etc. With better benefits, it has worse drawbacks, and one of the most concerned drawbacks is a security issue. So, one should keep the guidelines in mind and should avoid getting into fraud. M-Commerce features mobile banking, online markets, digital wallets, etc. The sectors most affected by M-Commerce are- banking, telecommunications and information services.

CHECK YOUR PROGRESS

Choose the Correct Answers:

1. In Mobile marketing, the full form of LBS is _____.

a) Location based service

b) List based service

c) Lead based service

d) Location based series

2. Electronic commerce transactions that are conducted with a mobile device are called _____.

a) M-Commerce

b) Mobile Portal

c) Location based Commerce

d) Mobile Computing

3. Full form of PDA is _____.

a) Palmtop Digital Assistant

b) Personal Digital Assistant

c) Palmtop Devices Assistant

d) Personal Devices Assistant

4. _____is an example of M-Commerce.

a) Purchasing airline and movie ticket

b) Hotel booking and reservation

c) Stock market analysis

d) All of the above

5. Which of the following devices is Internet enabled wireless devices?

a) Mobile   b) Tablet

c) Smartphone   d) All of the above

GLOSSARY

M-Commerce	:	The delivery of electronic commerce capabilities directly into the consumer's hand, anywhere, via wireless technology.
Auctions	:	An e-auction is a transaction between sellers (the auctioneers) and bidders (suppliers in business-to-business scenarios) that takes place on an electronic marketplace. This kind of environment encourages competition, with the result that goods and services are offered at their current market value.
Web Services	:	A Web service is a method of communication between two electronic devices over a network. It is a software function provided at a network address over the Web with the service always-on as in the concept of utility computing.
Crypto Currency	:	Crypto Currency is a form of digital payment, based on complex encryption that can be directly exchanged amongst its users for goods and services.
Data Analytics	:	Data analysts are a specialized analysts who understand e-Commerce businesses, are familiar with the systems in use at these companies, and the data these systems generate.

SUGGESTED READINGS

1. Alexi Leon and Mathews Leon, (2004), Introduction to Information Systems, McGraw-Hill Education (India) Pvt Limited, New Delhi.
2. Anup K. Ghosh, (2012), E-Commerce Security and Privacy, Kindle Edition
3. Peter G W Keen, (1994), Every Manager's Guide to Information Technology, 2nd Edition, Harvard Business School Press, Boston.
4. Rajesh Chakrabarti and VikasKardile, (2002),The Asian Manager's Handbook of E-Commerce (paperback edition), Tata McGraw – Hill Publishing Company Limited, New Delhi.

WEB RESOURCES

1. Mobile Commerce - Bing video
2. How M-commerce is changing the shopping experience - Bing video
3. Mobile Marketing - M-Commerce - Bing video

ANSWER TO CHECK YOUR PROGRESS

1. a)   2. a)   3. b)   4. d)   5. d)

BLOCK 4

MONEY ON THE NET

Unit 12 : Overview of the Electronic Payment Systems

Unit 13 : Rights and Obligations in the World of E-Commerce

Unit 14: Security Standard for Electronic Payment System

UNIT 12

OVERVIEW OF THE ELECTRONIC PAYMENT SYSTEM

STRUCTURE

Overview

Learning Objectives

12.1 Introduction

12.2 Electronic Payment Systems

    12.2.1 Internet Payment Processing System

    12.2.2 Basic Steps of an Online Payment

12.3 Prepaid and Post-paid Payment Systems

    12.3.1 Prepaid Payment Systems

    12.3.2 Benefits of the Prepaid Payment Systems

    12.3.3 Post-paid Payment Systems

    12.3.4 Features of Post-paid Payment Systems

12.4 Online Electronic Commerce Payments

    12.4.1 Digital Token based E-Payment

    12.4.2 Benefits of Digital Token based Payment Systems

12.5 Electronic Cash (E-Cash)

    12.5.1 Properties of E-Cash

    12.5.2 Advantages of E-Cash

    12.5.3 Disadvantages of E-Cash

12.6 E-Cheques

    12.6.1 Advantages of E-Cheques

12.7 Smart Cards

    12.7.1 Contact Smart Cards

    12.7.2 Contactless Smart Cards

    12.7.3 Memory Cards

    12.7.4 Microprocessor Cards

    12.7.5 Hybrid Cards

    12.7.6 Dual Interface Cards

OVERVIEW

The need for electronic payment systems has grown dramatically after the inception of online shopping and e-Commerce websites. The E-payment system made it convenient for the customer to pay for anything at any time. This convenience has created emerging opportunities for businesses to extend their operations in remote areas without any geographical limitations. Electronic payment is the process where customers make payments by using electronic methods. Whether you want to pay for your favorite food or you want to pay your nearby retailer, you can do it easily via electronic payment solutions. If you are looking

to set up an online business, then you need electronic payment software for accepting payments.

LEARNING OBJECTIVES

After completing this unit, you will be able to;

- explain the features of the electronic payment systems
- describe about the prepaid and postpaid payment systems
- evaluate the key features of trends in online e-commerce payments
- discuss the different phases of e-cash, e-cheques, smart cards.

12.1 INTRODUCTION

Electronic Payment is a financial exchange that takes place online between buyers and sellers. The content of this exchange is usually some form of digital financial instrument (such as encrypted credit card numbers, electronic cheques or digital cash) that is backed by a bank or an intermediary, or by a legal tender. An E- payment system is an online system that facilitates the acceptance of electronic payment for online transactions and any kind of non-cash payment that doesn't involve a paper check. The electronic payment system has grown increasingly over the last decades due to the widely spread of internet-based banking and shopping. As the world advance more on technology development, a lot of electronic payment systems and payment processing devices have been developed to increase, improve and provide secure e-payment transactions while decreasing the percentage of check and cash transaction.

E-commerce sites use electronic payment, where electronic payment refers to paperless monetary transactions. Electronic payment has revolutionized the business processing by reducing the paperwork, transaction costs, and labor cost. Being user friendly and less time-consuming than manual processing, it helps business organization to expand its market reach/expansion.

12.2 ELECTRONIC PAYMENT SYSTEMS

Electronic Payment system is a financial exchange that takes place online between buyers and sellers. The content of this exchange is usually some form of digital financial instrument (such as encrypted credit card numbers, electronic cheques or digital cash) that is backed by a bank or an intermediary, or by a legal tender. The various factors that have leaded the financial institutions to make use of electronic payments are:

a) Decreased technology cost
b) Reduced operational and processing cost
c) Increasing online commerce

12.2.1 Internet Payment Processing System

The participants in an online electronic payment transaction include the following:

a) **The Customer:** Customer in an e-commerce may be the holder of a payment card such as credit card or debit card from an issuer.
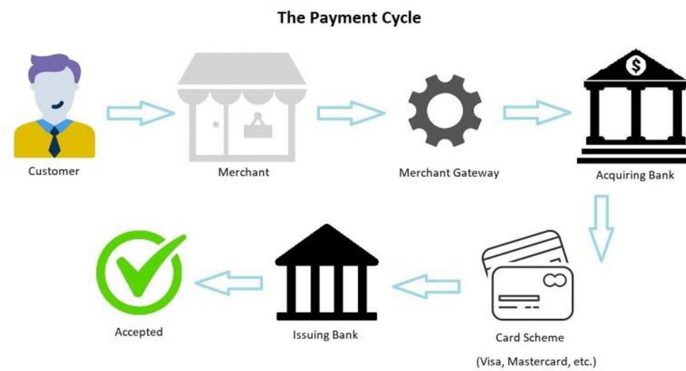
Figure 12.1 Payment Processing System

b) **The issuer:** The issuer means a financial institution such as bank that provides the customer with a payment card. The issuer is responsible for the card holder's debt payment.

c) **The Merchant:** The person or organizations that sell goods or services to the cardholder via a website is the merchant. The merchant that accepts payment cards must have an Internet Merchant account with the acquirer.

d) **The acquirer:** The acquirer is a financial institution that establishes an account with the merchant and processes payment card authorizations and payments. The acquirer provides authorization to the merchant that given card account is active and that the proposed purchase doesn't exceed the customer's credit limit.

e) **The Processor:** The Processor is a large data centre that processes credit card transactions and settles funds to merchants, connected to the merchant on behalf of an acquirer via a payment gateway.

12.2.2 Basic steps of an Online Payment

The basic steps of an online payment transaction include the following:

i) The customer places an order online by selecting items from the merchant's Website and sending the merchant a list.   The

merchant often replies with an order summary of the items, their price, a total, and an order number.

ii) The customer places an order along with their credit card information and sends it to the business. The payment information is usually encrypted by an SSL pipeline set up between the customer's web browser and the merchant's web server SSL certificate.

iii) The merchant confirms the order and supplies the goods or services to the customer. The business sends the consumer an invoice, their certificate and their bank's certificate.

iv) The business then generates an authorization request for customer's credit card and sends it to their bank.

v) The business's bank then sends the authorization request to the acquirer.

vi) The acquirer sends an acknowledgement back to the business's bank after receiving an acknowledgement from the customer's Bank.

vii) Once the consumer's bank authorizes payment, the business's bank sends an acknowledgement back to the business with an authorization number.

12.3 PREPAID AND POST-PAID PAYMENT SYSTEMS

Electronic payment systems are broadly classified in to prepaid and postpaid payment systems:

12.3.1 Prepaid Payment Systems

It provides a service that is paid prior to usage. Here the customer is allowed to spend only up to the amount that has pre-determined into the account. This type of payment system is highly useful to those customers who would like to control overspending. E.g. Prepaid debit cards or prepaid credit cards. Prepaid payment system is taken by the customer by depositing money with the credit given company. It can be deposited in the savings account or the current account. Once the money is deposited, the card is used as a regular credit card. It is very effective card as it doesn't put in to debt. Once the money is exhausted in the account, the credit card cannot be used. There is no interest charges related to this card.

12.3.2 Benefits of the Prepaid Payment Systems

Prepaid cards offer a wealth of benefits to consumers: there is less risk of overspending, they're safer than cash, they're easy to use and reload and they're a viable alternative to using traditional credit or debit cards.

a) It is accepted at the entire merchant establishment worldwide according to the affiliation of the credit given company.
b) It can be used to withdraw cash from the ATMs.
c) Reloadable anytime anywhere.
d) It can be used to withdraw cash in any international currency.
e) It is usually backed up by personal accident insurance cover.
f) Customer has the facility to get online and track spending, check balance, change pin.

12.3.3 Postpaid Payment Systems

This system is like a credit card used to make incremental purchases through the web site. As purchases are made, the accumulated debt on the postpaid credit instrument increase until a credit limit is reached, or until an arrangement has made to settle the debt such as monthly payment. Normally all credit cards are postpaid cards. The customer gets the eligibility of spending through the income statement and credit history produced before the credit card company. The customer gets a credit limit and a credit period by which the customer is supposed to pay back the money to the credit card company.

12.3.4 Features of Postpaid Payment Systems

a) **Global acceptance:** Accepted by all the merchant establishments according to the network set by the credit card company.
b) **Balance transfer option:** It is possible to transfer outstanding funds from one card to other cards with low interest rates.
c) **Revolver facility:** Customer can pay only a small amount of the total outstanding and revolve the rest for the payment Zero the next month.
d) **Cash advance facility:** Customer can withdraw around 30% of the credit limit at any ATM connected to the credit card company.
e) **Teledraft:** These facilities are available at the door steps of the customer
f) **Other services:** Credit card can be used for railway tickets and airline ticket purchase
g) **Convenience:** As the customer is not required to carry cash for any purchase
h) **Easy availability:** Holder can load prepaid credit cards at any time they need.

12.4 ON-LINE ELECTRONIC COMMERCE PAYMENTS

There are different types of payment methods and they vary from business to business. You have to figure out which payment method will suit the nature of your business and at the same time appeal to your customers. For achieving profitability and success it can be considered as a critical step. Long gone are the days where only cash was used for accepting payments.

Also with new players like UPI, mobile payments, mobile wallets, etc. payment space is shifting more towards the digital side. People nowadays are using more than one online payment method. They are trying to tailor the application and method as per their convenience.

- Token Based Payments system: Electronic Cash, Electronic Cheques, Smart Cards or Debit Cards.
- Credit card based payment system.

12.4.1 Digital Token Based E-Payment

A token based payment system is one in which tokens are purchased from authorized vendors may be used as credit in the purchase of goods and services. E-token is equivalent to cash that is backed by a bank. Digital token payment is of 3 types:

a) **Cash or real time:** Transactions are settled with the exchange of electronic currency. Example- E-cash.
b) **Debit or prepaid:** Users pay in advance. Example-Smart Cards.
c) **Credit or postpaid:** The server authenticates the customers and verifies with the bank that funds are adequate before purchase.

Figure 12.2 E-Commerce Payment Gateways

12.4.2 Benefits of Digital Token Based Payment Systems

Benefits to Buyer

a) Convenience of global acceptance, a wide range of payment options, and enhanced financial management tools.
b) Enhance security and reduce liability for stolen or miss used cards.

c) Consumer protection through and established system of dispute resolution.

d) Convenient and immediate access to funds on deposit via debit cards.

e) Accessibility to immediate credit, intuitively, the comparative cost of arranging for a consumer loan related to the ability to obtain credit at the point of sell is substantial in considering both the direct processing costs as well as the implicit opportunities costs to borrower and lender.

Benefits to Seller

a) Speed and security of the transaction processing chain from verification and authorization to clearing and settlement.

b) Freedom for more costly labor, materials and accounting services that are required in paper based processing.

c) Better management of cash flow, inventory and financial planning due to swift bank payment.

d) Incremental purchase power on the part of the consumer.

e) Cost and risk saving by eliminating the need to run an in house credit facility.

12.5 ELECTRONIC CASH (E-CASH)

It is cryptographic electronic money cash system designed in 1983 used as micropayment system. It combines computerized convenience with security and privacy that improve on paper cash. E-Cash is based on cryptographic systems called digital signature. This method involves a pair of numeric keys that work in tandem; one for locking and the other for unlocking. It focuses on replacing cash as the principal payment vehicle in consumer oriented payments system. Customers open an account with bank and either buy or receive free special software for their PC's.
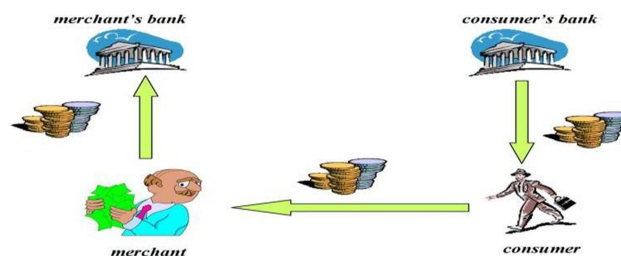
Figure 12.3 Electronic Cash Payment System

Two approaches to holding electronic cash are online storage where the consumer does not personally have possession of it and off-line where the consumer does have physical control. A smart card is an example of off-line electronic cash storage.

12.5.1 Properties of E-Cash

a) **Monetary value**: It is back by either cash, a bank authorized credit, or a bank certified cashier cheque. When e-cash created by one bank is accepted by others, reconciliation must occur without any problem.

b) **Interoperable:** It is exchangeable as payment for other e-cash, paper cash, goods or services, lines of credit, deposit in banking account, bank notes or obligation, electronic benefit transfer and the like. Most e-Cheque proposal use a single bank.

c) **Storable and retrieval:** Remote storage and retrieval would allow user to exchange e-cash from home or office or while traveling. The cash could be stored on the remote computer memory, in smart cards or special purpose devices. It is preferable that cash is stored on a dedicated device that can't be altered and should have suitable interface. To facilitate personal authentication using passwords or other means.

d) **Security**: E-Cash is not easy to copy or temper with while being exchanged. This includes preventing or detecting duplication or double spending. Detection is essential in order to audit whether prevention is working or not or to know the tricky issue of double spending.

12.5.2 Advantages of E- Cash

i)   More efficient than cash, checks or credit cards for both the consumer and the merchant.

ii) Lower transaction costs and perhaps product costs related to increases in efficiency.

iii) The distance which electronic cash must travel in a transfer does not affect the transmission costs or the time as it does with traditional payment methods.

iv) Electronic cash does not require any special authorization, so anyone may use it for almost any kind of transaction, large or small.

12.5.3 Disadvantages of E-Cash

i)   Potential collection problems if an Internet tax is ever enacted.

ii) Since electronic cash does not leave an audit trail, it could be used in money laundering operations or as a medium of exchange in other illegal activities.

iii) Electronic cash is susceptible to forgery and double spending abuses.

12.6 E-CHEQUES

Electronic Cheques are designed to accommodate the many individuals and entities that might prefer to pay on credit or through some mechanism other than cash. In e-Cheque system, consumer possess an e-Cheque book on a Personal computer memory card International Associations (PCMCIA Card). The buyers must register with a third party account server before they are able to write e-Cheque. As needed, Cheque is return electronically from an e-Cheque book on the card. They are then sending over the internet to the retailer, who in turn sends the e-Cheque to the customer banks. Settlement is made through a financial network such as ACH. E-Cheque method was deliberately created to work in much the same way as a conventional paper Cheque.

Figure 12.4 E-Cheque Services

12.6.1 Advantages of E-Cheque

i) They work in the same way as traditional Cheque, thus simplifying customer education.

ii) E-Cheque is well suited for clearing micro payments; their use of conventional cryptography makes it much faster than e-cash.

iii) E-Cheque creates float, and the availability of float is an important requirement for commerce.

iv) Financial risk is assumed by the accounting server and may result in easier acceptance. Reliability and scalability are providing by using multiple accounting servers.

12.7 SMART CARDS

A smart card is a plastic card with a small, built in microcomputer chip and integrated circuit that can store and process a lot of data. These are generally made of polyvinyl chloride, but sometimes polyethylene terephthalate based polyesters, acrylonitrile butadiene styrene or

polycarbonate. They can provide personal identification, authentication, data storage, and application processing and strong security authentication for single sign-on (SSO) within large organizations. Depending on your application you should choose right card.

12.7.1 Contact Smart Cards

a) These pads provide electrical connectivity when inserted into a reader, which is used as a communications medium between the smart card and a host (e.g., a computer, a point of sale terminal) or a mobile telephone.

b) These cards do not contain batteries; power is supplied by the card reader.

c) These have a contact area of approximately 1 square centimeter (0.16 sq in), comprising several gold-plated contact pads.

Figure 12.5 Smart Cards

12.7.2 Contactless Smart Cards

a) These cards are those in which the card communicates with and is powered by the reader through RF induction technology (at data rates of 106–848 kbit/s).

b) These cards require only proximity to an antenna to communicate.

c) Like smart cards with contacts, contactless cards do not have an internal power source. Instead, they use an inductor to capture some of the incident radio-frequency interrogation signal, rectify it, and use it to power the card's electronics.

12.7.3 Memory Cards

a) The most common and least expensive smart cards are memory cards.

b) This type of smart cards contains EEPROM (Electrically Erasable Programmable Read-Only Memory), non-volatile memory. Because it is non-volatile when you remove the card from the reader, power is cut off, card stores the data.

c) This microcontroller is responsible for accessing the files and accepting the communication.

d) The data can be locked with a PIN (Personal Identification Number), your password. PIN's are normally 3 to 8 digit numbers those are written to a special file on the card. Because this type is

not capable of cryptography, memory cards are used in storing telephone credits, transportation tickets or electronic cash.

12.7.4 Microprocessor Cards

a) A microprocessor smartcard is defined as an IC chip contact card with a microprocessor and memory.

b) This smart card contains a small microchip that can process and store thousands of bits of electronic data.

c) Memory cards or magnetic stripe cards can only store information, while the microprocessor smart card is truly smart as it has its own operating system able to process data in reaction to a given situation. This capability to record and modify information in its own non-volatile, physically protected memory makes the smart card a powerful and practical tool.

d) These smart cards are small and portable, they can interact with computers and other automated systems, and the data they carry can be updated instantaneously.

e) Also with the ongoing mass adoption of microprocessors, predominantly in the banking (EMV) and mobile phone markets (SIM cards), it has led to falling costs through economies of scale. This makes microprocessor cards attractive to developers in the emerging markets such as access control, E-passport, PKI and multi applications where their cryptographic capabilities addresses the issues of security.

f) There are open platforms available such as Java Card, Native Operating systems and the emerging .net architectures.

12.7.5 Hybrid Cards

a) A hybrid smart card which clearly shows the antenna connected to the main chip.

b) Hybrid cards implement contactless and contact interfaces on a single card with dedicated modules/storage and processing.

12.7.6 Dual Interface Cards

a) Dual-interface cards implement contactless and contact interfaces on a single card with some shared storage and processing.

b) An example is Porto's multi-application transport card, called Andante, which uses a chip with both contact and contactless (ISO/IEC 14443 Type B) interfaces.

12.7.7 USB Cards

a) The CCID (Chip Card Interface Device) is a USB protocol that allows a smartcard to be connected to a computer, using a standard USB

interface. This allows the smartcard to be used as a security token for authentication and data encryption such as Bitlocker.

b) CCID devices typically look like a standard USB dongle and may contain a SIM card inside the USB dongle.

12.8 APPLICATIONS OF SMART CARDS

i) Smart cards serve as credit or ATM cards, fuel cards, mobile phone SIMs, authorization cards for pay television, household utility pre-payment cards, high-security identification and access-control cards, and public transport and public phone payment cards.

ii) Smart cards may also be used as electronic wallets. The smart card chip can be "loaded" with funds to pay parking meters, vending machines or merchants. Cryptographic protocols protect the exchange of money between the smart card and the machine. No connection to a bank is needed. The holder of the card may use it even if not the owner.

iii) Smart-cards authenticate identity by storing an encrypted digital certificate issued from the PKI (public key infrastructure) provider along with other relevant information.

iv) Examples include the U.S. Department of Defense (DoD) Common Access Card (CAC), and other cards used by other governments for their citizens.

v) If they include biometric identification data, cards can provide superior two- or three-factor authentication.

vi) Smart cards and integrated ticketing are used by many public transit operators.

vii) Card users may also make small purchases using the cards. Some operators offer points for usage, exchanged at retailers or for other benefits.

viii) Smart cards are used as a security token. The Mozilla Firefox web browser can use smart cards to store certificates for use in secure web browsing.

ix) Some disk encryption systems, such as Microsoft's BitLocker, can use smart cards to securely hold encryption keys, and also to add another layer of encryption to critical parts of the secured disk.

x) GnuPG, the well-known encryption suite, also supports storing keys in a smart card.

xi) Smart cards are also used for single sign-on to log on to computers.

12.9 ADVANTAGES AND DISADVANTAGES OF SMART CARDS

12.9.1 Advantages of Smart Cards

a) Flexibility

i) Smart cards have multiple functions which simultaneously can be an ID, a credit card, a stored-value cash card, and a repository of personal information such as telephone numbers or medical history.

ii) The card can be easily replaced if lost, and, the requirement for a PIN (or other form of security) provides additional security from unauthorized access to information by others.

iii) At the first attempt to use it illegally, the card would be deactivated by the card reader itself.

b) Security

i) Smart cards can be electronic key rings, giving the bearer ability to access information and physical places without need for online connections.

ii) They are encryption devices, so that the user can encrypt and decrypt information without relying on unknown, and therefore potentially untrustworthy, appliances such as ATMs.

iii) Smart cards are very flexible in providing authentication at different level of the bearer and the counterpart.

iv) With the information about the user that smart cards can provide to the other parties, they are useful devices for customizing products and services.

c) Data Integrity Information on a smart card cannot be erased or removed accidentally by any electrical or magnetic means.

d) Portability Smart cards have the ability of software to be transferred from one machine or system to another.

12.9.2 Disadvantages of Smart Cards

a) Easily Lost Smart cards are small, lightweight and can be easily lost if the person is irresponsible as they have multiple uses and so the loss may be much more inconvenient.

b) Slow Adoption If used as a payment card, not every store may have the hardware necessary to use these cards as it is more expensive to produce and use. Therefore, some stores may charge a basic minimum fee for using smart cards for payment, rather than cash.

c) Possible Risk of Identify Theft When used correctly for identification purposes, they make the jobs of law enforcement and healthcare professionals easier. However, for criminals seeking a new identity, they are like gold, based on the amount of information it can contain on an individual.

12.10 CREDIT CARD PAYMENT SYSTEMS

A credit card is a payment card issued to users (cardholders) to enable the cardholder to pay a merchant for goods and services, based on the cardholder's promise to the card issuer to pay them for the amounts so paid plus other agreed charges. The card issuer (usually a bank) creates a revolving account and grants a line of credit to the cardholder, from which the cardholder can borrow money for payment to a merchant or as a cash advance.

12.10.1 Characteristics or Features of Credit Card

- a) Alternative to cash.
- b) Credit limit.
- c) Aids payment in domestic and foreign currency.
- d) Record keeping of all transactions.
- e) Regular charges.
- f) Grace period or grace days.
- g) Higher fees on cash withdrawals.
- h) Additional charges for delay in payment.

12.10.2 Advantages of Credit Cards

a) **Purchase Power and Ease of Purchase:** Credit cards can make it easier to buy things as the cardholder need not carry large amounts of cash with them and becomes convenient to pay big amounts to airlines, hotels, and car rental agencies.

b) **Protection of Purchases:** Credit cards may also offer you additional protection if something you have bought is lost, damaged, or stolen. Both your credit card statement (and the credit card company) can vouch for the fact that you have made a purchase if the original receipt is lost or stolen. In addition, some credit card companies offer insurance on large purchases.

c) **Building a Credit Line:** Having a good credit history is often important, not only when applying for credit cards, but also when applying for things such as loans, rental applications, or even some jobs. Having a credit card and using it wisely (making payments on time and in full each month) will help you build a good credit history.

d) **Emergencies:** Credit cards can also be useful in times of emergency. While you should avoid spending outside your budget (or money you don't have!), sometimes emergencies (such as your car breaking down or flood or fire) may lead to a large purchase (like the need for a rental car or a motel room for several nights.)

e) **Credit Card Benefits:** In addition to the benefits listed above, some credit cards offer additional benefits, such as discounts from particular stores or companies, bonuses such as free airline miles or travel discounts, and special insurances (like travel or life insurance.)

12.10.3 Disadvantages of Credit Cards

a) **Blowing Budget:** The biggest disadvantage of credit cards is that they encourage people to spend money that they don't have as most credit cards do not require to pay off the balance each month. While this may seem like 'free money' at the time, you will have to pay it off -- and the longer you wait, the more money you will owe since credit card companies charge you interest each month on the money you have borrowed.

b) **High Interest Rates and Increased Debt:** Credit card companies charge the cardholder an enormous amount of interest on each balance that they don't pay off at the end of each month. Most credit cards charge you up to 10 times that amount of interest on balances.

c) **Credit Card Fraud:** They may be physically stolen if lose the wallet or someone may steal the credit card number (from a receipt, over the phone, or from a Web site) and use the card to rack up debts. If, cardholder realize that their credit card or number has been stolen, report it to your credit card company immediately.

d) **Cash advance fees and rates:** Financial institutions make it very expensive to use your credit card to get cash out or make other "cash equivalent" transactions (such as buying foreign currency or gambling). Using a credit card for a cash withdrawal will attract a cash advance fee worth around 3% of the total transaction amount. It also typically attracts an interest rate of 19-22% right away.

e) **Annual fees:** While a cardholder can often get debit cards without annual fees, most credit cards have them. These can cost as little per year, or depending on the card type. Generally, the more perks, the higher the cost of the annual fee.

f) **Credit card surcharges:** Businesses often apply a surcharge when you pay with a credit card. For MasterCard and Visa

products, this fee is usually 0.5-2% of the total transaction cost, while for Amex cards it could be closer to 3%. Whatever the case, this is an extra cost for the convenience of paying with plastic.

12.11 TYPES OF CREDIT CARDS

Credit cards' growing popularity has led to disrupting the space of lending and credits. Many new cards enter the market frequently with a whole new range of features and benefits. These features and benefits go a long way in categorizing the cards into different types. Individuals choose a card based on these categories.

Figure 12.6 Types of Credit Cards

12.11.1 Business Credit Cards

a) Business credit cards are specialized credit cards issued in the name of a registered business and can only be used for business purposes. Their use has grown in recent decades.

b) Business credit cards offer a number of features specific to businesses. They frequently offer special rewards in areas such as shipping, office supplies, travel, and business technology. They can be harder to apply for than personal cards, however, and often carry high credit score requirements.

c) Business credit cards are offered by almost all major card issuers—like American Express, Visa, and MasterCard in addition to local banks and credit unions. Charge cards for businesses, however, are currently only offered by American Express.

12.11.2 Secured Credit Cards

A secured credit card is a type of credit card secured by a deposit account owned by the cardholder. Typically, the cardholder must deposit between 100% and 200% of the total amount of credit desired. This type of credit card is used by people with little to no credit or a past history of bad credit. Sometimes a credit card will be secured by the equity in the borrower's home.

12.11.3 Prepaid Cards

a) A "prepaid credit card" is not a true credit card, since no credit is offered by the card issuer: the cardholder spends money which has been "stored" via a prior deposit by the cardholder or someone else, such as a parent or employer.

b) However, it carries a credit-card brand such as Discover, Visa, MasterCard, American Express, or JCB and can be used in similar ways just as though it were a credit card.

c) Unlike debit cards, prepaid credit cards generally do not require a PIN. An exception are prepaid credit cards with an EMV chip, which require a PIN if the payment is processed via Chip and PIN technology.

d) After purchasing the card, the cardholder loads the account with any amount of money, up to the predetermined card limit and then uses the card to make purchases the same way as a typical credit card.

e) Prepaid cards can be issued to minors (above 13) since there is no credit line involved.

12.11.4 Digital cards

A digital card is a digital cloud-hosted virtual representation of any kind of identification card or payment card, such as a credit card.

12.12 DEBIT CARDS

It is a popular method of making payment. Banks issue debit cards to their customers who have maintained an account in the balance with sufficient credit balance. Each time the customer makes a purchase, an equal amount of the purchase is debited in his account. The transaction works much like a credit card transaction. For Eg. A customer gives an ATM card to the seller for the purchase. The merchant read the card through a transaction terminal and the customer enters his personal identification number.

Figure 12.7 Debit Card

12.12.1 Difference between Debit Card and Credit Card

Credit cards and debit cards look identical. Both types of plastic cards bear the 16-digit number markings and have details like the expiration dates and personal identification numbers (PIN) inscribed. Credit cards and debit cards are similar in more ways than one; they can be used to withdraw money from an ATM machine and to make cashless transactions either online, or offline at a point-of-sale terminal.

Figure 12.8 Difference between Credit Card Vs Debit Card

Table 12.1 Difference between Debit Card Vs Credit Card

PARAMETERS	DEBIT CARD	CREDIT CARD
Definition	Deducts money directly from your saving's bank account or your current account.	Allows you to borrow funds to pay for goods and services.
Source of Funds	Your savings bank account or current account.	Credit extended to you by your card issuer. It gives to money you otherwise do not have.
Spending advantage	You can only spend how much you have	Can spend more than what you have.
Who pays for the purchase	You pay for your purchase.	The credit card company pays the vendor for your purchase. You pay the credit card company.
Bill	There is no bill or statement.	You get a bill or statement each month with details of the transactions you have made.

Payment	There is no payment that needs to be made since you are using your own money.	A bill needs to be paid each month since it is being borrowed.
Fees and Charges	Annual fees and PIN regeneration fees are applicable.	Credit cards have multiple fees applicable. These including joining fees, annual fees, late payment fees and bounced cheque fees among others.
Interest	There is no interest that is charged.	Interest is charged on the outstanding amount if it hasn't been paid by the due date.
Limit to funds that can be	You can access any amount up to what is currently available in your savings bank or current account.	You can use the card only up to the pre-set credit limit on your card.
Rewards	Typically, the rewards you get are minimal.	Get to enjoy cashback, air miles and reward points which can be redeemed.
Privileges	Doesn't come with many privileges.	Come with numerous dining, retail, entertainment and travel privileges (depending on the type of card you have).
Lost card liability	Protection from theft or loss of the card is minimal.	Most cards offer 100% lost liability protection. So you are not liable for any unauthorized transactions made.

12.13 ELECTRONIC PURSE

Electronic Purse is a card with a microchip that can be used instead of cash and coins for everything from vending machines to public transportation. The Electronic Purse would consist of microchip embedded in a credit card, debit card, or standalone card to store value

electronically. The card would replace cash and coins for small ticket purchases such as gasoline stations, pay phones, road/bridge tolls, video games, school cafeterias, fast food restaurants, convenience stores, and cash lanes at supermarkets. Cardholders can "reload" the microchip and control the amount of value stored in the card's memory.

The e- purse is an electronic / cash less payment option for making small purchases within the campus. To load an electronic purse, the user must be able to operate an ATM or card loading machine. Usually this requires the user to be able to read a visual display, but methods for alleviating this problem have been developed. To use the electronic purse, the user hands the card to the shop assistant who inserts the card in a terminal and keys in the amount of the transaction. This is displayed visually to the customer.

LET US SUM UP

E-commerce grows rapidly and provides an opportunity for companies to increase sales over the internet. Nowadays, every individual and company familiar with e-commerce to make sales and purchase products and services. An electronic payment system comes to replace a cash payment system. Sales of goods and services increased significantly with the adoption of the use of e-payment systems so that electronic payments became an increasingly important part of the payment system.

E-Payment is a system that provides tools for payment of services or goods carried on the internet. E-payment system provides the ease of transaction processing in e-commerce between consumers and sellers. Using the E-payment System has many benefits for payers, payees, E-commerce, banks, organizations and governments. These benefits can lead to widespread electronic payment systems in the world.

An efficient and reliable e-payment system enables faster payouts, better tracking, transparent transactions, reduced time use, cost savings and increased trust between sellers and buyers. The development and adoption of technology in the e-payment system involve financial transactions, assimilated users and quality e-payment technology tend to shape their own perceptions and expectations.

CHECK YOUR PROGRESS

Choose the Correct Answers:

1. An electronic cheque is one form of what?

a) E-Commerce   b) Online Banking

c) E-Cash   d) Cheque

2. Which of the following is a method of transferring money from one person's account to another?

a) Electronic Cheque   b) Credit Card

c) E-transfer   d) None of the above

3. EDI stands for _____.

a) Electronic Data Interrupt   b) Electronic Data Interface

c) Electronic Data Interchange   d) Electronic Data Intermodule

4. EFT stands for _____.

a) Electronic Funds Tester

b) Electronic Fragmentation Transfer

c) Electronic Fragmentation Time

d) Electronic Funds Transfer

5. An example of Online currency exchange is _____.

a) E-Cash   b) Debit or Prepaid

c) Credit or Post paid   d) None of the above

GLOSSARY

Electronic Payment Systems	:	An e-payment system is a way of making transactions or paying for goods and services through an electronic medium, without the use of checks or cash. It's also called an electronic payment system or online payment system.
E-Cheques	:	Electronic cheques are an Electronic Funds Transfer (EFT) it permits use of electronic cheques to transfer funds from one account to another. Electronic CASH is a centralized debit card system for handling money withdrawals from cash machines.
Smart Cards	:	Smart card is again similar to a credit card or a debit card in appearance, but it has a small microprocessor chip embedded in it. It has the capacity to store a customer's work-related and/or personal information. Smart

		cards are also used to store money and the amount gets deducted after every transaction.
Credit Cards	:	Credit card is small plastic card with a unique number attached with an account. When a customer purchases a product via credit card, credit card issuer bank pays on behalf of the customer and customer has a certain time period after which he/she can pay the credit card bill.
Debit Cards	:	A debit card is a plastic card we use as a payment method instead of cash when we buy things. We also call it a bank card or check card. It is not the same as a credit card. Credit cards lend you the money when you buy things, while debit cards debit your bank account; hence the name.
Electronic Purse	:	Electronic purse (ePurse). An electronic purse is the store of value on a card, which can be used in a manner similar to cash to pay for travel or for other small-scale transactions. The electronic "purse" is secure information stored in a dedicated area or file in the smart-card.

SUGGESTED READINGS

1. Alexi Leon and Mathews Leon, (2004), Introduction to Information Systems, McGraw-Hill Education (India) Pvt Limited, New Delhi.
2. Anup K. Ghosh, (2012), E-Commerce Security and Privacy, Kindle Edition
3. HYPERLINK "https://www.google.co.in/search?tbo=p&tbm=bks&q=inauthor:%22P.T.JOSEPH,+S.J.%22&source=gbs_metadata_r&cad=4"P.T. Joseph, S.J. (2015) E-Commerce: An Indian Perspective, Fifth Edition, Prentice Hall India Pvt., Limited, New Delhi
4. Peter G W Keen, (1994), Every Manager's Guide to Information Technology, 2nd Edition, Harvard Business School Press, Boston.

5. Rajesh Chakrabarti and VikasKardile, (2002),The Asian Manager's Handbook of E-Commerce (paperback edition), Tata McGraw – Hill Publishing Company Limited, New Delhi.

WEB RESOURCES

1. Electronic Payment System - Bing video
2. Prepaid Payment Instruments (PPIs) - To The Point | Drishti IAS English - Bing video
3. Prepaid vs postpaid in tamil | Different between prepaid and postpaid in detail | AK | in tamil - YouTube
4. Electronic Cash Ledger in GST | Electronic Credit Ledger (English) | BUSY - Bing video

ANSWER TO CHECK YOUR PROGRESS

1. b)   2. a)   3. c)   4. d)   5. a)

UNIT 13

RIGHTS AND OBLIGATIONS IN THE WORLD OF E-COMMERCE

STRUCTURE

Overview

Learning Objectives

13.1 Introduction

13.2 Implications of Innovative Online Payment Systems

13.3 New Technologies in Payments

13.4 India's Policy Approach

13.5 Issues and Challenges regarding Electronic Payment System

13.6 Rights and Obligations in the World of E-Commerce

13.7 Domain Name and Registration

      13.7.1 Name Spaces

      13.7.2 DNS in the Internet

      13.7.3 Domain Name Registration

13.8 Protecting Published Material on the Web

Let Us Sum Up

Check Your Progress

Glossary

Suggested Readings

Web Resources

Answers to Check Your Progress

OVERVIEW

Alternative payment systems are evolving rapidly, driven by high growth in e-commerce. Digital shoppers want the maximum in user experience and convenience; however, security and trust are major issues in paying online. The tokenization that Apple Pay uses may be the future in securing payments, especially if embedded in other payment systems, such as in the Host-Card Emulation (HCE) that Google Wallet adopted and in EuroPay, MasterCard, and Visa's (EMV) chip-based cards. Nevertheless, the market for payments is still growing and innovating. There will be many players and options, but systems that can overcome

security issues and gain mass recognition will become front runners in the payments market.

LEARNING OBJECTIVES

After completing this unit, you will be able to;

- explain the features of the innovative online payment systems
- discuss the key features of issues and challenges in electronic payment system
- explore the different phases of rights and obligations in the world of e-commerce
- explain about the new technologies in payments and India's policy approach
- gain knowledge about Domain name system and registration

13.1 INTRODUCTION

While traditional payment methods (credit and debit cards) remain the main channels for online transactions, the share of alternative payment methods (such as e-wallets, real-time bank transfers, and mobile payments) is expected to rise from 43% in 2012 to 59% in 2017 globally. Future prospects for the alternative payment market will create ample room for new entrants, given the high 14% growth potential for business-to-consumer e-commerce sales in the coming years. Along with online payments, contactless payment systems through mobile devices are also gaining momentum with Apple Pay and Google Wallet.

This is then transferred in encrypted tokens to merchant payment processors or e-commerce sites where the data is decrypted and transactions authorized. The encrypted tokens can only be used in a single transaction or context under an expiry value, and cannot be reversed or de-tokenized by fraudsters. The entrance of digital ecosystems into the payment industry as well as cross-level alliances between internet players, telecommunication, and payment companies has caused disintermediation in the traditional value chain and undermined the bank's role in payments. This implies that banks need to take a more proactive approach and integrate innovative mechanisms into their payment systems. It is evident that adaptations and structural changes are required to make banks become more digitally driven and offer mobile financial services.

13.2 IMPLICATIONS OF INNOVATIVE ONLINE PAYMENT SYSTEMS

An innovation in online payment mechanisms keep expanding the payment options and create new mediums of exchange, policy makers

in industrial countries are beginning to get concerned over what implications they may have for the economy in general. These innovations have the potential to undermine the very foundation of the monetary systems followed in the world today although such fears may be somewhat premature at this point in time. In any case, the developments in the area of electronic money has caused enough interest for the IMF and World Bank to convene a conference to study the effect of these changes on the monetary systems of the world.

Presently, monetary policy is conducted primarily by changing the level of currency in circulation an economic variable over which the central bank has almost absolute and exclusive control. Checking accounts held by citizens, the other component of money, changes in step with the level of currency in circulation and thus the central bank actually gets to control the entire money supply.

The emergence of electronic money can potentially throw a spanner in this system. As online electronic cash companies float their own currencies, partially or fully de-linked from the real life currency, a central bank can possibly loose its complete control over the 'effective money supply' making monetary policy virtually ineffective. This, in turn, can have detrimental economic effects in society leading to undesirable levels of inflation or unemployment. It is exactly this possibility admittedly a remote one today given the relative unimportance of electronic cash that has got economists and policy makers concerned about electronic money.

13.3 NEW TECHNOLOGIES IN PAYMENTS

In general, payment systems consist of a set of instruments, procedures, rules, and users, and are traditionally interbank fund transfer systems. Wholesale payments are transactions between financial institutions, usually large value and settled in real-time; while retail payments pertain to transactions among businesses and individuals and are usually high volume.

E-commerce enabled purchases with a single click of a mouse or button and, supported by e-payments including e-wallets (or e-money), brought unrivalled convenience to consumers around the world. Cash, and debit or credit cards are no longer the only payment options. Mobile payments or e-wallets are increasingly more common due to its convenience, particularly in emerging markets with large populations of unbanked persons and low financial access. Brick and mortar banking is winding down and is being replaced by online banking and e-money services.

Wide range of innovations has taken place over the last years in the field of banking and payment systems. These have had, or are likely to have, significant consequences for payment habits and for the structure and functioning of markets. Moreover, they will influence the way monetary policy is conducted. The potential effects of these innovations for monetary policy in the euro area, and to which extent central banks and financial regulators should react to these challenges. These are very topical issues, and of great interest to central bankers.

13.4 INDIA'S POLICY APPROACH

The central bank of a country is usually the driving force behind the development of national payment systems. India's central bank, the Reserve Bank of India (RBI), has been playing this developmental role and has taken several initiatives for safe, secure, sound, efficient, accessible and authorized payment systems in the country.

The initial steps towards establishing modern payment systems were taken in the early 1980s, when the RBI introduced the magnetic ink character recognition (MICR) technology for cheque processing, which sowed the seeds for digital payment systems in the country. Migration to the cheque truncation system (CTS) happened in 2008 for all banks to migrate to the CTS. Further, to handle bulk payments and receipts, the electronic clearing system (ECS) was introduced, which has undergone many changes from being local to regional and then national. For a pan-India system for processing bulk and repetitive payments, the ECS has been subsumed into the National Automated Clearing House (NACH).

Payment systems have evolved over time to meet the requirement of remittances using non-cash and non-paper payment methods. The popularly known retail system is the National Electronic Funds Transfer (NEFT). Besides NEFT, the Immediate Payment Service (IMPS) and Real-time Gross Settlement (RTGS) also meet users' funds transfer requirements. Recently, the NEFT has been made operational on a 24x7 basis to ensure availability of digital payments at any time. The IMPS is also a 24x7 immediate funds transfer system.

Finally, the RBI has released its payment vision documents in the public domain. According to the latest document, 'Payment and Settlement Systems in India: Vision 2019-2021, digital transactions through UPI/IMPS are likely to register average annualized growth of over 100 per cent, which would help in the reduction of currency demand over the vision period.

In digital payments, payer and payee both use digital modes to send and receive money. It is also called electronic payment. No hard cash is involved in the digital payments. All the transactions in digital payments are completed online. It is an instant and convenient way to make payments.

13.5 ISSUES AND CHALLENGES REGARDING ELECTRONIC PAYMENT SYSTEMS

The risk to the online payments is theft of payments data, personal data and fraudulent rejection on the part of customers. Therefore, and until the use of electronic signatures is wide spread, we must use the technology available for the moment to guarantee a reasonable minimum level of security on the network.

a) **Lack of Usability** Electronic payment system requires large amount of information from end users or make transactions more difficult by using complex elaborated websites interfaces. For example credit card payments through a website are not easiest way to pay as this system requires large amount of personal data and contact details in web form.

b) **Lack of Security** Online payment systems for the internet are an easy target for stealing money and personal information. Customers have to provide credit card and payment account details and other personal information online. This data is sometimes transmitted in an un-secured way, providing these details by mail or over the telephone also entails security risks.

c) **Issues with e-Cash** main problem of e-cash are that it is not universally accepted because it is necessary that the commercial establishment accept it as payment method. Another problem is that when we makes payment by using e-cash, the client and the salesman have accounts in the same bank which issue e-cash. The payment is not valid in other banks.

d) **Lack of Trust** Electronic payments have a long history of fraud, misuse and low reliability as well as it is new system without established positive reputation. Potential customers often mention this risk as the key reason why they do not trust a payment services and therefore do not make internet purchases.

e) **Lack of Awareness** Making online payment is not an easy task. Even educated people also face problems in making online payments. Therefore, they always prefer traditional way of shopping instead of online shopping. Sometimes there is a technical problem

in server customers tried to do online payments but they fails to do. As a result they avoid it.

f) **Online Payments are not Feasible in Rural Areas** The population of rural areas is not very literate and they are also not able to operate computers. As they are unaware about technological innovations, they are not interested in online payments. So the online payment systems are not feasible for villagers.

g) **Highly Expensive and Time Consuming** Electronic payment system are highly expensive because it includes set up cost, machine cost, management cost etc. and this mode of payment will take more time than the physical mode of payment.

13.6 RIGHTS AND OBLIGATIONS IN THE WORLD OF E-COMMERCE

Understanding the Internet laws and realizing their implications for their respective businesses are crucial for both online e-commerce companies, the internet Service Providers (ISPs) as well as individuals using the Internet whether for browsing or for buying. The challenge in this endeavor, however, is the fact that these laws are still in the making and most case decisions involving an Internet dispute create important legal precedence. Nevertheless, this section presents a close look at few aspects of Internet law bringing out the basic issues and principles that may help E-Commerce to avoid possible legal pitfalls.

a) **Copyrights**

The issue of copyrights is as important on the Web as off it and has been quite a popular subject of Internet litigation. Given how easy it is to electronically reproduce, duplicate and re-distribute potentially copyrighted material, this is hardly surprising. Companies consequently have been subjects of copyright violation lawsuits for acts that have ranged from unknowing copyright violations to challenging the entire established system of intellectual property rights.

Figure 13.1 Copyright

Copyrights and patents are important intellectual property rights that exclude anyone other than the owner of such rights to product and sell

the items protected by such rights. Literary works both fiction and non-fiction, music, art, movies and software all come under copy right protection whether they bear the declaration with the familiar © mark on them or not unless, of course, they are old enough for the copyright to have expired. And this applies to the contents of Websites too.

The issue of copyrights is particularly important in the case of providing access to music online. An important law the Digital Millennium Copyright Act (DMCA) was passed in 1999 in the USA that stipulated that the ISPs themselves have no monetary liability for copyright infringements on sites hosted by them. However, once an ISP is informed of a copy right infringement on one of its Websites, it should immediately take down the offending site or at least probe into the allegation. The principle of the DMCA is also being used in the e-commerce directive of the European Union and is likely to have an impact in courtrooms around the world.

b) Defamation

Next to copyright violation, defamation is another legal hazard to watch out for. This is not so much of a concern for online vendors as it is for hosts of newsgroups and Internet Service Providers. What constitutes defamation and what does not is again a fine line to distinguish and standards differ from country to country. However the rule of thumb to go by is as follows: if a statement is false and is likely to have a harmful effect on someone's reputation –whether it be an individual or corporation then the affected party may have a strong case for defamation.

The similarities between defamation and copyright violation are several. And, therefore, so are the responsibilities. As in the case of copyright violation, the question of whether an ISP is responsible for defamatory remarks made by someone on its Website is an important one too. Freedom of speech is an issue where international consensus will always be difficult to achieve and ISPs worldwide should exercise caution and restraint when dealing with potentially defamatory material. In any case, as in the case of copyright violation, any potentially defamatory material that has been brought to the notice of the ISP should be investigated and acted upon.

c) Privacy

Privacy of e-mail communication as well as the contents of password protected sites is a subject matter of several legal disputes too. Particularly contentious is the issue of consumer data picked up by

online vendors or marketing sites. Such information can be potentially very sensitive like, for instance medical records with a medical service provider or financial records with a bank of financial institution or even credit card information with an e-retailer. If this information ends up in the wrong hands, it can cause substantial hardships and financial loss to the individuals whose right to privacy has been violated.

As a result, the question of data protection and individual privacy has been a hot topic of discussion among the member nations of the Organization Economic Co-operation and Development (OECD), though complete consensus is yet to be achieved. One way for online businesses to deal with this problem is not to collect identifiable information in the first place. If the information is being gathered for statistical analysis, "anonymous" data serves just as well as individual 'profiling' with the added advantage that if somehow the data leaks out or is shared with a business partner, the company cannot be held responsible for violating the right to privacy of the individuals concerned.

d) Contracts

People can trust one another and tie one another to the terms of an online agreement, the spread of e-commerce will only be limited to small value items and the mist of suspicion and mistrust will not be completely lifted from the world of e-commerce.

Increasingly, courts around the world are accepting online and e-mail communications and promises therein at the same footing as signed paper documents with equally binding obligations. E-mail communication is regularly being produced in courts (mostly in the USA) as admissible evidence and consequently, their legal validity is increasing every day. For instance, if a computer bug causes an airline to give a wrong price quotation on the web and people actually buy tickets on that information. The answer to this question would probably depend on the court it is taken to as well as the declarations and disclaimers the company has on the site. So the extent to which the "buyer beware" principle holds is indeed situation specific but it would be safe for online vendors and others putting up price quotations on the Web to assume that they are legally bound by those quotes and / or make sufficient declarations and disclaimers to safeguard themselves against situations of honest mistakes.

e) Taxation on the Internet

This issue of taxation of e-commerce is providing to be one of the most challenging issues for lawmakers around the world. On the one hand is

the dilemma of choice between the tax revenues and encouraging the growth of e-commerce. Most countries or states would like to get at least a part of the vast tax revenues possible by taxing e-commerce. And they can hardly be called overly greedy.

Since the electronic medium is displacing conventional channels of trade as a conduit of business, governments and tax authorities would actually witness a part of their tax revenues dwindling unless they tax online trade. On the other hand are even more vexing issues of jurisdiction and enforcement. Since many online transactions involve parties residing and operating in different legal and tax jurisdictions, which authority has the necessary tax jurisdiction is far from clear in many situations. Enforcement of tax laws in the online environment is equally challenging. Clearly, once again, tax authorities need to come together and thrash out common tax policies to avoid dual taxation and ascertain jurisdictions. Because of all these problems, very little taxes are actually paid for online transactions around the world-largely because governments are hesitant to impose taxes and tariffs to the online world and partly because businesses and individuals alike are finding it easy to get away with under-reporting of their online transactions.

Taxation of e-commerce profits poses its own challenges. Traditionally profits are taxed on two principles the country of the taxpayer's residence and country of source. With the spread of e-commerce, globalization is blurring these distinctions.

f) The Signing a Contract Electronically

The majority of Countries recognize that it is perfectly valid to sign a contract electronically, especially when this occurs in a closed electronic system, such as an electronic data interchange system. Today, in practice, the digital signature is the most frequently used technology for electronic signatures. This technology, as well as being the most widespread, is also the most secure. It allows signatories to be identified by recipients through the intervention of a trusted third party, known as the Certification Authority (CA).

The 'signature' consists of an encrypted message of the kind normally used in real signatures, which is attached or logically joined to the main message. The intervention of a third party is indispensable to establishing confidence and security in electronic exchanges, since the contracting parties are never physically present to sign their contracts.

The development of e-commerce relies, to a large extent, on the trust and security that users feel in electronic communications. Applications

related to or requiring electronic signatures are numerous. Examples are payments, contracts, administrative declaration and procurement operations.

13.7 DOMAIN NAME AND REGISTRATION

The Domain Name System is a hierarchical and decentralized naming system for computers, services, or other resources connected to the Internet or a private network. It associates various information with domain names assigned to each of the participating entities. Each node in the tree has a domain name. A full domain name is a sequence of labels separated by dots(.). The domain names are always read from the node up to the root.

Figure 13.2 Domain Name System

To have a hierarchical name space, Domain Name Space was designed. In this design, the names are defined in an inverted-tree structure with the root at the top. The tree can have only 128 levels: level 0 (root) to level 127. Each level of the tree defines a hierarchical level. Each node in a tree has a label, which is a string with a maximum of 63 characters. The root label is a null string. DNS requires that children of a node have different labels, which guarantees the uniqueness of the domain names. Domain Name System is an Internet service that translates domain names into IP addresses.

a) The DNS has a distributed database that resides on multiple machines on the Internet.

b) DNS has some protocols that allow the client and servers to communicate with each other.

c) When the Internet was small, mapping was done by using hosts.txt file.

d) The host file was located at host's disk and updated periodically from a master host file.

e) When any program or any user wanted to map domain name to an address, the host consulted the host file and found the mapping.

f) Now Internet is not small, it is impossible to have only one host file to relate every address with a name and vice versa.

g) The solution used today is to divide the host file into smaller parts and store each part on a different computer.

h) In this method, the host that needs mapping can call the closest computer holding the needed information.

i) This method is used in Domain Name System (DNS).

13.7.1 Name Spaces

A name space that maps each address to a unique name can be organized in two ways:

a) Flat Name Space: In this, a name is assigned to an address. A name in this space is a sequence without structure. Disadvantage: Cannot be used in large systems like Internet because it must be centrally controlled to avoid ambiguity and duplication.

B) Hierarchical Name Space: Each name is made of several parts. The first part can define the nature of organization, the second part can define the name, and the third part can define departments and so on. The authority to assign and control the name spaces can be decentralized.

i) The names assigned to the machines must be carefully selected from a name space with complete control over the binding between the names and IP addresses.

ii) There are two types of name spaces: Flat name spaces and Hierarchical names.

Flat name spaces

i) In a flat name space, a name is a sequence of characters without structure.

ii) A name in this space is assigned to an address.

iii) The names were convenient and short.

iv) A flat name space cannot be used in a large system such as the internet because it must be centrally controlled to avoid ambiguity and duplication.

Hierarchical Name Space

i) In hierarchical name space, each name consists of several parts.

ii) First part defines the nature of the organization, second part defines the name of an organization, third part defines department of the organization, and so on.

iii)   In hierarchical name space, the authority to assign and control the name spaces can be decentralized.

iv)   Authority for names in each partition is passed to each designated agent.
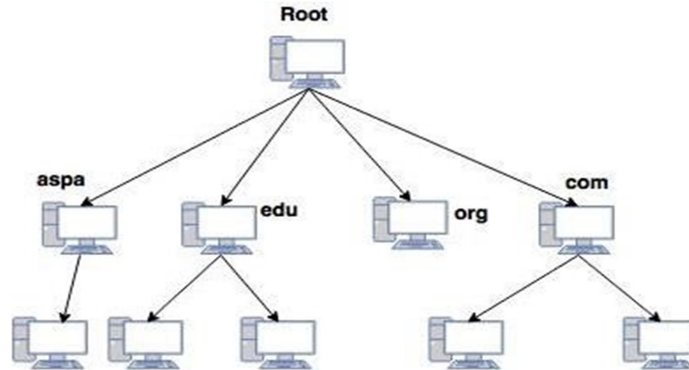
Figure 13.3 Hierarchy of DNS

13.7.2 DNS in the Internet

DNS is a protocol that can be used in different platform. Domain Name Space is divided into different sections in the Internet: Generic domain, country domain and inverse domain.

Figure 13.4 DNS in the Internet

Generic Domains

A generic domain is a name that defines a general category, rather than a specific or personal instance, for example, the name of an industry, rather than a company name. Some examples of generic names are books.com, music.com, and travel.info. The generic domains define registered hosts according to their generic behavior.

Table 13.1: Generic Domains

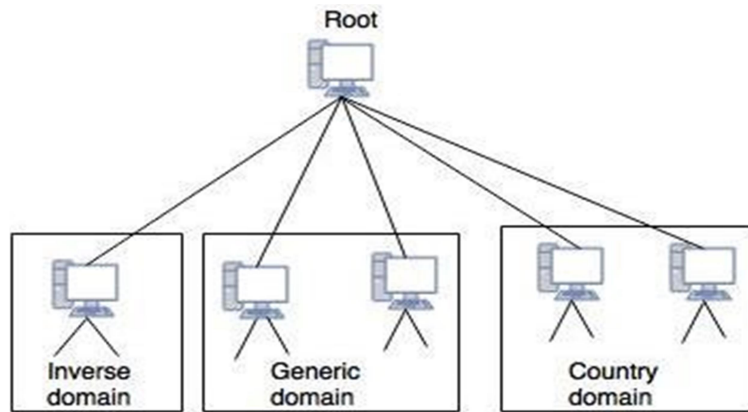| Label	Description
aero	Airlines and aerospace companies
biz	Businesses or firms
com	Commercial Organizations
coop	Cooperative business Organizations
edu	Educational institutions
gov	Government institutions
info	Information service providers
int	International Organizations
mil	Military groups
museum	Museum & other nonprofit organizations
name	Personal names
net	Network Support centers
org	Nonprofit Organizations
pro	Professional individual Organizations

A Generic top-level domain (gTLD) is an internet domain name extension with three or more characters. It is one of the categories of the top level domain (TLD) in the Domain Name System (DNS) maintained by the Internet Assigned Numbers Authority. There are in the root zone of the Internet and they are categorized as, .com, .org, .net, etc.,

Figure 13.5 Generic Domains

Country Domains

A country code top-level domain is an Internet top-level domain generally used or reserved for a country, sovereign state, or dependent territory identified with a country code.
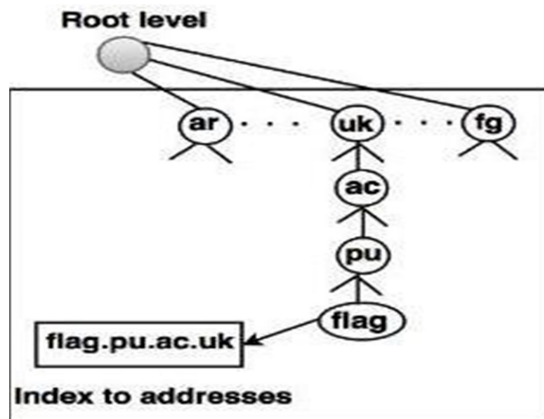
Figure 13.6 Country Domain

A ccTLD (Country Code Top-level Domain) is a two-letter domain extension used primarily to identify an association of some kind to a specific country or territory. There are approximately 300 ccTLDs, with over 150 million domains registered using one of them.

Inverse Domain

The inverse domain is used for mapping an address to a name. When the server has received a request from the client, and the server contains the files of only authorized clients. To determine whether the client is on the authorized list or not, it sends a query to the DNS server and ask for mapping an address to the name.

i)   Inverse domain is used to map an address to a name.
ii) For example, a client send a request to the server for performing a particular task, server finds a list of authorized client. The list contains only IP addresses of the client.
iii) The server sends a query to the DNS server to map an address to a name to determine if the client is on the authorized list.
iv) This query is called an inverse query.
v)   This query is handled by first level node called arpa.
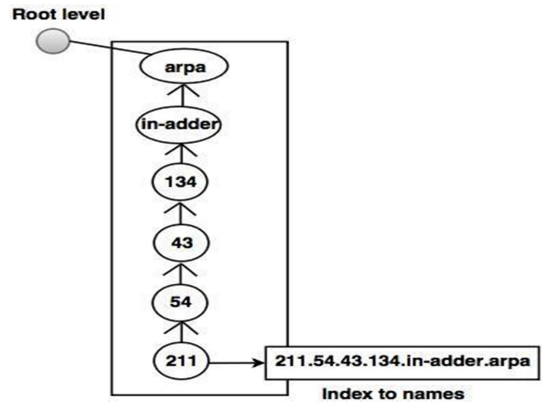
Figure 13.7 Inverse Domain

Domain Name Registration

The first domain name in history was Symbolics.com, which was registered on March 15, 1985. Today, there are more than 300 million domain names, with millions more added each year. A domain name is essentially the address that visitors will type into their browser address bar to arrive at your website. Domain names allow users to easily connect to other computer IP addresses by typing in an address like "Google.com" instead of Google's numerical IP address of "74.125.239.116".

Figure 13.8 Domain Name Registration

Your domain name is an important part of establishing your brand. No two domain names can be exactly alike, although they can be similar. Ideally, your domain name will be unique and distinctive, so users don't confuse it with other domain names or different businesses.

The non-profit Internet Corporation for Assigned Names and Numbers (ICANN) oversees the entire system of domain names, and it allows outside companies, called domain registrars, to sell and manage domain names. You will need to register your domain name through a registrar.

Once you have found the right domain registrar for you, you'll need to search for your domain name using the registrar's search bar. There are millions of domain names out there, with thousands more added daily. If you have your heart set on a domain name before doing a search, you might be disappointed to find it is already taken. Keep an open mind and incorporate important keywords into your domain when appropriate.

When you register a domain name with ICANN, you must provide your contact information including your name, phone number, physical address, and email address. As soon as your domain name is registered, this contact information becomes available to the public — unless you pay for domain privacy through your domain registrar. This domain privacy will shield your information from view keeping your personal information safe from spammers or worse, identity thieves.

13.8 PROTECTING PUBLISHED MATERIAL ON THE WEB

According to the Berne Convention, which was signed in 1886 and last revised in 1996, any original intellectual creation is subject to ownership, confers on the owner a monopoly over exploitation, and provides the following exclusive rights: representation, reproduction, translation, broadcasting, adaptation, recording, public reciting, right of continuity and moral rights. The Internet is multimedia by nature. This, in conjunction with its international character, makes traditional distinctions between works of the mind, designs or models less and less relevant. The content of the Internet is also multimedia in nature (it combines images, sounds, designs, models, text) and it is no possible here to go into the details of the various rights concerned.

LET US SUM UP

The power of the Web to reach the world carries with it a variety of legal issues, often related to intellectual property concerns, copyright, trademark, privacy, etc., particularly in the context of doing business on the Internet. Authorities seeking to apply their laws in traditional ways or to expand legal control over international links face many challenges due to the global nature of the Internet. Approximately 100 countries now enjoy Internet access, and a recent survey reported that there are approximately 20 million Internet hosts worldwide. The number of Internet users is currently estimated to be in the region of 100 million people. E-commerce presents a world of opportunity for doing businesses, reaching global markets and purchasing without leaving the home or office. E-commerce can provide opportunities to improve business processes, just as phones, faxes and mobile communications have in the past. However, just as any new business tool has

associated issues and risks so doe's electronic commerce. It's important to understand the legal issues and potential risks to ensure a safe, secure environment for trading with customers and other businesses.

CHECK YOUR PROGRESS

Choose the Correct Answer:

1. Which of the following is known as Plastic Money?

a) Demand Draft

b) Credit Card

c) Debit Card

d) All of the above

2. What is the name given to the online payment services that all internet banking customers can use?

a) E-pay

b) E-Commerce

c) ECS

d) None of the above

3. 'Smart Money' the term used for _____.

a) Internet banking

b) FDRs in Banks

c) Credit cards

d) Demand drafts of banks

4. Transferring money between banks for international wire transfers uses _____codes.

a) SWIFT

b) MICR

c) IFSC

d) None of the above

5. IMPS stands for _____.

a) Immediate Payment System

b) Immediate Payment Service

c) Intermediate Payment System

d) Intermediate Payment Service

GLOSSARY

RBI	:	The Reserve Bank of India is India's central bank and regulatory body under the jurisdiction of Ministry of Finance, Government of India. It is responsible for the issue and supply of the Indian rupee and the regulation of the Indian banking system.
MICR	:	Magnetic ink character recognition code, known in short as MICR code, is a character recognition technology used mainly by the banking industry to streamline the processing and clearance of cheques and other documents.
RTGS	:	Real Time Gross Settlement, abbreviated as RTGS systems are specialist funds transfer systems where the transfer of money or

securities takes place from one bank to any other bank on a "real-time" and on a "gross" basis.

NEFT	:	NEFT is a nation-wide centralized payment system owned and operated by the RBI. It is available round the clock on all days of the year. to transfer funds online is operational during this period, according the RBI.
IMPS	:	Immediate Payment Service is an instant payment inter-bank electronic funds transfer system in India. IMPS offers an inter-bank electronic fund transfer service through mobile phones. The service is available 24x7 throughout the year including bank holidays.

SUGGESTED READINGS

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2. Anup K. Ghosh, (2012), E-Commerce Security and Privacy, Kindle Edition
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4. Peter G W Keen, (1994), Every Manager's Guide to Information Technology, 2nd Edition, Harvard Business School Press, Boston.
5. Rajesh Chakrabarti and VikasKardile, (2002),The Asian Manager's Handbook of E-Commerce (paperback edition), Tata McGraw – Hill Publishing Company Limited, New Delhi.

WEB RESOURCES

1. https://www.facebook.com/pio.baguio/videos/online-payment/520128566506821/
2. The Rise Of E-Commerce 3.0: Decoding India's E-Retail Boom & Omnichannel Way Of D2C E-Commerce - Bing video
3. System Design: Payment Gateway | FAANG Sr SWE deep dives payment service interview question - Bing video

ANSWER TO CHECK YOUR PROGRESS

1. d)   2. a)   3. c)   4. c)   5. b)

UNIT 14

SECURITY STANDARD FOR ELECTRONIC PAYMENT SYSTEM

OVERVIEW

A payment gateway is a technology used by merchants to accept debit or credit card purchases from customers. The term includes not only the physical card-reading devices found in brick-and-mortar retail stores but also the payment processing portals found in online stores. However, brick-and-mortar payment gateways in recent years have begun accepting phone-based payments using QR codes or Near Field Communication (NFC) technology. With the Square Reader payment gateway technology, a merchant can attach a small piece of hardware to their mobile phone which allows the customer to swipe their payment card for processing through the mobile phone's electronic connection. The Square Reader sends the payment information to a merchant's acquiring bank which then processes the information for the merchant momentarily.

LEARNING OBJECTIVES

After completing this unit, you will be able to;

- gain knowledge in security aspects relating to electronic payment system
- explain the various areas related to third party payment processor
- express the features of the electronic payment systems
- explore about the security issues in electronic payment system
- evaluate the key features of trends in cyber security threats.

14.1 INTRODUCTION

Payment gateways are the consumer-facing interfaces used to collect payment information. In physical stores, payment gateways consist of the point of sale (POS) terminals used to accept credit card information by card or by Smartphone. In online stores, payment gateways are the "checkout" portals used to enter credit card information or credentials for services such as PayPal. Payment gateways are distinct from payment processors, which use customer information to collect payments on behalf of the merchant. There are also payment gateways to facilitate payment in crypto currencies, such as Bit coin. A normal payment processor like World pay has a simple job. It takes a transaction request from the merchant and liaises with various banks to move money from the customer's account to the merchant's account. A third-party processor works in *basically* the same way except, instead of sending the money to your merchant account, it sends it to its own merchant

account as an intermediate step before sending the funds to your bank account.

14.2 THIRD PARTY PAYMENT PROCESSING

A third-party payment processor is an entity that helps you receive payments online from your customers without first setting up your own merchant account with a bank. In other words, third-party payments processors allow merchants to entirely bypass the need to own a merchant account.

A third-party payment processor is an entity that helps you receive payments online from your customers without first setting up your own merchant account with a bank. If you're wondering what a merchant account is, it's a business bank account through which merchants can accept online or card payments from their customers. Businesses that have a merchant account can directly process and settle payments in their own account. In contrast, businesses that don't have their own merchant account can use one owned by a third-party payment processor. In other words, third-party payments processors allow merchants to entirely bypass the need to own a merchant account.

14.2.1 Need a Third party Payment Processor

A small or medium business or one that processes a low volume of transactions online every month, setting up a merchant account may prove to be a rather expensive deal. This is thanks to the different types of fees attached to them, including set-up fees, monthly fees and transaction fees. For many businesses, a third-party payment processor thus acts as the perfect alternative to a merchant account. Here are some factors that will help you decide if a third-party payment processing company is what you need instead:

a) **The size of your business:** If you are a small or medium-sized business that doesn't process hundreds of transactions per month, a merchant account may not scale well for you. In such a scenario, a third-party payment processor will offer you a hassle-free way to accept payments, just as you would with a merchant account.

b) **The volume of online transactions:** As a sub-merchant under a third-party payment processor, you typically pay only when you accept online payments, rather than shell out a monthly fee. For businesses with low transaction volumes, this is an attractive arrangement. But if you need to customize and control your account, then an independent sales organization (ISO) merchant account may be the right choice for you.

c) **Turn-around time:** Setting up a merchant account entails a long-drawn application and approval process that considers the nature of your business, how long you've been in business, as well as your credit history including bankruptcies. There's every chance of your application being rejected if you are regarded as a high-risk merchant based on these factors. For businesses that need to quickly start accepting payments, a third-party payment processor is a more hassle-free alternative.

14.2.2 Advantages of Third-Party Payment Processor

As we've discussed above, businesses that are looking to scale have a lot to benefit from their own merchant account. For new or small businesses, on the other hand, a merchant account may not prove economical. With that in mind, let's take a look at some of the benefits of partnering with a third-party payment services provider:

Here are the benefits of utilizing a third party payment processor for your business:

a) **No PCI Compliance Fee** With third party payment processors, you need not worry about the safety of your payments. They maintain the highest security measures to keep the customer data safe. Hence, do not have to stress about PCI compliance or any other fees on a standalone basis.

b) **Better UX** A third-party payment processor usually offers optimized checkout pages. In most cases, they are light for slow internet connections and work well on mobile. This results in a faster checkout experience and lower drop-offs.

c) **Handling Disputes and Refunds** Disputes and refunds are a part of everyday business life. More importantly, they are essential for a good customer service strategy. In fact, 95% of consumers believe that customer service dictates their choice and loyalty to a brand. A third party payment processor handles monetary transactions on your behalf.

d) **Risk Mitigation**

Online transactions involve an element of risk since buyers and sellers don't know each other. Third party payment processors handle high transaction volumes on a daily basis. Moreover, they have engines to detect potentially risky transactions. Flagging and declining such fraudulent transactions insulates your business from risk and financial loss.

e) **Faster Turnaround Time** A business needs to start accepting payments at the earliest. But setting up a merchant account is a lengthy and complex process. If the vendor considers you risky, he may even reject your application. In contrast, a third party payment processor ensures hassle-free setup and takes a fraction of the time incurred otherwise.

f) **Easy On boarding** Moreover, it ensures the approach is holistic and seamless. In fact, some online third party payment processors don't charge setup and annual maintenance costs, further enhancing the overall value to the business.

g) **Reliability** Everyone likes to partner with trustworthy organizations. It not only works this way for businesses but for customers too. If they find their most trusted payment partner listed on your website, there is a higher chance of trusting you and your offerings. With online third party payment processors, you benefit from partnering with the best players in the payment landscape without shelling exorbitant charges.

h) **Diverse Modes of Payment** It will allow you to accept payments through diverse modes. After all, customers prefer to pay with diverse modes of payments. This can be cards, UPI, wallets, EMI, etc. In fact, recent reports state that the preferred globally preferred modes of payment are eWallets (36%), credit cards (23%) and debit cards (12%). In India, UPI is increasingly becoming the preferred mode of payment beating debit and credit cards.

i) **International Payment Support** The support for international payments is one of the major advantages. It enables you to sell without thinking of location restrictions and cater to a broader audience. With Cash free, you get support for over 30 international currencies, allowing you to sell to a global audience.

j) **Faster Payment Settlement Cycle** A Third party payment processor takes a while to transfer the customer's funds to your account. This is known as the settlement cycle. Choosing a third party payment processor would ensure a faster payment settlement cycle compared to the traditional method.

k) **Timely Support** A lot of online third party payment processors provide 24*7 support to their partners. This ensures timely resolving of issues and an improved customer experience.

l) **Payment Analytics** Furthermore, they seamlessly integrate with your existing software. They also have the inbuilt ability to provide you with payment analytics to improve business decision-making and better cater to your customers. For instance, you can get reports of your previous transactions and set filters like transaction volume, date and time, mode of payment etc.

m) **Personalized Checkout Experience** 80% of consumers agree that personalized experiences increase their chances of making a purchase. Each payment processor offers a unique experience. This is one of the critical factors in improving the overall customer experience. It enables you to create a personalized checkout experience and enhance the value quotient for the client.

n) **High Payment Success Rate** Third party payment processors usually have in-built rerouting capabilities. Basically, they have multiple acquiring banks (acquirers). Now, various acquirers might have downtimes due to maintenance or high traffic. The processors route the transaction to the best acquiring bank to ensure maximum payment success.

14.2.3 Disadvantages of Third Party Payment Processor

Partnering with a payment processor can help you easily and conveniently accept credit card payments when you're just starting out. But as business scales, most merchants may find that a merchant account coupled with a payment gateway works better for their needs. With that in mind, it helps to know what you cannot expect from a third party payment processor:

Every coin has two sides. Partnering with a third party payment processor is no different. These come with disadvantages, which you must keep in mind before drawing up a contract with them.

a) **Less Scope for Customization**

A dedicated merchant account may enable you to make the minutest of the tweaks. Partnering with third parties leaves less scope for customization. There are constraints pertaining to the checkout pages, pricing, and other integrations you seek.

b) **Higher Setup Cost**

A third-party payment processor entails a high setup cost compared to the traditional way. However, it saves you about a

year of testing and choosing all the tools you would require for your payments.

14.2.4 Using Multiple Third-Party Payment Processor

A lot of merchants choose to use multiple third party payment processors for their payment needs. One of the biggest advantages of using it is payment routing. Payment routing means that transactions are forwarded to the acquirer that is most likely to approve them. Moreover, the transactions go to the acquiring bank that supports "failover transactions". Hence, if one acquirer declines a transaction, another bank might approve it. This results in higher payment success rates and a higher percentage of approved transactions. However, every business has specific needs according to which they may want to route their transactions. Here are some of them.

a) **MDR**: MDR or Merchant Discount Rate is the fee that the merchant pays when a customer makes a payment on his website using a card. A merchant may want to route the transaction based on the MDR offered by the third party payment processor.
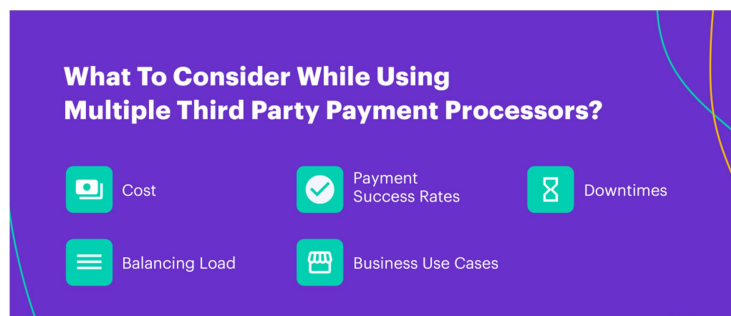
Figure 14.1 Multiple Third Party Payment Processors

b) **Balancing Load**: A business might have multiple peak seasons in a year. So it becomes imperative for a merchant to route the transactions to a processor that can handle higher loads with ease.

c) **Business Use Cases:** Many payment processors offer unique solutions that cater to specific industries. Hence, a merchant may route transactions related to specific industries to the respective processor.

d) **Downtime:** Downtimes are a part of a payment processor's operations. So, merchants need to consider a processor that has dynamic routing capability.

e) **Payment Success Rate:** The success rate of different processors may vary. The merchant may choose to route the high volume

transactions to the processor that has a record of success with a large number of funds.

14.2.5 How to Choose A Third Party Payment Processor?

Here are the factors you should take into consideration before choosing a third party payment processor.

a) **Business Size** Your software needs are directly proportional to the size of your business. The larger your organization, the more sophisticated third party payment processor you would require.

b) **Volume of Transactions** Some businesses have few high-value financial transactions. On the other hand, others have a high volume of low-value ones. So, you can look for a processor capable of meeting your transaction volume needs easily.
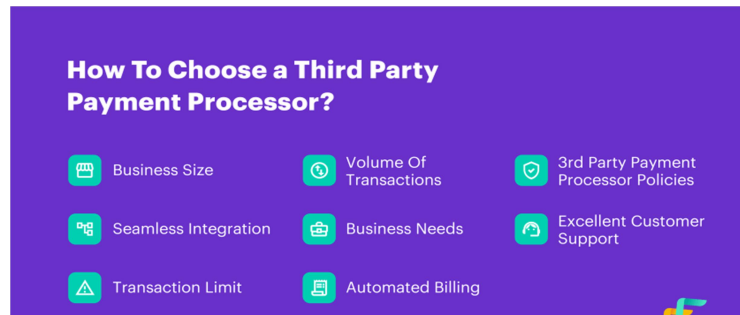
Figure 14.2 Third party Payment Processor

c) **Third Party Payment Processor Policies** Every business software comes with its set of terms and conditions. You must garner an in-depth understanding of what the policy document states, before finalizing a processor for your organization.

d) **Seamless Integration**

A payment processor is an integral part of your online business. So seamless integration is an important criterion while looking for the same. It includes the ability to collate information from various sources and feed data into the accounting software.

e) **Business Needs** Every business has specific needs. For example, you may need support for Pound-based transactions, or you may have a large amount of UPI transactions. Make sure that you choose a payment processor that is in sync with all your business needs.

f) Excellent Customer Support Even when you sleep, your store is open for all online customers. So, it is imperative for you to choose a payment processor that offers reliable support for its customers. It will enable you to reduce downtime and ensure that you can continue your usual business without any hiccups.

g) Transaction Limit Most third party payment processors have an upper limit on transactions per month. So, make sure that your chosen processor is in line with your transaction limit requirements.

h) Automated Billing There are businesses that offer subscriptions or memberships to their users for exclusive perks. If your business is one of them, it becomes imperative for you to offer an automated billing facility to your customers. Look for a processor that support recurring billing, UPI Autopay, and other related services.

14.2.6 Third Party Payment Processor Regulation

The rules and regulations for a third party payment processor vary from one country to another. In India, there are certain rules that have to be strictly adhered to. We have mentioned them below.

a) Capital Requirements Third party payment processors are required to reach and maintain a specified net worth. Essentially, net worth is a sum total of free reserves, convertible preference shares, paid-up equity capital, etc.

b) Authorization Online payment processors are required to handle funds. So, they require authorization from RBI. They have to apply to the Department of Payment and Settlement Systems (DPSS) for the same.

c) Prevention of Money Laundering Payment processors have to undergo risk assessment procedures. This is done to identify any threats to integrity or confidentiality of assets from a business compliance prospect. Moreover, they have to uphold the Know Your Customer (KYC) / Anti-Money Laundering (AML) / Combating Financing of Terrorism (CFT) guidelines issued by RBI. They also have to follow the Prevention of Money Laundering Act, 2002.

d) Merchant On boarding Payment processors have to ensure compliance with Payment Card Industry-Data Security Standard (PCI-DSS) and Payment Application-Data Security Standard (PA-DSS). They also have to run background checks on merchants before on boarding them. Most importantly, they have to ensure

that these merchants do not have any intentions to sell fake products or dupe customers. Furthermore, they may organize security audits of merchant sites to make sure that they are not saving customer card-related data

e) **Risk Management** They also have to prevent and detect frauds through proper data security infrastructures. Furthermore, they have an obligation to mitigate risks for the security of payment systems by following information security policies. They have to report any cyber security breach to DPSS and CERT-In (Indian Computer Emergency Response Team). Head over to this blog for more information on regulation for payment gateways and third party payment processors.

14.3 ELECTRONIC PAYMENT GATEWAY

A payment gateway is an online payments' service that, when integrated with the e-commerce platform, is devised as the channel to make and receive payments.

Figure 14.3 E-Commerce Payment Gateway

Post this, the customer proceeds to make a payment, which then, gets transferred from the buyer's account to the seller's (merchant's) account. Payment Gateway is an online payment processing technology which helps businesses to accept credit cards and electronic checks. In other words, payment gateways are "Man-in-the-middle" which are located between e-commerce platforms and clients.

To choose the right payment gateway, you should follow the following guidelines:

i) You should finalize that payment gateway which is supported in your country, not all them operate globally.

ii) You should check what payment gateways are supported better from your ecommerce platform. For example, PayPal gateway is

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fully supported by Magento because the same group have created them.

iii)   Payment gateway should be of 3.0 PCI data security standards.

iv)   Do you need payment gateway and merchant account or an all-in-one payment service provider?

v)   You must see the charges and fees that will be deducted per transaction.

vi)   What payment method do they support? For example, VISA is a payment method, Master Card is another.

vii)   Do they support your type of business? For example, some of them don't deal with businesses that sell adult materials, betting, gambling, firearms selling, narcotics, etc.

14.3.1 Most Popular Payment Gateway Providers

Following is the list of the most widely used and popular payment getaway providers along with a brief history about them.

a) **PAYPAL:** You can find all the terms and conditions of their business model on their URL:https://www.paypal.com/. PayPal is one of the longest established and probably the best-known service for transferring money online.

b) **Amazon Payments:** The URL of this immensely popular payment getaway provider is https://payments.amazon.com/. It was created in 2007, Amazon Payments provides your customers with the same checkout experience they get on Amazon.com

c) **Stripe:** The URL of this payment getaway is https://stripe.com/. No monthly fees, no extra charges for different cards and different payment methods, also for different currencies. Stripe also offers a great API (Application Program Interface) as well.

d) **Authorize Net:** The URL for this popular payment getaway provider is https://www.authorize.net/. It is among the most powerful and well-known payment gateways. It is well-supported by e-commerce Word Press plugins.

e) **2Checkout:** The URL for this payment getaway provider is https://www.2checkout.com/. 2checkout is one of the most simple and affordable credit card gateways.

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14.3.2 How Does Payment Gateway Work

Straight away coming to the functioning of an online payment gateway, it follows a procedure for settling the payment every time. This happens when a customer places the order for a service/product from a payment gateway-enabled merchant. From filling in the card details to payment finally flowing into the merchant's account and settling, the payment gateway passes through a variety of steps-

STEP 1: After the customer places the order online and proceeds to make payment for the same, he/she needs to enter credit/debit card details.

STEP 2: The card details are encrypted in a secure way with Secure Socket Layer (SSL) encryption to be sent between the browser and the merchant's web server. A payment gateway eliminates the merchant's Payment Card Industry Data Security Standard (PCI DSS) compliance obligations without redirecting customers away from the website.
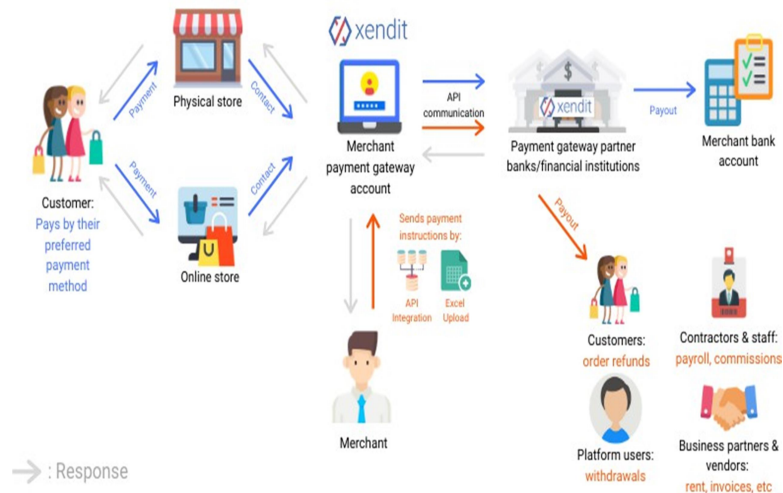
Figure 14.4 How does Payment Gateway Work

STEP 3: After this, the merchant forwards transaction details to their payment gateway, which is also an SSL encrypted connection to the payment server hosted by the payment gateway.

STEP 4: The payment gateway converts the message from XML to ISO 8583 or a variant message format (format understood by EFT Switches) and then forwards the transaction information to the payment processor used by the merchant's acquiring bank.

STEP 5: The payment processor forwards the transaction information to the card association (i.e.: Visa/MasterCard/American Express).

STEP 6: Next, the credit card issuing bank receives the authorization request, verifies the credit or debit available and then sends a response back to the processor (via the process same as for the authorization) with a response code (i.e., approved or denied). The response code also helps to communicate the reason for the case of a failed transaction, for example, insufficient funds, and so on.

STEP 7: The processor then forwards the authorization response to the payment gateway, and the payment gateway receives the response and forwards it onto the interface used to process the payment. This process is termed as Authorization or "Auth". This entirely takes around 2-3 seconds in general.

STEP 8: The merchant then fulfills the order and the above process can be repeated but this time to "Clear" the authorization by consummating the transaction. Typically, the "Clear" is initiated only after the merchant has fulfilled the transaction (I.e. shipped the order). This results in the issuing bank 'clearing' the 'auth' and prepares them to settle with the merchant acquiring bank.

STEP 9: The merchant submits all their approved authorizations, in a "batch" (end of the day), to their acquiring bank for settlement via its processor. This typically reduces or "Clears" the corresponding "Auth" if it has not been explicitly "Cleared."

STEP 10: The acquiring bank makes the batch settlement request of the credit card issuer.

STEP 11: The credit card issuer makes a settlement payment to the acquiring bank (the next day in most cases).

STEP 12: The acquiring bank subsequently deposits the total of the approved funds in to the merchant's nominated account (the same day or next day). This could be an account with the acquiring bank if the merchant does their banking with the same bank or an account with another bank.

14.3.3 The Architecture of Payment Gateway

Before we dive deeper into the functionality of a payment gateway, let us first understand some terminologies –

1. **Secure Servers** – A server that follows the Secure Sockets Layer (SSL) protocol to provide secure online transactions.

2. **Encryption** – A series of steps followed to convert data or information into a secret code.

3. **Acquiring Bank** – A financial institution that helps the Merchants to process debit and credit card transactions.

4. **Card Schemes** – Payment networks associated with debit or credit cards.

5. **Issuing Bank** – Banks that issue debit or credit cards to customers.
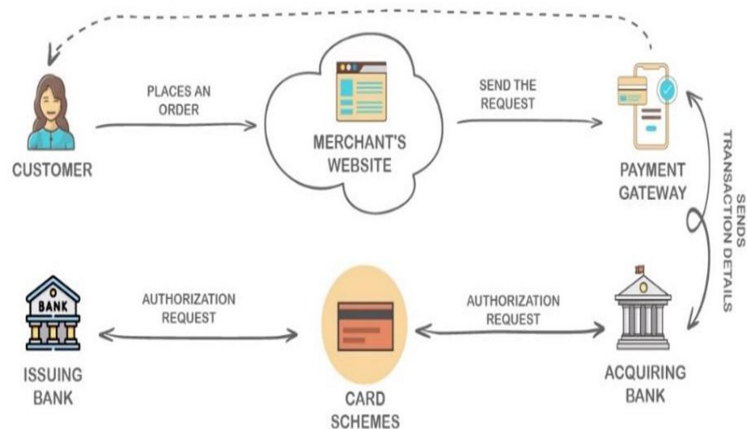
Figure 14.5 Payment Gateway Architecture

14.3.4 Key Features to look for from a Payment Gateway

Choosing the right payment gateway is an important decision for small retailers, and it helps to think about what you want from a gateway. Here are some of the key features and functions to think about.

a) **Security:** Customers, especially when buying from websites for the first time, want safe and secure payments. It's important to review the security features of any payment gateways.

b) **Speed of payment:** Cash flow matters, so you want to be paid quickly when customers make a purchase from your site.

c) **Customer support:** Slow customer service and longer resolution times can have a negative impact on business so it's important to look at customer service lead times and reputation. Reviews from other retailers are worth checking out before you make a decision.

d) **Integration:** Some payment gateways are easier to implement on your site than others. For smaller retailers without technical knowledge this can be important.

e) **Brand recognition:** Some of the gateways mentioned here (Amazon, PayPal) are well known by online shoppers. This can be an advantage in terms of customer confidence.

f) **International payments and support:** If you sell worldwide, it's important that the gateway accepts payments in the territories you target.

14.3.5 Advantages and Disadvantages Of Payment Gateway

Payment gateways are an essential component of e-Commerce websites, without that payment transactions will not happen. Internet payment gateways facilitate all these financial transactions.

Advantages of Payment Gateway

a) **Secure Transaction** A payment gateway checks and validates online transactions. It protects merchants and customers from flagrant instances of fraud.

b) **Ease of Use** Anyone with basic computer knowledge can perform business transactions using payment gateways. No need to go through any costly training or learn elaborate setup. It's simple and easy. Everybody can use it.

c) **Rapid Deployment** A merchant can immediately utilize payment gateway service for his/her online store. He need not wait for agonizing time to complete the payment gateway setup in his business. He can avail it in the quickest time possible.

d) **Feature-Rich** Internet payment gateways offer lots of customizable features that could greatly benefit merchants and customers alike. There are security features, payment option choices, card features, etc. You may turn on all these features or select only the ones that best serve your type of business.

Disadvantages of Payment Gateway

Contrary to common notion, payment gateways have some drawbacks, too. It can be likened to a double-edge sword that, when mishandled, can do significant financial damage to merchants as well as to customers. Here are the disadvantages of Internet payment gateways:

a) **Risk on Sensitive Information** Remember that a payment gateway deals with customers' information. Therefore, a payment gateway company will have files on all sensitive customers' data - customers' names, banks accounts, credit card numbers, passwords, etc. These are highly valuable data

b) Any Technical Glitch Can Take Considerable Troubleshooting Time A payment gateway is basically software. And just like any piece of computer software, it can go awry at times. When it does, it can have deleterious effects. The customers can no longer access or make payments online. On the other hand, the software glitch will render merchants' websites inoperative. It will take time— maybe weeks or months– to troubleshoot the problem and bring back merchants websites back to normal functionality.

c) Customers' Uneasiness Fraud is widespread in the Net and this fact scares most customers. They tend to stay away from any web-based software when making online transactions that involve disclosing personal information. If a merchant company gets a payment gateway service but the customers will not utilize it for some reasons or another, then the merchant will be at the losing end of the bargain.

14.4 SECURITY ISSUES ON ELECTRONIC PAYMENT SYSTEM

It is recommended that the clients instruct their banks to make the transfer of large payments directly to the agency's bank and not use Internet based payment systems. In common with all other electronic information processing systems, payment systems are prone to disruption by people exploiting the systems innate vulnerabilities.

Those considering employing a payments system must decide whether to accept the consequent risks. Data in computers are more liable to destruction, fraud, error and misuse. Since payment information is so valuable its security is all the more important than other kinds of tangible assets in the organizational context.

Security refers to the policies, procedures and technical measures and to prevent unauthorized access, alteration, theft or physical damage to information systems. The basic objective of information security is the protection of interests of those involved in online business. All electronic information processing systems are vulnerable to denial of service attacks where the attacker employs any one of a variety of methods to prevent a client using a service a provider offers. Such attacks can have the effect of closing down a business. Some of the attacks were as follows:

- Development of a method of obtaining the goods or services without making the appropriate payment.
- Compromise of clients' financial details credit card number, etc, which may result in the unauthorized transfer of funds and or

political embarrassment by their publication.

- Illicit modification of the electronic goods offered by the merchant or of the descriptions of the other goods or services on the merchant server

Before the introduction of computers, people manage payment systems directly and valuable information of business organizations was kept safely in paper records and files. However, in e-commerce environment, information related to payments is transmitted through computers and as such it can easily be accessible to any number of people including outsiders. Hence, the data in computers are more liable to destruction, fraud, error, and misuse.

Since payment information is so valuable its security is all the more important than other kinds of tangible assets in the organizational context. Therefore it is highly essential to protect this valuable information against loss, damage or disclosure.

Though only the positive change brought about by the e-payment systems is highlighted, we cannot ignore the disadvantages of electronic payment systems. One must be aware of the privacy and security concerns raised by electronic payment systems.

Security refers to the policies, procedures and technical measures and to prevent authorized access, alteration, theft or physical damage to information systems.

14.5 SECURE ONLINE PAYMENTS

As it is your responsibility to keep the purchasing process under control and reduce the risk of fraud at every step of checkout, you should provide solutions that reduce the vulnerable points of payment processing. Read on to learn the most important things that will keep your payments secure.

1. SSL Protocol

The first thing that is crucial for your payment security is ensuring that you have an SSL protocol implemented on your website. It helps you to encrypt information that goes through the site, such as credit card details and sensitive data that customers share during the checkout process.
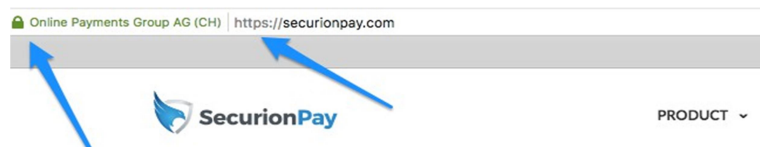
Figure 14.6 SSL Protocol

Plus, the padlock icon visible in the URL bar next to your web address that begins with *https* tells customers that your website is protected and safe to use. This grows your online reputation, improves brand awareness, and builds your credibility. The SSL certificate comes with many benefits for your business, so make sure you have one in place.

2. PCI Compliance

PCI compliance if you accept payments on your website or consider working with one of the payment providers. In short, PCI DSS is a set of regulations created by major payment card brands such as Visa, MasterCard, American Express, Discover, and JCB. This scheme requires organizations to comply with 12 general data security requirements that every merchant needs to follow.

PCI compliance is required by credit card companies to make online transactions secure and protect them against identity theft. Any merchant who wants to process, store, or transmit credit card data is required to be PCI compliant, according to the PCI Compliance Security Standard Council. However, Verizon's report shows that even though the PCI DSS was launched in 2004, just 36.7% of organizations were actively maintaining the compliance programs in 2018, which is a major concern.

3. Tokenization

Tokenization is a technology that makes it easier to improve payment security and provide a payment process without vulnerabilities. It helps to authenticate the customer during the purchase without affecting the security of a transaction. The process uses tokens—random strings of characters that replace sensitive information, such as a 16-digit credit card number. Tokenization reduces the chances of data breach, because if a token is stolen, it will be useless to fraudsters.

4. 3D Secure

3D Secure authentication is an additional security layer for card-not-present transactions. The name comes from 'Three Domain Secure', which is a messaging protocol that involves three domains, such as a bank, technology that processes the transaction, and the issuing bank.

The system usually requests tokens or biometrics to authenticate cardholder information, which can decrease the number of fraudulent attempts. Plus, the liability on every transaction that is successfully verified is shifted from a merchant to the issuing bank.

5. Address Verification Service

Address Verification Service, also known as AVS—a security measure used to prevent fraudulent transactions on debit and credit cards. The tool verifies whether the billing address provided by the cardholder matches the one associated with the card.

14.5.1 How Do You Prevent Fraud?

According to the European Fraud Report – Payments Industry Challenges card not present fraud in Europe represents almost 80% of the total volume of fraudulent card transactions. The report also states that the total value of transactions reaches €1.8 billion annually.

Fraud is costly and affects your credibility with a customer's trust. Its detection can be time-consuming and requires comprehensive knowledge. That's because suspicious activities can be similar, but are rarely identical, so they are difficult to detect. So, bearing this in mind, consider implementing a fraud protection service or choose a payment gateway with advanced fraud management tools.

Fraudulent activities are made for personal gain and frequently committed against consumers. These could be unauthorized transactions, false requests for a refund, etc. It's a real threat to payment security, but there are warning signs you can look out for to limit the number of fraudulent activities. The most common methods to fight fraud are data analysis, pattern recognition, anomaly detection, multi-layer security, and risk assessment.

1. Monitor your Orders: Monitor orders before shipping them, especially international ones. Plus, pay special attention to late night and early morning orders. You should also require a signature upon delivery to ensure that the order is delivered and in good hands.

2. Provide updated product or service descriptions: Incomplete or mismatched descriptions increase the chances that the customer will file a chargeback. So, make sure that items on your website come with accurate and detailed descriptions. You should also check your billing descriptors—they need to match your business name to make consumers simply recognize transactions on their bank statements. If customers don't recognize your business name, they will most likely dispute a charge.

3. Send confirmation emails: Send email messages right after your customers place an order on your website. Include all transaction details to keep customers informed about the status of their transactions.

4. Provide shipping details: Customers want to know shipping costs and deadlines before they click the Pay button. Provide them with tracking information to keep them updated about where their package is and immediately inform them about delays. Sometimes, fast shipping can help. People are impatient and waiting too long for ordered items may cause a dispute of the transaction.

5. Make a clear refund policy: Make your refund policy visible for website users and make it simple and easy to understand. Offer a refund when a customer isn't satisfied with an ordered product. Provide detailed information on how to return the item and how to request a refund. It can help you prevent chargebacks and avoid negative reviews. Set clear return policies. Return management can be less expensive and comes with less hassle than having to deal with chargebacks.

6. Keep all information regarding past orders: It's good to keep details of past fraudulent activities to quickly recognize patterns and spot transactions that are considered risky. Also, keep detailed records of all transactions, so that it will be easier for you to gather evidence and valid proof when a chargeback occurs.

7. Analyze trends: As fraudsters are getting more and more sophisticated with their attacks, you should follow the latest trends. Doing so will help you understand how they can impact your business and be better prepared for mitigation strategies. If you work with decent payment providers or fraud detection companies, you can rest assured that they strictly follow all the trends and regulations on the market. But even so be vigilant—it's better to be safe than sorry.

8. React promptly: Deal with customer issues promptly, as when customers know the status of their inquiries, they are less likely to file a chargeback. If possible, run a customer service 7 days a week 24 hours a day. If that's not possible, state the support hours on your website and inform about an approximate time frame for addressing customer inquiries.

14.6 CYBER SECURITY THREATS

A cyber security threat is a malicious and deliberate attack by an individual or organization to gain unauthorized access to another individual's or organization's network to damage, disrupt, or steal IT assets, computer networks, intellectual property, or any other form of sensitive data.

Types of Cyber Security Threats

While the types of cyber threats continue to grow, there are some of the most common and prevalent cyber threats that present-day organizations need to know. They are as follows:

1. Malware: Malware attacks are the most common type of cyber-attack. Malware is defined as malicious software, including spyware, ransom ware, viruses, and worms, which gets installed into the system when the user clicks a dangerous link or email. Once inside the system, malware can block access to critical components of the network, damage the system, and gather confidential information, among others.

2. Phishing: Cybercriminals send malicious emails that seem to come from legitimate resources. The user is then tricked into clicking the malicious link in the email, leading to malware installation or disclosure of sensitive information like credit card details and login credentials.

3. Spear Phishing: Spear phishing is a more sophisticated form of a phishing attack in which cybercriminals target only privileged users such as system administrators and C-suite executives.

4. Man in the Middle Attack: Man in the Middle (MitM) attack occurs when cyber criminals place themselves between a two-party communications. Once the attacker interprets the communication, they may filter and steal sensitive data and return different responses to the user.

5. Denial of Service Attack: Denial of Service attacks aims at flooding systems, networks, or servers with massive traffic, thereby making the system unable to fulfill legitimate requests. Attacks can also use several infected devices to launch an attack on the target system. This is known as a Distributed Denial of Service (DDoS) attack.

6. SQL Injection: A Structured Query Language (SQL) injection attack occurs when cybercriminals attempt to access the database by uploading malicious SQL scripts. Once successful, the malicious actor can view, change, or delete data stored in the SQL database.

7. Zero-day Exploit: A zero-day attack occurs when software or hardware vulnerability is announced, and the cybercriminals exploit the vulnerability before a patch or solution is implemented.

8. Advanced Persistent Threats (APT): An advanced persistent threat occurs when a malicious actor gains unauthorized access to a system or network and remains undetected for an extended time.

9. Ransom Ware: Ransom ware is a type of malware attack in which the attacker locks or encrypts the victim's data and threatens to publish or blocks access to data unless a ransom is paid.

10. DNS Attack: A DNS attack is a cyber-attack in which cybercriminals exploit vulnerabilities in the Domain Name System (DNS). The attackers leverage the DNS vulnerabilities to divert site visitors to malicious pages (DNS Hijacking) and exfiltration data from compromised systems (DNS Tunneling).

14.6.1 Sources of Cyber Security Threats

In order to respond effectively to a cyber-attack, it's imperative to know the threat actors and understand their tactics, techniques, and procedures.

Figure 14.8 Sources of Cyber Security Threats

a) **Nation States** Cyber-attacks by a nation can inflict detrimental impact by disrupting communications, military activities and everyday life.

b) **Criminal Groups** Criminal groups aim to infiltrate systems or networks for financial gain. These groups use phishing, spam, spyware, and malware to conduct identity theft, online fraud, and system extortion.

c) *Hackers* Hackers explore various cyber techniques to breach defenses and exploit vulnerabilities in a computer system or network.

d) **Terrorist Groups** Terrorists conduct cyber-attacks to destroy, infiltrate, or exploit critical infrastructure to threaten national security, compromise military equipment, disrupt the economy, and cause mass casualties.

e) **Hacktivists** Hacktivists carry out cyber-attacks in support of political causes rather than financial gain. They target industries, organizations, or individuals who don't align with their political

f) **Malicious Insiders** Insiders can include employees, third-party vendors, contractors, or other business associates who have legitimate access to enterprise assets but misuse that accesses to steal or destroy information for financial or personal gain.

g) **Corporate Spies** Corporate spies conduct industrial or business espionage to either make a profit or disrupt a competitor's business by attacking critical infrastructure, stealing trade secrets, and gaining access.

14.6.2 Best Practices To Protect From Cyber Threats

a) **Create an Insider Threat Program** Creating an insider threat program is imperative for organizations to prevent employees from misusing their access privileges to steal or destroy corporate data. The IT security team should not delay and gain the approval of top management to deploy policies across departments.

b) **Train employees** Employees are the first line of defense against cyber threats for every organization. Thus, organizations must conduct comprehensive cyber security awareness programs to train employees on recognizing and responding to cyber threats. This dramatically improves an organization's security posture and cyber resilience.

c) **Maintain Compliance** Irrespective of the level of cyber security an organization implements, it must always maintain compliance with data regulations that apply to their industry and geographical location. The organization must stay abreast with the evolving compliance regulations to leverage the benefits it brings with it.
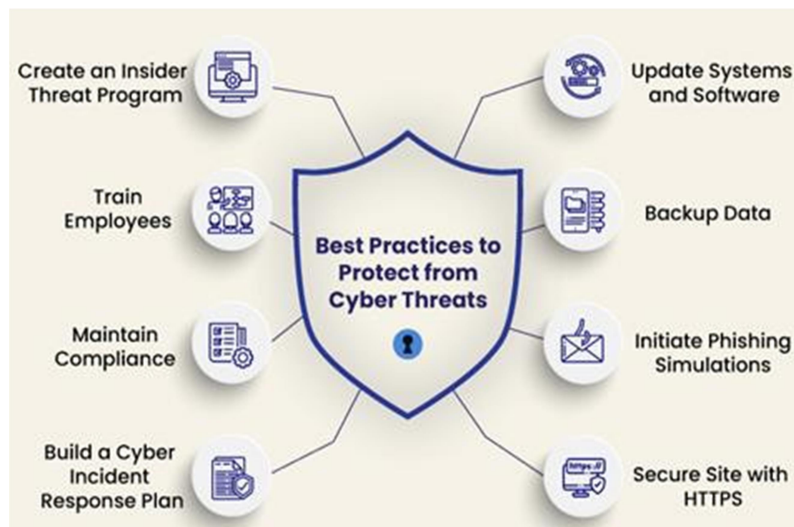
Figure 14.10 Protect from Cyber Threats

d) **Build a Cyber Incident Response Plan** In the present digital era, no organization is exempt from cyber-attacks. Thus, organizations of all sizes must build an effective Cyber Security Incident Response Plan (CSIRP) to navigate cyber adversaries. It enables businesses to prepare for the inevitable, respond to emerging threats, and recover quickly from an attack.

e) **Regularly Update Systems and Software** As cyber threats are evolving rapidly, your optimized security network can become outdated within no time, putting your organization at the risk of cyber-attack. Therefore, regularly update the security network and the associated systems and software.

f) **Backup Data** Backing up data regularly helps reduce the risk of data breaches. Backup your website, applications, databases, emails, attachments, files, calendars, and more on an ongoing and consistent basis.

g) **Initiate Phishing Simulations** Organizations must conduct phishing simulations to educate employees on how to avoid clicking malicious links or downloading attachments. It helps employees understand the far-reaching effects of a phishing attack on an organization.

h) **Secure Site with HTTPS** Organizations must encrypt and secure their website with an SSL (Secure Sockets Layer) certificate. HTTPS protects the integrity and confidentiality of data between the user and the website.

LET US SUM UP

Security is the major concern in e-commerce. Internet is an insecure and unreliable media today. E-commerce applications are in threat to various security threats. The electronic payment system need to be secure for internet transaction participants such as payment gateway server, bank sever and merchant server. The security architecture of the system is designed by using many security protocols and techniques, which reduces the fraud that occurs with stolen credit card or debit card payment information and customer information. Every type of business operation in which the parties relate electronically rather than by physical exchanges or direct physical contact consists of the buying and selling of products or services over electronic systems such as internet and other computer networks comes under the type of ecommerce. Online transactions are an important part of ecommerce. When we sell or buy an item we have to pay for it. Here different methods of security have offered that increases the level of security

dimensions and appearances that the security principle for secure communication channel has a significant level protection rather than unsecure communication channel.

CHECK YOUR PROGRESS

Choose the Correct Answer:

1. A firewall may be implemented in _____.

a) Routers which connect intranet to internet

b) Bridges used in an intranet

c) Expensive modem

d) User's application programs

2. The secure electronic transaction protocol is used for _____.

a) Credit card payment

b) Cheque payment

c) Electronic cash payments

d) Payment of small amounts for internet services

3. Currency notes are issued by _____.

a) NABARD   b) RBI

c) Public sector banks   d) Central government

4. What does SSL stands for?

a) Standard Security Layer   b) Socket Security Level

c) Secure Socket Layer   d) Socket Security Level

5. _____is the payment facilitator through which customers shall make payments for their purchases?

a) Payment Hub   b) Payment agent

c) Payment Merchant   d) Payment Gateway

GLOSSARY

| **Payment Gateway** | : | A payment gateway is a merchant service provided by an e-commerce application service provider that authorizes credit card or direct payments processing for e-businesses, online retailers, bricks and clicks, or traditional brick and mortar. |

Threats	:	E-commerce threat is occurring by using the internet for unfair means with the intention of stealing, fraud and security breach. There are various types of e-commerce threats. Some are accidental, some are purposeful, and some of them are due to human error. The most common security threats are an electronic payments system, e-cash, data misuse, credit/debit card frauds, etc.
Cyber Security	:	Cyber security is the application of technologies, processes and controls to protect systems, networks, programs, devices and data from cyber-attacks. It aims to reduce the risk of cyber-attacks and protect against the unauthorized exploitation of systems, networks and technologies.
Hackers	:	A computer hacker is a computer expert who uses their technical knowledge to achieve a goal or overcome an obstacle, within a computerized system by non-standard means.
Phishing	:	Phishing is a type of social engineering where an attacker sends a fraudulent message designed to trick a human victim into revealing sensitive information to the attacker or to deploy malicious software on the victim's infrastructure like ransom ware.

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WEB RESOURCES

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3. What is a Payment Gateway - 3 Ways To Use a Merchant Account Gateway - Bing video
4. What Is A Payment Gateway? - Bing video
5. Online Payment Security: What You Need to Know - YouTube

ANSWER TO CHECK YOUR PROGRESS

1. a) 2. a) 3. b) 4. c) 5. d)

BLOCK 5

ENVIRONMENT OF E-COMMERCE

Unit 15: The Environment of E-Commerce

Unit 16: Business Plan For Implementing

Electronic Commerce

UNIT 15

THE ENVIRONMENT OF E-COMMERCE

STRUCTURE

Overview

Learning Objectives

15.1 Introduction

15.2 The Environment of E-Commerce

15.3 International Nature of Electronic Commerce

15.4 Issues of E-Commerce

       15.4.1 Financial Issues

       15.4.2 Legal Issues

       15.4.3 Borders and Jurisdiction

       15.4.4 Jurisdiction on the Internet

15.5 Intellectual Property

       15.5.1 Intellectual Property Protection

       15.5.2 Patents

       15.5.3 Trademarks

       15.5.4 Trade Secrets

       15.5.5 Copyrights

15.6 Ethical Issues

       15.6.1 Web Tracking

       15.6.2 Privacy

       15.6.3 Privacy Rights and Obligations

       15.6.4 Principles for Handling Customer Data

       15.6.5 Disintermediation and Re-intermediation

15.7 Taxation and Electronic Commerce

15.8 Taxation and E-Commerce Problems

15.9 Legal Environment

Let Us Sum Up

Check Your Progress

Glossary

OVERVIEW

Today, e-commerce has grown into a big industry and is generating huge revenues from online retailing. It requires the integration of transportation, information and communication technologies for the success of e-commerce. But e-commerce cannot be now seen as clean way of doing business as it can have some harmful impacts on environment. The rapid growth of the e-commerce is the basis of different, positive as well as negative impacts on environment. The overwhelming sustainable development and major technological innovations have not only brought fundamental change to the economic system but also extensive environmental impacts, for better or worse. The environmental implications, in most cases are a reflection of human economic activities as mediated by technology. After decades of development, the Internet brings a new era, in which worldwide participants has been increasing.

LEARNING OBJECTIVES

After completing this unit, you will be able to;

- explain about the environment of E-Commerce
- discuss the key features of intellectual property
- assess the different phases of issues in E-Commerce
- gain knowledge about Taxation of electronic commerce
- gain knowledge about ethical issues.

15.1 INTRODUCTION

The Internet has created a new economic ecosystem, the e-commerce marketplace, and it has become the virtual main street of the world. Providing a quick and convenient way of exchanging goods and services both regionally and globally, e-commerce has boomed. Due to vast and fast development of e-commerce, companies and businesses are paying so much attention to the production of low cost products. Also, they are focusing on developing efficient methods and practices which increases productivity in minimum efforts and cost. They are not aware and hence not concerned about its adverse environmental implications.

The Internet has now entered almost every corner of the world. Furthermore E-commerce can well coordinate, collaborate and manage the business activities but it may have some negative effects like air

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pollution, harmful radiation etc. E-commerce is the foundation of the economy development in several developing and developed nations.

The ease of online shopping itself causes people to buy more. The environmental effects of e-commerce focuses on three aspects: energy, resources and pollution. As of today the scientists or policy makers still do not have clear statements about relationship between the ecommerce and the environment. Even though e-commerce business models reduce the number of transportation emissions put into the air by their customers, their delivery trucks and other vehicles (e.g. planes) can still emit large amounts of harmful pollutants. This will require additional trips and more transportation emissions.

E-commerce by its nature involves a lot of packaging and shipping, and e-commerce companies can't always control how their products get sent. Eventually, the system surrounding e-commerce is likely to become more environmentally friendly, though it's difficult to predict the timing of that shift.

15.2 THE ENVIRONMENT OF E-COMMERCE

Today, Internet is affecting almost every aspect of daily life. Internet is empowering citizens, democratizing societies and changing the classic business and economic paradigms. New business models are developing as more and more businesses and consumers continuing to participate in E-Commerce.

Figure 15.1 Environment of E-Commerce

The unique nature of the Internet as a medium, widespread competition and increased consumer choices are the defining features of the new digital marketplace. E-Commerce has no geographical boundaries and a business that uses the Web immediately becomes an international business subject to many more laws. The increased efficiency and speed of communication provided by web enables much more interactive and complex relationships of customers with online

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businesses and within themselves. Violation of laws or breach of ethical standards by online businesses therefore can result in rapid and intense reactions from their customers and stakeholders. With expanding use of Internet, E-Commerce businesses and users continue to face extensive regulations on the Internet and E-Commerce.

15.3 INTERNATIONAL NATURE OF ELECTRONIC COMMERCE

Because the Internet connects computers all over the world, any business that engages in electronic commerce instantly becomes an international business. When companies use the Web to improve a business process, they are automatically operating in a global environment. The key issues that any company faces when it conducts international commerce include trust and culture, language, and infrastructure.

1. Trust Issues on the Web

It is important for all businesses to establish trusting relationships with their customers. Companies with established reputations in the physical world often create trust by ensuring that customers know who they are. These businesses can rely on their established brand names to create trust on the Web. New companies that want to establish online businesses face a more difficult challenge because a kind of anonymity exists for companies trying to establish a Web presence.

2. Language Issues

Most companies realize that the only way to do business effectively in other cultures is to adapt to those cultures. "Think Globally, Act Locally" The first step that a Web business usually takes to reach potential customers in other countries, and thus in other cultures, is to provide local language or regional dialect.

3. Culture Issues

An important element of business trust is anticipating how the other party to a transaction will act in specific circumstances. That is one reason why companies with established brands can build online businesses more quickly and easily than a new company without a reputation. The brand conveys some expectations about how the company will behave. Companies must be aware of the differences in language and customs that make up the culture of any region in which they intend to do business.

4. Culture and Government

Some parts of the world have cultural environments that are extremely inhospitable to the type of online discussion that occurs on the internet. The cultural conditions, in some cases, lead to government controls that can limit electronic commerce development. The internet is a very open form of communication. This type of unfettered communication is not desired or considered acceptable in some cultures.

5. Infrastructure Issues

Internet infrastructure includes the computers and software connected to the internet and communications networks over which the massage packets travel. In many countries other than the United States, the telecommunications industry is either government owned or heavily regulated by the government. More than half of all businesses on the Web turn away international orders because they do not have the processes in place to handle the orders.

15.4 ISSUES OF E-COMMERCE

Doing E-Commerce or E-business cannot be a competitive alternative to traditional commerce or maximize the benefits of E-Commerce / E-business unless a number of technical as well as enabling issues are considered.

Increasing size of E-Commerce is forcing governments to adopt a non-regulatory, market oriented approach to E-Commerce that will support a transparent and predictable legal environment to support global E-Commerce. However, there are several major issues of E-Commerce where agreements are needed to achieve this goal.

15.4.1 Financial Issues

Financial services exist to protect, invest and manage money. The range of financial products is huge – from personal banking to the management of complex international investment portfolios.

a) Customs and Taxation

Taxation in E-Commerce is a controversial and extremely important issue. This is because it is related to global E-Commerce as well as to fairness in competition between E-Commerce and conventional offline businesses. The issue becomes more important due to the current and forecasted large transaction volumes of E-Commerce. E-Commerce transactions are multiplying at an exponential rate. Therefore there exists lots of potential sales tax and cities, states and countries all would be interested to get a piece of the pie.
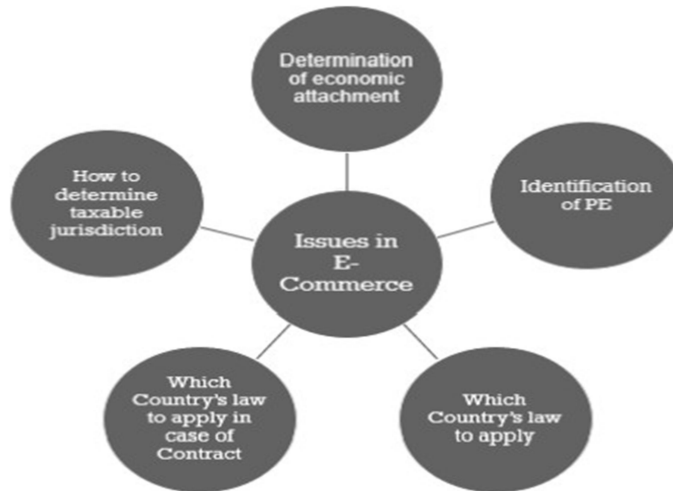
Figure 15.2 Issues in E-Commerce Transactions

However, nations looking for new sources of revenue may introduce tariffs on global E-Commerce. Worldwide efforts are being made by governments and other organizations (e.g. World Wide Web Consortium) to ensure that taxation of E-Commerce is consistent with the principles of international taxation, avoid inconsistent local tax laws and double taxation, simple to administer, easy to understand.

b) Electronic Payment System

Electronic payment systems have many associated issues e.g. security during the transaction and storage, double spending, counterfeiting and issue of liability. The business and technological environment, in which the electronic payment systems are being developed is changing rapidly. Therefore developing a policy that is both timely and appropriate is difficult and governments need to develop flexible and non-rigid regulations. Government intervention is needed in long run to ensure the security and reliability of electronic payment systems and to protect consumers.

15.4.2 Legal issues

Laws are written and enacted by government. All citizens within jurisdiction of laws must act according to the laws. Any activity against the laws can be held liable for punishment by the legal system. Using the Internet in general and E-Commerce in particular raises many legal issues.

Electronic Contracts

a) **A legally binding contact requires a few basic elements:** Offer, acceptance and consideration. In an online transaction these

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requirements are difficult to establish because there is no human involvement and the contracting is performed electronically. In general, contracts are valid and enforceable even if they are not in writing or signed by parties involved. A signature is any symbol executed or adopted for the purpose of authenticating writing. The US Electronic Signatures in Global and National Commerce Act gives contracts signed online the same legal status as a contract signed with pen or paper. Similar laws have been enacted in several European and Asian countries.

b) **Written contracts on the Web:** In general, contracts are valid even if they are not in writing or signed. However, certain categories of contracts are not enforceable unless the terms are put into writing and signed by both parties. Most courts will hold that a writing exists when the terms of a contract have been reduced to some tangible form. A signature is any symbol executed or adopted for the purpose of authenticating a writing.

c) **Warranties on the Web:** Most firms conducting electronic commerce have little trouble fulfilling the requirements needed to create enforceable, legally binding contracts on the Web. One area that deserves attention, however, is the issue of warranties. Any contract for the sale of goods includes implied warranties. Sellers can avoid some implied warranty liability by making a warranty disclaimer. A warranty disclaimer is a statement declaring that the seller will not honor some or all implied warranties.

d) **Authority to form contracts:** Determining whether an individual has the authority to commit a company to an online contract is a greater problem than forged identities in electronic commerce. This issue, called authority to bind, can arise when an employee of a company accepts a contract and the company later asserts that the employee did not have such authority.

e) **Terms of service agreement:** Intended to limit the Web site owner's liability for what you might do with information you obtain from the site. In most cases, a site visitor is held to the terms of service even if that visitor has not read the text or clicked a button to indicate agreement with the terms.

15.4.3 Borders and Jurisdiction

Territorial borders in the physical world serve a useful purpose in traditional commerce: They mark the range of culture and reach of applicable laws very clearly. When people travel across international borders, they are made aware of the transition in many ways.

a) **Power:** A form of control over physical space and the people and objects that reside in that space, and is a defining characteristic of statehood. For laws to be effective, a government must be able to enforce them. The ability of a government to exert control over a person or corporation is called jurisdiction.

b) **Effects:** Laws in the physical world are grounded in the relationship between physical proximity and the effects, or impact, of a person's behavior. Personal or corporate actions have stronger effects on people and things that are nearby than on those that are far away.

c) **Legitimacy:** The idea that those subject to laws should have some role in formulating them.

d) **Notice:** Physical boundaries are a convenient and effective way to announce the ending of one legal or cultural system and the beginning of another. The physical boundary, when crossed, provides notice that one set of rules has been replaced by a different set of rules. Notice is the expression of such a change in rules.

15.4.4 Jurisdiction on the Internet

Governments that want to enforce laws regarding business conduct on the Internet must establish jurisdiction over that conduct. A contract is a promise or set of promises between two or more legal entities – persons or corporations – that provides for an exchange of value (goods, services, or money) between or among them. A tort is an intentional or negligent action taken by a legal entity that causes harm to another legal entity. People or corporations that wish to enforce their rights based on either contract or tort law must file their claims in courts with jurisdiction to hear their cases. A court has sufficient jurisdiction in a matter if it has both subject matter jurisdiction and personal jurisdiction.

a) **Subject-matter Jurisdiction** Subject-matter jurisdiction is a court's authority to decide a particular type of dispute. For example, in the United States, federal courts have subject-matter jurisdiction over issues governed by federal law (such as bankruptcy, copyright, patent, and federal tax matters), and state courts have subject-matter jurisdiction over issues governed by state laws (such as professional licensing and state tax matters). If the parties to a contract are both located in the same state, a state court has subject matter jurisdiction over disputes that arise from the terms of that contract. The rules for determining whether a court has subject-matter jurisdiction are clear and easy to apply. Few disputes arise over subject-matter jurisdiction.

b) Jurisdiction

Jurisdiction is basically the ability of a legal body, such as a court, to assume control and enforce its decisions over you. The Internet is international. Except for things like international treaties, legal systems are not. Therefore, you have to think about which laws may apply to you. This is a complex area, but the fundamental concept to keep in mind is that foreign courts may take jurisdiction over you, generally on a sliding scale depending on how your website is set up, and how active you are in the other jurisdiction. When a court in another jurisdiction decides to exercise authority over you, that court's decisions may be recognized by other jurisdictions, including your own.

15.5 INTELLECTUAL PROPERTY

Intellectual Property Protection is protection for inventions, literary and artistic works, symbols, names, and images created by the mind. Learn how you can protect your intellectual property by using: Patents, Trademarks, Trade Secrets and Copyrights.

Figure 15.4 Intellectual Property

15.5.1 Intellectual Property Protection

Entrepreneurs and business owners need to understand the basics of intellectual property (IP) law to best protect their hard-earned creations and ideas from unfair competition. Intellectual property includes distinctive items that you have created and ones that give you an economic benefit. Seek professional experience from an intellectual property attorney to help your company plan for success and avoid theft of ideas, designs, and other concepts. Since filing and refiling IP applications can get expensive and waste time if done incorrectly, determine what you need to protect when it comes to IP:

a) Decide which of your ideas fall under which specific protection option
b) File as quickly as possible to reduce your chance of losing out on protection
c) Investigate international patents as well as those registered in the United States

Make sure to plan and execute your planned strategy as soon as you start your company or invent something new.

15.5.2 Patents

A patent grants property rights on an invention, allowing the patent holder to exclude others from making, selling, or using the invention. Inventions allow many businesses to be successful because they develop new or better processes or products that offer competitive advantage on the marketplace. You get a patent by filing a patent application with the U.S. Patent and Trademark Office (USPTO).

You'll discover three types of patents:

- Utility
- Design
- Plant

A utility patent is the most common type, covering any process, machine, article of manufacture, or composition of matter, or any new and useful improvements thereof. To qualify for a utility patent, the invention must be novel, no obvious, and have some usefulness. Novel means new and not known by anyone else, while nonobvious means that it can't be immediately obvious to someone having ordinary skills in the industry.

A design patent covers any new, original, and ornamental design for an article of manufacture, while a plant patent covers any new variety of asexually produced plant. A design patent lasts for 14 years, and a utility or plant patent lasts for 20 years. With patent protection, the patent holder can take legal action against anyone who copies the patented invention, design, or discovery. Without this legal protection, anyone can use similar designs, products, and processes without risk. In fact, if you don't file for patent protection on your invention within 12 months of releasing it in a public setting, the opportunity to patent it will be gone.

Before filing for a patent, you should determine who will own the idea. Some companies file for patents on their protected inventions, but if an employee came up with the idea, the individual may be granted holder of

the patent. If your business owns the patent, you must protect the patent with the company by having employees involved in the invention process sign an agreement stating that the idea belongs to the company. The patent application process is complicated, one that could take up to six years and cost thousands of dollars, so the USPTO recommends that you hire a qualified patent attorney or agent to file your patent.

Those on the opposite side believe that patents and other forms of protection restrict free trade and economic growth. But IP protection laws are still in place and designed to protect inventors, business owners, and creators.

15.5.3 Trademarks

A trademark is a word, phrase, symbol, or design that distinguishes the source of products (trademarks) or services (service marks) of one business from its competitors. In order to qualify for patent protection, the mark must be distinctive. For example, the Nike "swoosh" design identifies athletic footwear made by Nike.

Although rights in trademarks are acquired by use, registration with the USPTO allows you to more easily enforce those rights. Before registering your trademark, conduct a search of federal and state databases to make sure a similar trademark doesn't already exist. This trademark search can help you reduce the amount of time and money you could spend on using a mark that is already registered and trademarked.

To apply, you must have a clear representation of the mark, as well as an identification of the class of goods or services to which the mark will apply. You can submit an online application, and filing fees vary according to several factors, including the form type and the number of classes of goods or services. Trademarks expire after 10 years, and renewal terms are 10 years.

Before receiving approval from the USPTO, companies and people can use the TM symbol to indicate ownership of the mark. Upon approval, you can legally add the registered trademark symbol (®) to your mark. The TM symbol doesn't hold any legal weight, but it can indicate to other businesses or people in your industry that you intend to claim the mark.

To register trademark, you can:

1. File a "use" application after using the mark.

2. File an "intent to use" application before using the mark.

If a foreign application exists, a trademark holder might be able to rely on that application for use in the United States. Filing an application is complex, so most applicants hire an attorney who specializes in trademarks.

15.5.4 Trade Secrets

A trade secret is a formula, process, device, or other business information that companies keep private to give them a business advantage over their competitors. Examples of trade secrets include:

- Soda formulas
- Customer lists
- Survey results
- Computer algorithms

Unlike the other types of intellectual property, you can't obtain protection by registering your trade secret. Instead, protection lasts only as long as you take the necessary steps to control disclosure and use of the information. Businesses use non-disclosure agreements, restricted access to confidential information, post-employment restrictive covenants, and other security practices to maintain trade secrets.

When protecting intellectual property, look at competitors and others in the industry as if they are in competition for your ideas. Protecting yourself and your company is the best way to make sure that no one else can use your distinctive inventions, works, marks, or other ideas. Meet often with employees to keep them aware of what must stay out of public discussion and away from competitors.

Physical and digital protection of ideas is also necessary, so track who has access and limit who can get into important databases. Looking at the risk and cost-benefit analysis can also help you decide what's worth protecting. Protection of intellectual property often comes at a high cost and takes much time, so make sure your time and money is worth the investment.

15.5.5 Copyrights

Copyrights protect original works of authorship, such as literary works, music, dramatic works, pantomimes and choreographic works, sculptural, pictorial, and graphic works, sound recordings, artistic works, architectural works, and computer software. With copyright protection, the holder has the exclusive rights to modify, distribute, perform, create, display, and copy the work. In order to qualify under copyright laws, the work must be fixed in a tangible medium of expression, such as words

on a piece of paper or music notes written on a sheet. A copyright exists from the moment the work gets created, so registration is voluntary.

Figure 15.7 Copyright

However, registered works may be eligible for statutory damages and attorney's fees in a copyright infringement suit, so you may want to consider registering your work through the U.S. Copyright Office. You can register your copyright online by completing an application, submitting a nonrefundable fee of $35, and sending in a nonreturnable copy of your work. The average processing time for e-filed copyright applications is 2 1/2 months and a little more than 5 1/2 months for paper filing.

15.6 ETHICAL ISSUES

In general, many ethical and global issues of Information Technology apply to e-business. So, the issues particularly related to e-commerce. Let's list some of the ethical issues spawned with the growing field of e-commerce.

15.6.1 Web Tracking

E-businesses draw information on how visitors use a site through log files. Analysis of log file means turning log data into application service or installing software that can pluck relevant information from files in-house. Companies track individual's movement through tracking software and cookie analysis. Programs such as cookies raise a batch of privacy concerns. The tracking history is stored on your PC's hard disk, and any time you revisit a website, the computer knows it. Many smart end users install programs such as Cookie cutters, Spam Butcher, etc. which can provide users some control over the cookies. The battle between computer end users and web trackers is always going on with a range of application programs.

For example, software such as Privacy Guardian, My Privacy, etc. can protect user's online privacy by erasing browser's cache, surfing history and cookies. To detect and remove spyware specially designed programs like Ad-Aware are present.

15.6.2 Privacy

Most Electronic Payment Systems knows the identity of the buyer. So it is necessary to protect the identity of a buyer who uses Electronic Payment System.

A privacy issue related to the employees of company is tracking. Monitoring systems are installed in many companies to monitor e-mail and other web activities in order to identify employees who extensively use business hours for non-business activities. The e-commerce activities performed by a buyer can be tracked by organizations. For example, reserving railway tickets for their personal journey purpose can be tracked. Many employees don't want to be under the monitoring system even while at work.

15.6.3 Privacy Rights and Obligations

The issue of online privacy is continuing to evolve as the Internet and the Web grow in importance as tools of communication and commerce. Many legal and privacy issues remain unsettled and are hotly debated in various forums. The Electronic Communications Privacy Act of 1986 is the main law governing privacy on the Internet today. Of course, this law was enacted before the general public began its wide use of the Internet.

15.6.4 Principles for Handling Customer Data

a) Use the data collected to provide improved customer service.
b) Do not share customer data with others outside your company without the customer's permission.
c) Tell customers what data you are collecting and what you are doing with it.
d) Give customers the right to have you delete any of the data you have collected about them.

15.6.5 Disintermediation and Re-intermediation

Intermediation is one of the most important and interesting e-commerce issue related to loss of jobs. The services provided by intermediaries are,

- Matching and providing information.
- Value added services such as consulting.

The first type of service (matching and providing information) can be fully automated, and this service is likely to be in e-marketplaces and portals that provide free services. The value added service requires expertise and this can only be partially automated. The phenomenon by which

Intermediaries, who provide mainly matching and providing information services, are eliminated is called Disintermediation.

The brokers who provide value added services or who manage electronic intermediation (also known as info mediation), are not only surviving but may actually prosper, this phenomenon is called Reinter mediation.

The traditional sales channel will be negatively affected by disintermediation. The services required to support or complement e-commerce are provided by the web as new opportunities for reinter mediation. The factors that should be considered here are the enormous number of participants, extensive information processing, delicate negotiations, etc. They need a computer mediator to be more predictable.

15.7 TAXATION AND ELECTRONIC COMMERCE

The volume of e-commerce in the Philippines is still currently miniscule compared to the more developed economies. Still, the Bureau of Internal Revenue (BIR) recognizes that electronic commerce has the potential to grow by leaps and bounds in the near future. The BIR's intention is not only to go after online entrepreneurs who fail to pay taxes and issue receipts, but also operators of "buy and sell" web sites, which allow their members to conduct business online without verifying if they are registered with the BIR and the Department of Trade and Industry (DTI).

Online sellers using Sulit.com.ph, AyosDito.ph, Facebook and Instagram, according to Internal Revenue Commissioner Kim Jacinto-Henares, should be registered, must issue electronic invoices, and pay taxes the way brick and mortar entrepreneurs do. While the BIR is correct in going after these online sellers, there is a need to know if such transactions are actually taxable under our jurisdiction. The basic rule is that the state, where the subject to be taxed has a situs, may rightfully levy and collect the tax; and the situs is necessarily in the state, which has jurisdiction, or which exercises dominion over the subject in question. Situs literally means "place of taxation."

Hence, before one can proceed to the possible imposition of e-commerce taxation, we must first look into the perfection of e-commerce contracts; how they are formed; what constitutes an offer and an acceptance between the seller and the buyer. It is the perfection of e-commerce contracts that gives rise to the possible imposition of tax on e-commerce.

It is said that the perfection of a contract comes when the parties to a contract have come to a definite agreement or meeting of the minds regarding the terms, that is, the subject matter and the cause of the contract. While such definition is easy to apply in regular transactions in commerce, it is entirely different in e-commerce transactions since it would be difficult to know at which point both parties have a meeting of the minds.

It is also interesting to note that even the Electronic Commerce Act, which was crafted to address such transactions, gives no precise definition of an electronic contract. In e-commerce transactions, the problem arises in the determination of the source of the income because the line between the principle of e-commerce transactions and the traditional physical-business concept, which involves assets, personnel, or both, becomes vague. Foreign businesses, or even individuals, can tap the domestic market without having to go through the burdensome ins and outs of establishing physical presence within the domestic market.

E-commerce, although a more complex form of commerce, may be said to be covered by the existing laws of the country. It is still in the nature of a contract, over which the general law may still be applicable to electronic commerce transactions by analogy. If this is so, then the law must provide for standards that will establish the formation of e-commerce contracts that will supplement the application of the existing laws of the country.

15.8 TAXATION OF E-COMMERCE AND PROBLEMS

The taxation policies of countries based on territory and jurisdiction has originated to fail after improving e-commerce. Concepts like stable establishment, sale points, product and income classification that using in taxation process have been remained insufficient. Whereas determining place of seller and consumer at transaction on internet is challenging, tax revenue loss has been occurred. Electronic commerce allows businesses to get their revenue without any physical presence. Because of these implications of e-commerce, tax administrations reach hardly evidence about taxes that should be collected and thereby tax loss exists.

In Ottawa Conference where arranged to find solution to taxation problems of e-commerce highlighted that conventional taxation values should be applied to e-commerce and association between countries has been necessary. Fair and neutral taxation should be generated for conventional commerce and e-commerce. A well-

organized taxation system should be provided to reduce compliance costs to businesses, administrative costs. Tax rules should be clear and convinced. Tax payers should know how and in which circumstances they are taxed. Effectiveness and fairness should be ensured on taxation process. Tax systems should be flexible adapting to technological and commercial development. Taxation place for consume tax should be where the consumption occurs. Otherwise, dual taxation and non-taxation problems may be occurred.

Another problem for taxation of e-commerce arises from being made by a permanent establishment that is not essential. To apply tax and to identify one who has taxation power, it is compulsory to point out physical occurrence and permanent establishment. According to OECD, website is not a permanent establishment and if business acquisition or hire server and activities on server are not only being made a preparatory or auxiliary.

To be made e-commerce all over the place the world without any borders and different applications about taxation on e-commerce lead to dual taxation risk. Countries figure this issue out with double taxation avoidance agreements. But the risk still happens for business where functioned in countries that have not got agreements.

It is also additional problem to be subjected different rate and policies of tax on goods and services in the field of taxation on e-commerce between countries or states. Both EU and USA, taxation is made on final transactions to type and value of goods. While this tax is collected by EU as value added tax, it is collected by localities and states in USA as consumption and use taxes. Each state, county and municipality in USA have their own tax policies and tax rates. It becomes a problem for taxation. For instance; while cheese can be taxable in one state as a snack food, in additional state it cannot be taxable. The uncertainties on VAT regulations, who has taxation power for collecting VAT and requirements of registering pose a problem. The countries divided by states and each state applies different tax regulation cause extra costs and difficulties in term of electronic sellers. Various tax regulations between states particularly affect businesses that sell via internet and accept returns in stores.

15.9 LEGAL ENVIRONMENT

The government, in every country, regulates the business according to its defined priorities. Legal system of a country is framed by the government. The laws which are passed by the government for

business operation is called legal environment. In every country, the government regulates business activities. These regulations of government are considered as legal environment. In practice legal and regulatory goes hand in hand. The limits for business operations are decided by regulatory environment & this is also called legal environment.

Legal environment in a country has a dominating position on all decisions of organization. As all business policies are highly influenced by government, the organization should have thorough knowledge of these policies because non-implementation of legal policies results in heavy fines, penalties & punishment & therefore every organization must follow all these regulations.

Following are some of the government Acts & government policies relating to legal or regulatory environment for business operations:

- The Sale of Goods Act, 1930.
- Indian Companies Act, 1956.
- Income Tax Act, 1961.
- The Consumer Protection Act, 1986.
- The Weights & Measures Act, 1958.
- Environment Protection Act, 1986.
- Agricultural Policy.
- Industrial Policy.
- Foreign Investment Policy.
- Monetary Policy.
- The Factories Act, 1948.
- The Minimum Wages act, 1948.

LET US SUM UP

The overwhelming sustainable development and major technological innovations have not only brought fundamental change to the economic system but also extensive environmental impacts, for better or worse. The environmental implications, in most cases are a reflection of human economic activities as mediated by technology. Here, Environmental Impacts of E-Commerce are considered for case study and survey. It is very tempting to know that the marketing on the Internet is beneficial to the environment. The rapid growth of the ecommerce is the basis of different, positive as well as negative impacts on environment. Environmental concerns are affecting E-Commerce and many consumers are viewing online shopping as a "green" alternative to shopping at traditional bricks-and-mortar stores. Green shopping sites have emerged that help consumers find environmentally friendly

products. Increasingly manufactures are displaying information about product ingredients and publicizing environmentally friendly products and also stepped up posts on green life.

CHECK YOUR PROGRESS

Choose the Correct Answer:

1. _____ indicates rules and regulations to be obeyed in the organization.

a) Law   b) Moral

c) Ethics   d) Privacy

2. Code of ethics do not includes _____.

a) Fair treatment   b) Communication

c) Software piracy   d) Co-operation

3. _____ provides norms and principles to the computer users and system professionals.

a) Guidelines   b) Code of ethics

c) Privacy   d) Security

4. To make the exact copy of a program is termed as _____.

a) Copyright   b) Fair use

c) Law   d) Software privacy

5. _____ refers to all the legal and regulatory aspects of internet and World Wide Web.

a) Cyber Crime   b) Cyber Law

c) IT Act   d) Code of Standard

GLOSSARY

Electronic Contracts	:	E contracts are contracts that are not paper based and are electronic in nature. These contracts are generally made for speedy entering into a contract or for the convenience of the parties. They are best made between parties who live in 2 different parts of the world and have to enter into an agreement.
Jurisdiction	:	Jurisdiction is the practical authority

		granted to a legal body to administer justice, as defined by the kind of case, and the location of the issue.
Intellectual Property	:	Intellectual property is a category of property that includes intangible creations of the human intellect. There are many types of intellectual property, and some countries recognize more than others. The most well-known types are copyrights, patents, trademarks, and trade secrets.
Patents	:	A patent is an exclusive right granted for an invention, which is a product or a process that provides, in general, a new way of doing something, or offers a new technical solution to a problem.
Trademarks	:	A trade mark (popularly known as brands name in layman's language) is a visual symbol which may be a word to indicate the source of the goods, a signature, name, device, label, numerals, or combination of colours used, or services, or other articles of commerce to distinguish it from other similar goods or services.

SUGGESTED READINGS

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3. HYPERLINK "https://www.google.co.in/search?tbo=p&tbm=bks&q=inauthor:%22P.T.JOSEPH,+S.J.%22&source=gbs_metadata_r&cad=4"P.T. Joseph, S.J. (2015) E-Commerce: An Indian Perspective, Fifth Edition, Prentice Hall India Pvt., Limited, New Delhi
4. Peter G W Keen, (1994), Every Manager's Guide to Information Technology, 2nd Edition, Harvard Business School Press, Boston.

5. Rajesh Chakrabarti and VikasKardile, (2002),The Asian Manager's Handbook of E-Commerce (paperback edition), Tata McGraw – Hill Publishing Company Limited, New Delhi.

WEB RESOURCES

1. [E Commerce Meaning Concept Advantages Features - Bing video](#)
2. [Managerial Issues in eCommerce - Bing video](#)
3. [Intellectual Property Rights | IPR | Patent | Copyright | Trade Mark by Tanisha Gangrade in English - Bing video](#)
4. [What is Ethics? (Ethics Defined, Ethics Meaning) (See link below for more video lectures in Ethics) - Bing video](#)

ANSWER TO CHECK YOUR PROGRESS

    1. a)   2. c)   3. b)   4. d)   5. b)

UNIT 16

BUSINESS PLAN FOR IMPLEMENTING ELECTRONIC COMMERCE

OVERVIEW

It has been 2020, many small e-Commerce businesses are confirmed to be facing the challenges in the area of success and growth—moving ahead of their start-up status, and making the most of the opportunities that promise growth and maturity. Navigating the untested waters of e-Commerce maturation will call for plenty of business expertise, insight, and the capacity to stay flexible to adjust to an ever-changing and growing business area. The booming of digitalization has transformed the way that business operates. Enjoying such an ideal condition, E-commerce business has exploited with the fruitful growth of millions of online businesses worldwide. Although this new trend has made shopping much more convenient for both sellers and buyers, some unique challenges, which form the online business bounce to struggle, also come along the way. In such a virtual environment, there are challenges that obstacle the development of E-commerce enterprise, big and small alike.

LEARNING OBJECTIVES

After completing this unit, you will be able to;

- explain about the seven-step framework successful e-commerce implementation
- explore the key features of business plan
- discuss about how to write an e-commerce business plan
- gain knowledge about challenges faced by e-commerce business
- describe about future of e-commerce business.

16.1 INTRODUCTION

Excellent business plans help companies maintain focus on a predefined set of goals. They also help company owners present their businesses to lenders and investors. If your business is an online vehicle, your e-commerce business plan is a roadmap. First, define your business - your vehicle - and then describe where you want to take your business and how you'll get there. The best business plans read like travel itineraries. They include blueprints for growth, projected timelines, and financial goals. Like real-world route planners, they identify potential roadblocks and outline contingency strategies. They clarify topics like cash flow, expenses, marketing tools, and distribution channels in detail. Basically, your business plan is the framework for your enterprise.

A good business plan guides you through each stage of starting and managing your business. You'll use your business plan as a roadmap for how to structure, run, and grow your new business. It's a way to think

through the key elements of your business. Business plans can help you get funding or bring on new business partners. Investors want to feel confident they'll see a return on their investment.

16.2 A SEVEN STEP FRAMEWORK FOR SUCCESSFUL E-COMMERCE IMPLEMENTATION

Each of these steps has a positive and cascading effect on the other steps and hence implementing each of them in the right priority and in a phased manner is of utmost importance. For an e-commerce business to get the maximum ROI on their investment, it is the execution of these 7 steps around the 4 core pillars that will be your mantra for success!

16.2.1 Strategic business planning and Roadmaps

Strategy is about making the right choices that will help reach the stated business objectives. There should to be a clear cut vision, mission and objective about what will be achieved, in how much time, within what budget, identification of the right resources for and constraints in the face of execution of the strategy mentioned in the business plan, and what elements will be considered for roadmap.

Knowledge and deep understanding of the digital marketing tools and techniques that will help in reaching and acquiring customers is required. Your business must reach out to customers who are online across multiple dimensions and devices. So, the assumptions considered in preparing the strategic business plan should be in alignment with the ecommerce industry's norms and trends.

16.2.2 Technology selection/ Website audit and Analysis

In order to provide the maximum benefit to the end customer, your chosen ecommerce technology should be fully capable of being customizable, and be able to complement the business model, and adhere to the existing best practices in offline retail.

If you're a retailer taking the first-time plunge into ecommerce, various functionalities on the e-commerce website should be carefully thought over based on the industry, audience being targeted, various customer segments who may be buying the offered products and services.

With respect to retailers who have implemented an ecommerce strategy and have not yet received the rewards of the complete capability of the ecommerce technologies, there needs be a complete assessment of how the website can perform better by examining the store front and customer flow, analysis of competing websites, identification and implementation of solutions based on the gap analysis carried out ('as-is'

and 'to-be'). It is equally important to measure and monitor the process that was made because of the implementation of the suggested changes.

16.2.3 Customer Acquisition

Online or popular digital marketing encompasses multiple tools for reaching out to the new generation of customers, who are actively engaged in using multiple devices, through search engine optimization, search engine marketing (paid advertisement that includes both cost per click and cost per thousand impressions), social media marketing (that includes both cost per click and cost per thousand impressions), email campaigns, display advertisements using various ad networks, referral programs and re-targeting campaigns.

16.2.4 Customer Engagement

Customers these days are actively seeking to engage with brands to understand the core benefits and unique value proposition that the brand offers, discount and offers during special seasons, a robust support mechanism for queries/clarifications regarding the products displayed and interaction with customer support executives to know more about policies on returns and exchange, etc.

Engaging customers through various social media channels also instills superior trust in the minds of customers.

16.2.5 Customer Retention

With the advent of sophisticated e-commerce technologies, new age retailers will be able to leverage an almost one-to-one customer experience and that's the best a customer can really expect.

However, it should be noted that to fully leverage best-in-class technology, there needs to be a constant effort to look out for features and functionalities that will enhance the customer experience.

16.2.6 Optimization based on Key Metrics

Some of the key metrics to measure the health of an ecommerce venture are the total revenue generated, cost of customer acquisition, % of customers converted, and % of customers entering the website through various channels.

However, these metrics may vary significantly based on the business objectives and so every business needs a fully customized approach for defining the key metrics and further analysis.

Once these are defined and there are a substantial number of customers

visiting the website, a deeper level of optimization is needed at 2 levels – on the technology and the business front.

Technology: This generally includes optimizing the page load speed, shopping cart, check-out and other web pages, a/b and multivariate testing, etc. Creating unique and well-researched blog content, refining the titles & headings in the content, and using engaging Meta descriptions are other ways to attract organic traffic to your website.

Business: Optimization here includes analysis of the total revenues generated, total spends for running the e-commerce operations, optimizing the gross net margins, conversion rates from each of the various channels, customer loyalty and retention rates, rate of repeat purchase, frequency of repeat customers (across multiple dimensions), % of carts abandoned, etc.

There are a lot of features and functionalities to helping online retailers improve these numbers. There is a lot of research evidence supporting the incorporation of features like reviews and ratings, and display of the right products either through up-selling or cross-selling.

Based on the statistics, 47% of shoppers read product reviews prior to their online purchases and 63% are more likely to buy from websites with online reviews or ratings. Similarly, online companies that leverage a recommendation system can increase sales by 8-10%.

16.2.7 Business analysis and Customer Insights

The final step in the entire process is about fine-tuning and understanding the product categories that have performed well compared to other products displayed in the web store. Assessing this is crucial since each of these categories and products within those categories occupy the prime real estate in the online world the web store.

It also should consist of understanding the customer segments, demographics, profitable customers, source of channels through which the profitable customers came to the web store, % of revenue each profitable customer contributes to and the marketing spends that has gone into acquiring these customers.

These metrics are only a small representation of a larger list that can be optimized further. These metrics vary based on the business needs and require a customized approach for defining, monitoring and optimization.

In today's "compete hard or perish" environment a holistic e-commerce strategy, if planned and executed well, can be an important means of

bolstering revenues, increasing brand awareness, providing best in class support and shopping experience to the new generation of customers. The successful implementation of an e-commerce strategy helps in gaining a competitive edge over the existing competitors, no matter whether they are online or offline.

16.3 BUSINESS PLAN FOR E-COMMERCE BUSINESS

If you're looking for funding from investors for your e-Commerce business, you'll definitely need a business plan. But, business plans aren't just for entrepreneurs who are looking to raise money for their business. There are many other reasons why you should consider writing a plan.

a) **Strategy.** Writing your plan down will help you clarify your business strategy and figure out key aspects of how your business will run. You'll think about your marketing plan, fulfillment, sales strategies, and more.

b) **Test ideas.** Business plans can help you figure out if an idea will work. A plan will help you figure out which ideas will be profitable and which will struggle to make money.

c) **Know your numbers.** Developing your financial plan as part of your business plan will help you understand what it's really going to take to start an online business. Running the numbers will help you determine profitability and what it will take to get your business up and running.

d) **Market research.** Your business plan will help you answer questions about who your customers are and how you can best get your product in front of them.

e) **Marketing and advertising.** Getting your e-Commerce business running online is just the first step. Now you need to bring customers to your website. Having a plan and knowing how much it will cost you before your start will improve your chances of success.

f) **Business plan competitions.** An often overlooked way of getting money for your e-Commerce business is business plan competitions. There are thousands of them every year that include cash prizes. With a solid business plan, it's usually free to enter.

A business plan can help you develop your strategy, figure out how much money you'll need to get up and running and identify potential roadblocks. It's a critical step that will ensure that you don't waste time or money as you get your business off the ground.

16.3.1 How to Write An E-Commerce Business Plan?

Every business plan follows a fairly standard format, but for e-Commerce you will need some extra detail in the marketing and fulfillment sections. Here's an outline of what you should include.

1. Executive Summary

Every business plan needs an executive summary. Usually, you write the summary last, after you've fleshed out all the details of your plan. The executive summary isn't a repeat of the full plan—it's really just a brief outline that should be 1-2 pages at the most.

When you're getting introductions to investors, you'll probably just share your executive summary to start, and then share the full plan if an investor is interested. Your executive summary should summarize your vision for your online business, the products you'll be selling, a short description of target market, and highlights of your management team and financials. If you did a market analysis, don't get into tons of detail, but cover enough that a casual reader will understand what you're trying to accomplish.

2. Opportunity: Problem and Solution

The first chapter of your business plan describes your opportunity. That's a description of the business you are building and the problem you are solving for customers. Every business needs to solve a problem for customers. For your business to stand out and be successful, you'll ideally fill a gap that other companies haven't filled yet. Even if you're selling the same types of products as other companies, your business could offer a better shopping experience, lower prices, or better customer service.

The problem you are solving then is that customers can't get good customer service or low prices from other companies in your industry. They will come to you, instead, because you do offer those things. You can also solve problems for customers by offering a product they've never seen before. Perhaps you've developed a new line of kitchen utensils that are designed for older hands and wrists.

3. Target Market

Arguably, the target market section of your business plan is one of the most important components. Your target market describes the types of customers you hope to attract. Trying to please everyone is bound to be a failure—instead, focus on a specific group of people or type of person and build from there.

For example, maybe you're trying to sell to young professionals who value good design. Or, maybe you're targeting new families who are looking for sustainably made, affordable kids toys. When you're writing the target market section of your business you'll describe exactly who your ideal customer is, what their demographics are, and how large your target market is.

4. Marketing and Advertising

For an e-Commerce business, getting the word out about your business is critical. Unlike a physical storefront that potential customers might walk or drive by, an online store needs to figure out how to get customers to its virtual doors.

Here are a few tactics you may want to consider:

a) **Content marketing.** Start writing blog posts that your potential customers may find interesting so that you can attract prospects to your business. Also, consider guest posting on other blogs that your potential customers might read.

b) **Social media.** These days, most consumers expect that the companies they shop at will have some form of social media presence. Pick the networks that you plan to be active on and determine a strategy that will engage your potential customers.

c) **Traditional PR.** Traditional PR isn't dead. If you can get popular publications to cover your company launch and your products, you'll be able to drive new customers to your door.

d) **Advertising.** Online advertising will almost certainly be in your plans. The good thing about online advertising is that you can measure its effectiveness and fine-tune things as you go. Depending on your business and how much cash you have on hand, you may consider traditional off-line advertising as well.

e) **Email marketing.** For many e-Commerce businesses, email is a core strategy for driving sales. If you have a content marketing plan, you can use that content to drive email subscriptions.

f) **Operations** Successful e-Commerce businesses are all about ensuring that their operations are running smoothly and efficiently. Use your business plan as your chance to figure out what your operations plans are ahead of time before you jump in and get started. This is where many businesses can get tripped up, so taking the time to get your operations set up properly is worth the up-front investment of time.

g) **Company & Management** Business plan describes the structure of your business and who is running it. If you're going into business

with other people, you should establish a partnership agreement. Your plan will need to explain how your business is structured and who owns what portions of the business. You'll also want to include a company description that includes details on the management team and the highlights from their resumes. Potential investors will be looking for experienced owners and managers to get an e-Commerce business up and running, so this section of the plan should explain why your team is qualified to build the business into a success.

h) **Financial Plan** finally, your business plan will need to include a financial plan. Investors will want to see a sales forecast, income statement (also called profit and loss statement), cash flow statement, and a balance sheet. If you use a tool like LivePlan, to build out your financial forecasts relatively quickly, even if you don't have experience with business numbers.

16.4 CHALLENGES FACED BY E-COMMERCE BUSINESSES

Some of the challenges faced by e-commerce in India are: E-commerce in spite of opportunities, hoopla and hype, also bears the connotations of challenges as well at the same time. We, therefore, enumerate the major challenges e-commerce in small enterprises is facing and also submit the remedial measures to meet these challenges.

16.4.1 Infrastructural Problems

Internet is the backbone of e-commerce. Unfortunately, internet penetration in India is so far dismally low at 0.5 per cent of the population against 50 per cent in Singapore. Similarly, penetration of personal computer (PC) in India is as low as 3.5 per thousand of population compared to 6 per thousand in China and 500 per thousand in US. Internet is still accessible through PCs with the help of telephone lines.

Given the penetration of telephone only 2.1 per cent of population, electronic commerce remains far away from the common man. It is difficult for e-commerce to reach to 1,000 million population spread over 37 million households in 6, 04,374 odd villages and 5,000 towns and cities. Besides, both cost of PCs and internet access in India are quite high.

16.4.2 Absence of Cyber Laws

Other big challenge associated with e-commerce market is the near absence of cyber laws to regulate transactions on the Net. WTO is expected to enact cyber laws soon. The India's Information Technology

(IT) Bill passed by the Indian Parliament on May 17, 2000 intends to tackle legislatively the growing areas in e-commerce.

The Bill also intends to facilitate e-commerce by removing legal uncertainties created by the new technology. As it stand today, the Bill deals with only commercial and criminal areas of law. However, it does not take care of issues such as individual property rights, content regulation to privacy and data protection specific legislation.

16.4.3 Privacy and Security Concern

As of to-day, quite vulnerable issues related to e-commerce are privacy and security. So far, there is no protection offered either by Website or outside watchdogs against hazard created by exploiting one's privacy.

16.4.4 Payment and Tax Related Issues

Issues related to payment and tax is yet another problem continuously hinting e-traders. The electronic payment is made through credit card or plastic money which could, however, not become popular so far in India mainly due to two reasons. First, the penetration of credit card in India is very low (2 per cent of the population).

Second, the Indian customers are quite skeptical of paying by credit card with the increasing threat of fraud played by hackers. Like elsewhere, credit card could not gain growth in India mainly because of authentication and recognition problems of electronic signatures.

16.4.5 Digital Illiteracy and Consumer Psyche

At present, digital illiteracy is one of the formidable problems e-commerce is facing in India. On the other hand, the continuous exodus of skilled computer engineers to other countries has denuded India of software engineers. This has posed a real threat to the Indian IT industry. Obviously, solution to this problem lies in curbing the computer brain – drain and uses the same in the country.

The Indian consumer is also characterized by his unique psyche. Usually, the Indian consumer does not go long distances for having any good of his choice when a neighborhood store provides him whatever he wants. That is why the consumer does not browse the Net knowing the consequent hassles of connectivity and other botherations. Added to this is that building trust on the electronic media also takes long time more especially when the vendor is situated at a very far off place.

16.4.6 Virus Problem

That computer virus is also a formidable problem in the execution of electronic transactions is confirmed by the computer virus originated in Manila. A computer virus lagged' I Love You' originated in Manila, Philippines on May 5. 2000 rippling across world, inflected millions of computer files causing colossal loss of US $7 billion to the governments and the businesses. The offenders causing 'virus' must be awarded deterrent punishment, otherwise similar assaults in future can cause lasting blows to the quite young e-commerce in India as well.

16.4.7 English Specific

Last but not the least, the software so far in the country is English specific. But, in order to make e-commerce reach to the small enterprises, it needs to be available in the languages (regional) of the owners of the small enterprises to enable them to adapt e-commerce processes in their operations. Sooner it is done, better will be it for small enterprises to adapt e-commerce.

16.5 THE FUTURE OF E-COMMERCE BUSINESSES

A new study on the e-Commerce market recognizes top trends that will guide and change the prospects of online retail sales in the future. They are as follows:

a) **Online to Offline Retail Growth:** Due to rapid growth in recent times, e-Commerce has gone up and is still growing. It has taken over almost 11.9% of retail sales worldwide. Hence, online to offline retail share is a trend to consider, as e-Commerce aims to provide a virtual in-store experience to shoppers that is unmatched in every sense.

b) **Multi-Channel e-Retail Sales:** Mobile users are estimated to make for $319bn in e-Commerce sales by this year, and multi-channel retail sales, opening up more avenues for customers to quickly purchase products will be far more crucial in the coming years. So, online retailers will require an infrastructure for handling and maintaining multi-channel e-Commerce to help compensate for the inherited challenges of online sales.

c) **Automated Ecommerce Operations / Management:** The functional needs of e-Commerce merchants are evolving along with technology. Automating order entry/delivery to make sure that the business site goes well with the recently integrated technology without much manual work on a day-to-day basis will be crucial for the long-term success of e-Commerce businesses.

d) Mobile Responsive Ecommerce in Growing Demand: Mobile traffic counts for great opportunities for e-Commerce businesses. Most online sales are accessed and closed by consumers over mobile. Though desktop users are no less involved in e-Commerce transactions, mobile responsiveness brings more potential customers to e-Commerce businesses through browsing.

e) Exposure to the Global Ecommerce Market: McKinsey's study suggests that e-Commerce entrepreneurs may like to shift their operational areas all over the world while looking for more global sales opportunities. Forging local partnerships, learning about laws and rules in the region, and implementing robust, efficient marketing will enable e-Commerce businesses to expand successfully worldwide.

LET US SUM UP

The Indian e-commerce industry is supposed to outrun the US electronic commerce industry to be the second-largest market in the world by 2034. Besides increasing revenue and easing our lives, e-commerce is expected to boost the employment scenario of the country by creating nearly 1.45 million jobs by 2021. E-commerce is one big thing in the industry now. Everybody wants to be involved in buying or selling things online. To have an alluring career in the sector, you must be ahead of the herd because the competition in this sector is exceptionally high.

The common challenges all the e-commerce businesses facing today. If you are already running an e-commerce business, you may already be facing them. If you are planning to start your e-commerce business, make sure you take necessary steps to face these challenges. Over the last decade, e-Commerce has entirely transformed the global retail sector. Small e-Commerce businesses have not only come into existence dynamically but also grown and modernized in due course to address the not so static desires and needs of today's' consumers.

CHECK YOUR PROGRESS

Choose the Correct Answer:

1. The ability to change the product to better fit the needs of the customer is called _____.

a) Customization   b) Personalization

c) Privacy   d) Accessibility

2. The number of business methods patents granted is _____ compared to the number of patents applied for.

a) Slightly smaller   b) Substantially smaller

c) Close to equal   d) Equal

3. The redirection of traffic from a legitimate site to an infringing site is called _____.

a) Cyber squatting   b) Cyber piracy

c) Met tagging   d) key wording

4. The taxation system for e-commerce sales is best described as _____.

a) Streamlined   b) Universal

c) Standardized   d) Complex

5. All of the following are types of intellectual property protection except _____.

a) Patents   b) Trademark

c) Governance   d) Copyrights

GLOSSARY

Business Plan	:	An ecommerce business plan defines and directs the various factors that go into an online store's launch and continued growth.
Business Analysis	:	Business analysis is used to identify and articulate the need for change in how organizations work, and to facilitate that change.
Customer insights	:	Customer insights allow your business teams to gain a deeper understanding of how your customers think and feel about your products and services.
Customer Acquisition	:	Customer acquisition in e-Commerce is defined as the process of acquiring new customers to your online store by using a mix of digital marketing strategies like SEO, PPC, email marketing, content marketing, and other forms of digital advertising strategies.

| **Cyber Laws** | : | Cyber law encompasses aspects of intellectual property, contract, jurisdiction, data protection laws, privacy, and freedom of expression. It directs the digital circulation of software, information, online security, and e-commerce. |

SUGGESTED READINGS

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WEB RESOURCES

1. Ecommerce trends 2023 - what's working now - Bing video
2. How to Write a Business Plan - Entrepreneurship 101 - Bing video
3. The 10 Most Common Challenges Faced by eCommerce Businesses - Bing video
4. The Future of Ecommerce: 9 Trends That Will Exist In 2030 - Bing video
5. The Future of E Commerce - Bing video

ANSWER TO CHECK YOUR PROGRESS

1. a)   2. b)   3. b)   4. d)   5. c)

| યુનિવર્સિટી ગીત |

સ્વાધ્યાયઃ પરમં તપઃ
સ્વાધ્યાયઃ પરમં તપઃ
સ્વાધ્યાયઃ પરમં તપઃ

શિક્ષણ, સંસ્કૃતિ, સદ્ભાવ, દિવ્યબોધનું ધામ
ડૉ. બાબાસાહેબ આંબેડકર ઓપન યુનિવર્સિટી નામ;
સૌને સૌની પાંખ મળે, ને સૌને સૌનું આભ,
દશે દિશામાં સ્મિત વહે હો દશે દિશે શુભ-લાભ.

અભણ રહી અજ્ઞાનના શાને, અંધકારને પીવો ?
કહે બુદ્ધ આંબેડકર કહે, તું થા તારો દીવો;
શારદીય અજવાળા પહોંચ્યાં ગુર્જર ગામે ગામ
ધ્રુવ તારકની જેમ ઝળહળે એકલવ્યની શાન.

સરસ્વતીના મયૂર તમારે ફળિયે આવી ગહેકે
અંધકારને હડસેલીને ઉજાસના ફૂલ મહેંકે;
બંધન નહીં કો સ્થાન સમયના જવું ન ઘરથી દૂર
ઘર આવી મા હરે શારદા દૈન્ય તિમિરના પૂર.

સંસ્કારોની સુગંધ મહેંકે, મન મંદિરને ધામે
સુખની ટપાલ પહોંચે સૌને પોતાને સરનામે;
સમાજ કેરે દરિયે હાંકી શિક્ષણ કેરું વહાણ,
આવો કરીયે આપણ સૌ
ભવ્ય રાષ્ટ્ર નિર્માણ...
દિવ્ય રાષ્ટ્ર નિર્માણ...
ભવ્ય રાષ્ટ્ર નિર્માણ

DR. BABASAHEB AMBEDKAR OPEN UNIVERSITY
(Established by Government of Gujarat)
'Jyotirmay' Parisar,
Sarkhej-Gandhinagar Highway, Chharodi, Ahmedabad-382 481
Website : www.baou.edu.in